

Research Papers

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**SURFACE SEDIMENT DIATOM ASSEMBLAGES AND
WATER QUALITY IN WELSH LAKES:
BRIEF DESCRIPTIONS OF 33 SITES SELECTED FOR STUDY**

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1. INTRODUCTION

In May 1987 surface sediment and periphyton samples were collected for diatom analysis from 27 upland lakes in mid- and north Wales (Figure 1). The sites were selected to provide a range of water acidities from circumneutral to strongly acid. The results, together with those collected from other regions in the British Isles, are to be used to produce a UK diatom-water quality data set that will facilitate calibration of sediment core diatom assemblages and reconstruction of past water quality characteristics such as pH (eg. Birks *et al.* 1990).

2. SAMPLING STRATEGIES

In most cases a Kajak corer was used to obtain surface sediment samples from at or near the deepest point in each lake. Normally, two independent surface sediment samples were collected, together with one sample of deeper sediment (ie. from approximately 15 cm below the sediment-water interface). Modern periphytic communities were sampled in each lake, usually from the epilithon and epiphyton. No attempt was made to collect diatom plankton directly since its seasonal occurrence often makes 'spot' sampling unrepresentative; surface sediments give a better indication of phytoplankton abundance. Water samples were collected from each lake for pH determination and further chemical analysis in the laboratory. Where possible notes about lake bathymetry and aquatic macrophytes were made.

Methods of sampling and laboratory analysis follow those described by Stevenson *et al.* (1987a).

3. SAMPLE SITES

Although water chemistry, lake biota and/or catchment geology and soils are probably the most useful criteria for classifying lakes, here sites are roughly grouped according to catchment vegetation and land-use and basin type. Six characteristic types were identified.

Group 1: lakes lie in obvious corries with much exposed rock, often with some blanket peat and supporting an acidophilous vegetation, usually *Calluna* and upland grasses. These sites are relatively high in altitude and deep, with maximum depths between 14 and 20 m and show a simple bathymetry with the deepest point lying near the back wall of the corrie.

Group 2: lakes similar in aspect to Group 1 sites but which do not occur within a typical corrie setting. They tend to be shallower and often have complex bathymetries; some are moraine dammed valley lakes others may owe their origins to differential erosion processes.

Group 3: lakes similar to those in Group 2, but the catchments have been afforested to varying degrees.

Group 4: lakes lie in catchments with blanket peats in areas of low relief; they are fairly shallow and contain brown water.

Group 5: lakes at lower altitude that have catchments with some improved pasture and/or some natural woodland, usually oak.

Group 6: lakes totally artificial in origin.

Table 1 **Categorisation of sample lakes**

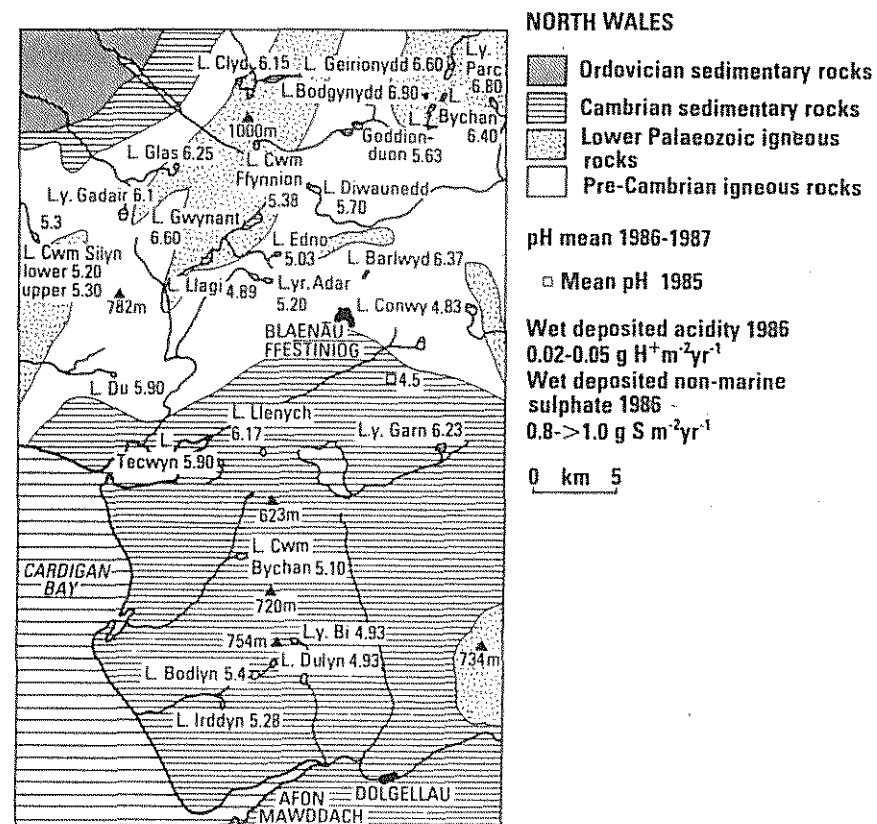
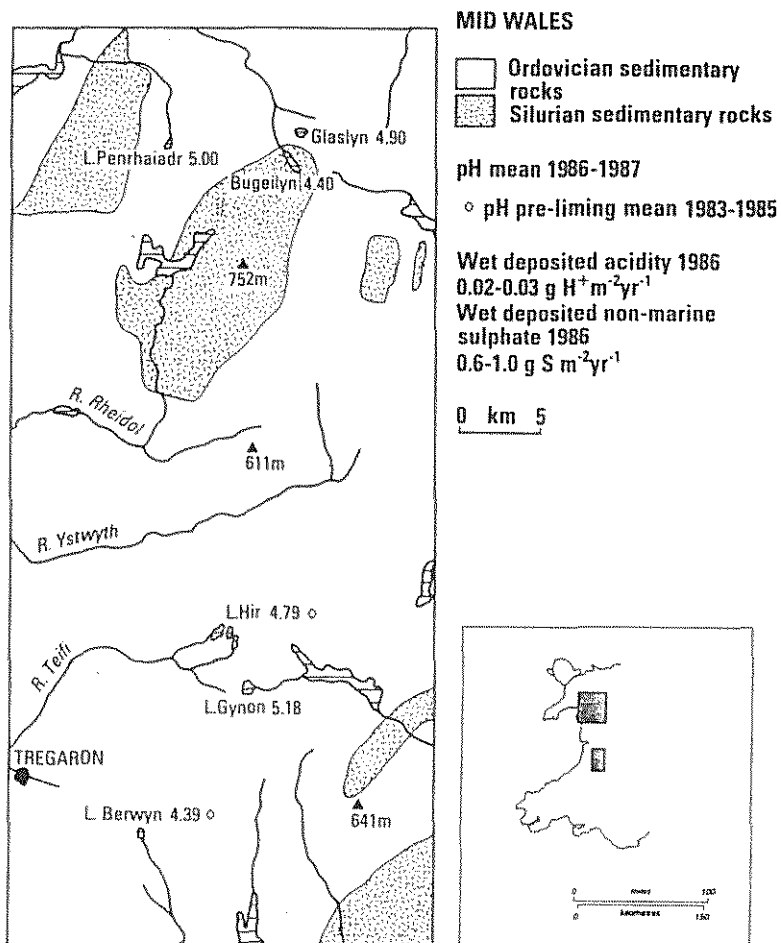
Lake	Group	Grid Ref.	Altitude (m)
L. Diwaunedd	1	SH 685536	375
L. Cwm Silyn	1	SH 512508	340
L. Bodlyn	1	SH 648238	450
L. Glas	1	SH 601547	520
L. Clyd	1	SH 635597	660
L. Cwm Bychan	2	SH 640313	191
L. Llenyrch	2	SH 655377	255
L. y Garn	2	SH 762377	510
L. Cwm Ffynnion	2	SH 648564	380
L. Glaslyn	2	SN 826941	490
L. Irddyn	2	SH 630220	380
L. Edno	2	SH 663497	550
L. Conwy	2	SH 780463	450
L. Bodgynnyd	3	SH 762593	300
L. Geirionydd	3	SH 765610	228
L. Bychan	3	SH 753794	320
L. Goddionduon	3	SH 754585	292
L. y Parc	3	SH 793587	246
L. Du	4	SH 564425	255
L. Bugeilyn	4	SN 822923	457
L. Penrhaidr	4	SN 753933	410
L. Tecwyn	5	SH 629370	100
L. y Gadair	5	SH 648564	380
L. Gwynant	5	SH 644529	70
L. Glasfryn	5	SH 403422	120
L. Barlwyd	6	SH 713486	558

Notes: some sites possess characteristics of several groups, for example a corrie setting at Llyn Bodlyn was unclear although its bathymetry indicates this origin; Llyn Llenyrch was surrounded by blanket peat but contained clear water. Only the Tecwyn, Gwynant and Cwm Bychan catchments possessed any remnants of natural oak forest. Several sites are also described by Jehu (1902), Ward (1931) and Liddle *et al.* (1979).

In order to extend the Welsh modern diatom-water quality data set further an additional five lakes have been added by using sites that have been previously the subject of detailed investigation by the Palaeoecology Research Unit. These comprise Llyn Berwyn (Kreiser *et al.* 1986) and Llyn Hir (Fritz *et al.* 1986) cored in 1984 and Llyn Llagi (Patrick *et al.* 1987), Llyn y Bi (Fritz *et al.* 1987), Llyn Gynon (Stevenson *et al.* 1987b) and Llyn Dulyn (Stevenson *et al.* 1987c) cored in 1985.

Figure 1 Location of sample sites

4



3.1 A systematic account of the sample sites.

Characteristics of each lake at the time of sampling (May 1987) are given below together with a summary of the diatoms and water chemistry. All data produced in this study are stored on the Palaeoecology Research Unit ORACLE data-base which was used to generate the full lists of surface sediment diatom taxa and of water chemistry for each site which are presented in Appendices 1 and 2 respectively.

Llyn Barlwyd (upper), sampled 13th May 1987, 14.30.

This artificial lake is situated (OS grid ref. SH 713486) 1.5 km north east of Blaenau Ffestiniog at 558⁴⁵⁰ m altitude and forms part of the water supply to the Llechwedd slate quarry. It is confined within a small catchment of grazed upland grasses by a 6 m high barrage. Blanket peats are exposed along the eastern margin of the lake and occasional tree remains are exposed where erosion is occurring.

The littoral area is soft and blocks of partially eroded submerged peat can be clearly seen. Aquatic macrophytes are common with *Callitriche*, *Sparganium*, *Littorella* and *Lobelia* all frequent. Small trout were also observed in the clear water. Most of the lake is c. 2 m deep with a maximum depth of almost 3 m near the centre. All the lake bed lies within the photic zone. Cores were taken from the deepest point and contained black organic sediment with chironomid tubes abundant at the mud/water interface.

pH	6.4	Cond.	35 $\mu\text{S cm}^{-1}$
Ca	130.7 $\mu\text{eq l}^{-1}$	DOC	1.9 mg l^{-1}
Most common diatom: <i>Fragilaria virescens</i> v. <i>exigua</i>			

Llyn Bodgynydd, sampled 11th May 1987, 15.00

This lake is located at 300²⁵⁰ m altitude in the Gwydyr Forest, near Betws-y-Coed (OS grid ref. SH 762593). The catchment is heavily afforested with conifers except in the northern sector where rough grazing for sheep occurs. Some clear-felling of the plantation is in progress at the southern end of the lake. In the south western sector birch, self-seeded pines, *Calluna*, *Erica* and *Vaccinium* are common. Inflows are very minor and at the outflow a 7 m barrage has been constructed indicating that formerly the lake was kept at a higher level for ore extraction purposes. Little evidence of mining activity was seen in the catchment although Ward (1931) states that the lake was fishless due to pollution from copper ore washings. Following restocking the lake now supports brown trout.

Epilithon was fairly abundant and aquatic macrophytes were plentiful and included *Potamogeton*, *Littorella*, and *Juncus bulbosus*. Maximum depth of the lake is 17 m and two sediment cores were collected from 16 m depth. The cores consisted of about 15 cm of black mud with lighter coloured material below, possibly indicating an erosion phase following afforestation or mining. The lake is also described by Liddle *et al.* (1979).

pH	6.9	Cond.	94 $\mu\text{S cm}^{-1}$
Ca	260.5 $\mu\text{eq l}^{-1}$	DOC	1.0 mg l^{-1}

Most common diatom: *Cyclotella kutzingiana* v. *minor*

Llyn Bodlyn, sampled 23rd May 1987, 17.30.

³⁸⁰ This lake (OS grid ref. SH 648238) lies 2 km north east of Llyn Irddyn at 450 m altitude. Its catchment is similar to that of Irddyn although slopes are much steeper and several almost vertical rock faces occur at the southern edge of the lake. According to Ward (1931) the lake contained trout of fine quality, perch and char; also at that time the lake was (and still is) used as a drinking water supply for Barmouth. During sampling no obvious signs of water level fluctuation were noticed although aquatic macrophytes were few and sampling was at a time when water level could be expected to be high. A sluice and associated barrage indicate that the lake level has been raised a metre or so sometime in the past. The deepest point in the lake is 20 m about 50 m off a cliff face on the south side of the lake. Two short cores of black homogeneous sediment (with no sign of inwash episodes) were collected from 19 m depth.

pH	5.4	Cond.	32 $\mu\text{S cm}^{-1}$
Ca	48.4 $\mu\text{eq l}^{-1}$	DOC	0.9 mg l^{-1}

Most common diatom: *Tabellaria flocculosa*

Llyn Bugeilyn, sampled 17th May 1987, 12.00

This elongated lake in mid-Wales (OS grid ref. SN 822923) lies at 457 m altitude in a catchment composed of low hills where virtually all the land is given over to rough grazing for sheep. Blanket peats are extensive at either end of the lake and in flatter areas elsewhere. The lake is divided into two parts by a neck of land which carries the access road. The lake possibly had a higher level in the past. Ward (1931) noted that the lake supported good trout fishing.

Aquatic macrophytes are few and dominated by several stands of *Nuphar*. The water is strongly coloured brown and secchi-disc depth was about 1.0 m. Most of the lake basin is about 2 m deep with a maximum depth of 2.25 m near the northern end. Two cores were collected at the deepest point although the very flocculant nature of the black organic sediment prevented the retrieval of cores with a completely undisturbed mud/water interface.

pH	5.1	Cond.	26 $\mu\text{S cm}^{-1}$
Ca	46.4 $\mu\text{eq l}^{-1}$	DOC	9.1 mg l^{-1}

Most common diatom: *Eunotia incisa*

Llyn Bychan, sampled 15th May 1987, 11.30.

This small lake (OS grid ref. SH 753794) lies at the edge of the Gwydyr Forest conifer plantations at 320 m altitude. The catchment is wholly afforested except for the steeply sloping north west sector. In the 1970s a forest fire in the catchment caused extensive erosion which has been well documented (Rumery 1983). Ward (1931) noted that the lake contained trout up to 2 lbs in weight.

Biologically the lake is relatively rich with extensive beds of aquatic macrophytes, including *Schonoplectus lacustris*, *Nuphar*, *Juncus bulbosus*, *Potamogeton*, *Phragmites*, and *Littorella*. Water is clear with a secchi-disc depth of c. 5 m. Unusually for the area, the lake appears to be free from heavy metal pollution and on the sampling day tadpoles were abundant. The lake is mostly <3 m deep but a deeper hole at c. 8 m occurs at the north eastern end of the lake. Two cores were obtained in 7 m of water and contained a 2-3 cm thick uppermost layer of oxidized fairly organic sediment above brown silty material, rich in inwashed material.

pH	6.6	Cond.	51 $\mu\text{S cm}^{-1}$
Ca	145.7 $\mu\text{eq l}^{-1}$	DOC	1.7 mg l^{-1}

Most common diatom: *Achnanthes minutissima*

Llyn Clyd, sampled 24th May 1987, 14.00.

A small high altitude (660 m) lake which lies above the Nant Ffrancon valley below the summit of Y Garn (OS grid ref. SH 635597)

pH	6.1	Cond.	28 $\mu\text{S cm}^{-1}$
Ca	57.9 $\mu\text{eq l}^{-1}$	DOC	0.5 mg l^{-1}

Most common diatom: *Fragilaria virescens* v. *exigua*

Llyn Conwy, sampled 26th May 1987, 12.30.

A large lake (OS grid ref. SH 780463) which lies at 450 m altitude with a predominantly moorland catchment with much *Calluna* on blanket peat. Ward (1931) noted that the lake held great numbers of 0.25 lb trout. (See Patrick and Stevenson 1986 for a detailed description of the catchment and fishery history of this site).

Lake water is slightly brown coloured and the aquatic macrophytes, *Juncus bulbosus*, *Littorella* and *Sparganium* (especially around a small island in the southern corner of the lake) were observed; also few small trout were seen rising. Several cores from various depths were taken from the west side of the lake. A master core taken with a wide diameter piston corer in 7 m of water contained 1.72 m of homogenous dark brown organic sediment.

pH	4.8	Cond.	32 $\mu\text{S cm}^{-1}$
Ca	39.9 $\mu\text{eq l}^{-1}$	DOC	1.9 mg l^{-1}

Most common diatom: *Eunotia incisa*.

Llyn Cwm Bychan: sampled 12th May 1987, 13.00.

A valley lake (OS grid ref. SH 640313) located at 191 m altitude near Harlech; the catchment is rugged with much outcropping rock in higher places; land-use is rough grazing for sheep but there remains some oak woodland on the southern slopes. Pockets of blanket peat have accumulated in low-lying areas near the south east end of the lake and some erosion is occurring. Some exploratory mining has taken place on the northern catchment slopes at sometime in the past. A farm exists near the main inflow at the east end of the lake. Ward (1931) noted that trout fishing was previously good but had declined due to over-fishing.

The eastern shore of the lake is fringed by *Juncus Epilithon* was very sparse and aquatic macrophytes were represented by *Littorella* and apparently little else, although high water level hampered littoral sampling. Secchi-disc depth was c. 4 m, maximum depth was c. 14.5 m and two cores of dark grey sediment were collected from 13.5 m and 14.0 m respectively.

pH	5.2	Cond.	36 $\mu\text{S cm}^{-1}$
Ca	59.9 $\mu\text{eq l}^{-1}$	DOC	0.8 mg l^{-1}
Most common diatom: <i>Eunotia incisa</i>			

Llyn Cwm Ffynnion, sampled 14th May 1987, 18.30.

A very irregular shaped lake (OS grid ref. SH 648564), 1 km west of Pen y Gwryd, lying below the Glyders at 380 m altitude. The catchment is very steep and rocky to the north but the area around the lake is of low relief, covered with blanket peat and dominated by upland grasses which are grazed by sheep. The lake has moderately peaty water and Ward (1931) noted that it supported a few trout of very small size though fishing was apparently better before the level was lowered.

Aquatic macrophytes were few although the water was clear with a secchi-disc depth of about 6 m. Most of the lake is c. 3 m deep and organic sediments are uncommon. Most of the lake bed is composed of grey clay and bare rock. Repeated coring attempts showed that the clay possessed an upper crust of iron hydroxides and gravel and this occurred at the deepest point (11 m). Cores of organic sediment could only be obtained from shallower water (8 m depth) near the western shore. These cores consisted of black flocculant sediment ('liquified peat').

pH	5.4	Cond.	22 $\mu\text{S cm}^{-1}$
Ca	40.4 $\mu\text{eq l}^{-1}$	DOC	1.1 mg l^{-1}
Most common diatom: <i>Fragilaria virescens</i> v. <i>exigua</i>			

Llyn Cwm Silyn (lower), sampled 14th May 1987, 11.30.
Llyn Cwm Silyn (upper), sampled 14th May 1987, 13.30.

This exposed corrie lake, located 4 km east of Penygoes, is divided into two sections by a moraine, the upper lake (OS grid ref. SH 515505) and lower lake (OS grid ref. SH 512508) occur at about 340 m altitude with the latter higher by c. 2 m. There is much exposed rock in higher parts of the catchment and the back rock wall of the corrie slopes steeply into the upper lake at the south east end. In the west the catchment is of lower relief and is managed for sheep grazing. Land to the north and north east is less accessible and is dominated by *Calluna*. Soils are mainly minerogenic. Ward (1931) noted that the lake contained a small brown trout population.

In the Lower lake aquatic macrophytes were mainly submerged *Juncus bulbosus*, with *Lobelia* in the shallows. In the littoral green filamentous algae and diatoms occurred sparsely on stones in both sections of the lake. Maximum depth in the lower lake was 17 m although no useful core could be obtained at this point as late-glacial clay comprised the surface sediment. Successful cores were obtained at 11.5 m depth and contained c. 6 cm of brown flocculant oxidized sediment lying above brownish-grey sediment. Cores from the upper lake were obtained from the deepest point (18.5 m), some 30 m off the corrie back wall. They consisted of c. 6 cm of brown flocculant oxidized sediment lying above c. 6 cm of brownish-grey sediment, below which grey clay was present. The lake water was very clear with secchi-disc depths in the upper and lower lakes of 10 m and 7 m respectively.

Lower:	pH	5.2	Cond.	36 $\mu\text{S cm}^{-1}$
	Ca	35.4 $\mu\text{eq l}^{-1}$	DOC	undetectable
	Most common diatom: <i>Achnanthes marginulata</i> v. <i>major</i>			
Upper:	pH	5.3	Cond.	33 $\mu\text{S cm}^{-1}$
	Ca	35.9 $\mu\text{eq l}^{-1}$	DOC	0.3 mg l^{-1}
	Most common diatom: <i>Achnanthes marginulata</i> v. <i>major</i>			

(nb. *Navicula tenuicephala* was also common at both sites)

Llyn Diwaunedd (upper), sampled 13th May 1987, 15.30.

This lake (OS grid ref. SH 685536), 3 km east of Snowdon, is divided by a line of boulders and till into upper and lower sections and has the appearance of a typical corrie lake. The natural barrier across the lake is probably a terminal moraine formed during the late-glacial readvance, a similar feature occurs in Llyn Cwm Silyn (see below). Exposed rock is common on higher ground and lower parts of the catchment are lightly grazed and *Molinia*, *Festuca*, and *Nardus* are common. Soils are predominantly minerogenic but blanket peat occurs locally. Extensive conifer plantations have been established around much of the lower lake. According to Ward (1931) the lake previously supported brown trout though fishing quality had declined by the 1930s.

Aquatic macrophytes were infrequent except for *Juncus bulbosus* which was abundant at the west end of the lake and adjacent to the dividing moraine. The lower lake at 13 m maximum depth is shallower than the upper where the maximum depth is 15.5 m. The deepest point in the latter lies about 50 m from the main inflow and when cored only about 3 cm of organic sediment was found overlying grey clay. Only one good core was collected at this site, in 14 m of water. The core contained c. 6 cm of brown oxidized, fairly organic sediment overlying a grey clay lens at 6-7 cm (inwash or redeposited glacial clay?) with greyish brown silty sediment with bryophytes below. Secchi-disc depth was c. 5.5 m.

pH	5.9	Cond.	26 $\mu\text{S cm}^{-1}$
Ca	47.9 $\mu\text{eq l}^{-1}$	DOC	0.7 mg l^{-1}
Most common diatom: <i>Brachysira brebissonii</i>			

Llyn Du, sampled 12th May 1987, 18.00.

210 This small lake (OS grid ref. SH 564425) lies a few kilometers north east of Portmadog in boggy ground below Mynydd Gorllwyn at an altitude of 255 m. The north west of the catchment contains a farm; here the land is of low relief and is given over to sheep grazing on raised quality pasture. The lake level has probably been lowered sometime in the past and some mining has occurred in the catchment. There are no clear inflows or outflows although a seepage outlet is probably through an alder/willow carr. Some drainage ditches have been cut through to the lake. Ward (1931) noted that small black trout were common in the lake.

The littoral is organic and fringed with aquatic macrophytes, *Carex rostrata*, *Littorella* and *Nuphar lutea* being common. Maximum depth is 7 m and two cores of black organic sediment were collected from 6.0 and 6.5 m depth. The water is brownish, secchi-disc depth being c. 1.5 m.

pH	6.2	Cond.	52 $\mu\text{S cm}^{-1}$
Ca	149.2 $\mu\text{eq l}^{-1}$	DOC	2.3 mg l^{-1}
Most common diatom: <i>Fragilaria virescens</i> v. <i>exigua</i>			

Llyn Edno, sampled 24th May 1987, 16.00.

This lake (OS grid ref. SH 663497) lies at 550 m in a small catchment below Moel Meirch some 2 km south east of Llyn Gwynant. The catchment contains much exposed rock with extensive scree slopes adjoining the lake, especially along the north western shore. Blanket peat is common and *Nardus* grass supports low intensity sheep grazing immediately to the south west of the lake. Elsewhere *Calluna* and *Vaccinium* occur. The lake occurs at the junction of black shales and sandstones. In many respects the lake is physically similar to Llyn y Garn. Ward (1931) noted that the lake supported large trout.

Lake water is clear (secchi-disc depth c. 4.5 m) and fringing aquatic macrophytes, *Lobelia*, *Littorella*, and *Carex rostrata*, are common in sheltered bays. *Isoetes* occurs at depth. The lake has an unusual 'L' shape and has a complex bathymetry with at least three sub-basins, the deepest (20 m) occurs near the centre. Coring at this point showed that about 40 cm of black organic sediment overlies about 20 cm of gritty silt below which was grey clay; hence the area was unsuitable for coring with a Mackereth mini-corer. In the southern corner of the lake a 12 m deep sub-basin was located and yielded two c. 80 cm long cores of black organic sediment.

pH	5.0	Cond.	28 $\mu\text{S cm}^{-1}$
Ca	38.9 $\mu\text{eq l}^{-1}$	DOC	1.2 mg l^{-1}
Most common diatom. <i>Cyclotella kutzingiana</i>			

Llyn Geirionydd, sampled 11th May 1987, 18.00

This long narrow lake (OS grid ref. SH 765610) is also in the Gwydyr Forest area. It lies at 228 m altitude and the steep eastern slopes of its catchment are extensively planted with now mature conifers; rough grazing for sheep occurs on the western slopes. There has been considerable mining activity within the catchment (note the elevated zinc concentration - Appendix 2) and Ward (1931) states that the lake was devoid of fish at that time due to pollution from copper mining. The lake has now been stocked with trout which are apparently surviving.

Epilithon was sparse and aquatic macrophytes were few, only *Littorella* and mosses were observed. Maximum depth of the lake is 14.5 m and sediment cores were taken from 13.5 m and 14 m. The cores contained brown surficial sediment with leaf debris but became greyer below about 12 cm depth, probably reflecting soil inwash resulting from afforestation.

pH	6.6	Cond.	79 $\mu\text{S cm}^{-1}$
Ca	213.1 $\mu\text{eq l}^{-1}$	DOC	2.1 mg l^{-1}

Most common diatom: *Brachysira vitrea*

Llyn Glas, sampled 24th May 1987, 12.30.

This small lake (OS grid ref. SH 601547) lies under the summit of Snowdon (on the west side) at 520 m altitude. The catchment is composed of boulder screes and where slopes are less steep, moorland grasses (including *Nardus*) occur on thin minerogenic soils; small pockets of blanket peat are also present. Other terrestrial plants include *Lycopodium* (two species) and *Rhacomitrium*. Ward (1931) recorded the presence of small trout in the lake and also noted that copper was mined in the immediate vicinity and suggested (wrongly) that the lake was artificial.

The lake water is very clear and the lake bottom is everywhere visible, however although common in shallow water, aquatic plants are limited to about 3 m depth. *Isoetes* is most abundant and forms a discrete fringe around the lake between 0.5 and 3.0 m depth. *Littorella* and the moss *Fontinalis* also occur and one small stand of *Potamogeton* was recorded. A few snails were observed on the surface sediment and reflect the relatively high pH of lake water which in turn reflects the local geology (pyroclastic rocks, including basic tuffs). The deepest point in the lake is 6.5 m towards the centre and several >1 m cores of grey sediment were collected. No blackening towards the top of any of these cores was observed.

pH	6.2	Cond.	26 $\mu\text{S cm}^{-1}$
Ca	65.9 $\mu\text{eq l}^{-1}$	DOC	<0.1 mg l^{-1}

Most common diatom: *Achnanthes detha*

Llyn Glasfryn, sampled 18th May 1987, 12.00.

A shallow almost circular lake on the Llyn Peninsular (OS grid ref. SH 403422) possessing several afforested small islands. This spring fed lake lies at low altitude (120 m) in countryside of moderate relief, the catchment is however very small and includes woodland and several pasture fields. The lake was drained in the 1930s to clear a population of coarse fish prior to the introduction of trout.

The water is clear and allows aquatic macrophytes to grow over the entire bed of the lake. Common aquatic macrophytes were *Menyanthes trifoliata*, *Nuphar* and *Carex rostrata*. Maximum depth is about 1 m and a sediment core recovered about 12 cm of brown silt overlying grey clay. The flora and fauna of the lake was described by Griffiths c. 1895 in a local natural history society journal.

pH	6.9	Cond.	31 $\mu\text{S cm}^{-1}$
Ca	390.7 $\mu\text{eq l}^{-1}$	DOC	5.7 mg l^{-1}

Most common diatom: *Fragilaria elliptica*

Llyn Glaslyn, sampled 17th May 1987, 14.30.

This almost circular and relatively undisturbed lake (OS grid ref. SN 826941) lies at about 490 m altitude in a catchment partly given over to the sheep grazing; the western section is maintained as a *Calluna* heath. Ward (1931) noted that although several attempts at stocking the lake with trout had been made, the fish failed to survive.

The lake is very exposed and aquatic macrophytes appeared to be absent from the stone/gravel littoral area. Macrophytes possibly occur at depth since the water is very clear with a secchi-disc depth in excess of 7 m. The deepest point in the lake is 11 m, towards the centre. Coring showed the bottom to be grey clay at this point and this clay appeared to form the surface sediment below much of the lake. A patch of organic sediment was however located immediately to the west of the 11 m point at 9-10 m depth. The cores obtained consisted of about 12 cm of brown oxidised sediment (probably the mixed oxidized 'micro'zone) overlying grey clay.

pH	4.9	Cond.	30 $\mu\text{S cm}^{-1}$
Ca	34.9 $\mu\text{eq l}^{-1}$	DOC	0.8 mg l^{-1}

Most common diatom: *Achnanthes marginulata*

Llyn Goddionduon, sampled May 15th 1987, 13.30

Llyn Goddionduon (OS grid ref. SH 754585) lies about 0.5 km south of Llyn Bychan at an altitude of 292 m. It has a completely afforested catchment, although selective felling of the forest is currently occurring. According to Ward (1931) the lake was even then destitute of fish.

Aquatic macrophyte beds are extensive along the western shore and similar in composition to those in Llyn Bychan. The lake is mostly shallow and the majority of the lake bed lies within the photic zone. Secchi-disc depth is about 6 m. The deepest point is at 7 m and occurs in a small depression near the western edge of the lake. Two cores were taken from 5.5 m water depth and contained organic sediment several centimeters thick overlying grey silty sediment. This latter sediment probably results from soil erosion following afforestation. The sediments of this lake have been extensively studied by researchers at Liverpool University.

pH	5.9	Cond.	52 $\mu\text{S cm}^{-1}$
Ca	102.3 $\mu\text{eq l}^{-1}$	DOC	1.4 mg l^{-1}

Most common diatom: *Fragilaria virescens* v. *exigua*

Llyn Gwynant, sampled 18th May 1987, 15.00.

A relatively large lake (OS grid ref. SH 644529) that lies at an altitude of only 70 m although the eastern slopes of the Snowdon massif and western slopes of Cerrig Cochion form much of the catchment. On flatter ground immediately to the north east of the lake, near the Afon Glaslyn inflow, sheep and cattle graze pasture of raised quality and in summer months the area is used as a camping ground. Some deciduous woodland, mainly oak and birch, as well as several farms occur in the catchment. Ward (1931) noted that the lake contained a good stock of trout and that the water level had been previously lowered.

Lake water was fairly clear with secchi-disc depth of 4.5 m, but aquatic macrophytes were few on the exposed eastern shore. *Juncus bulbosus* was locally common and *Myriophyllum* was abundant around the Glaslyn inflow. A maximum depth of 17 m occurs some 50 m off an escarpment on the north west shore and two cores were collected from 16.5 m depth. The top 12 cm of sediment was fairly silty and light brown in colour; a layer of grey silt/clay occurred below and possibly provides evidence of the nineteenth century lake level reduction or mining activity in the catchment.

pH	6.6	Cond.	37 $\mu\text{S cm}^{-1}$
Ca	117.8 $\mu\text{eq l}^{-1}$	DOC	0.8 mg l^{-1}
Most common diatom: <i>Achnanthes minutissima</i>			

Llyn Ird dyn, sampled 23rd May 1987, 13.00.

An oval lake (OS grid ref. SH 630220) lying at 380 m at the foot of Craig y Grut (north east of Barmouth). The catchment is composed of sheep grazed upland grasses and exposed rock; blanket peat cover was not extensive. A substantial stone walled trackway and pens for sheep on the south side of the lake provide evidence of considerable shepherding activity in the past. Ward (1931) noted that the lake was well known for its excellent trout fishing, the lake apparently still supports fish today.

The water is clear, secchi-disc depth was c. 5 m and although littoral emergent macrophytes are rare (a few *Equisetum*) the lake bed is covered with a dense growth of *Isoetes lacustris*. A maximum depth of 8.75 m occurs towards the east shore although coring at this point showed the sediment to be composed of grey clay. Short cores of black organic sediment were obtained in 5.5 m of water c. 50 m south of the deepest point.

pH	5.1	Cond.	36 $\mu\text{S cm}^{-1}$
Ca	60.4 $\mu\text{eq l}^{-1}$	DOC	0.8 mg l^{-1}
Most common diatom: <i>Fragilaria virescens</i> v. <i>exigua</i>			

Llyn Llennych, sampled 12th May 1987, 15.30

The lake is located (OS grid ref. SH 655377) near Harlech at 255 m altitude and lies in a small catchment of low relief where sheep graze upland grasses and blanket peat predominates. Inflows are very minor. The littoral is composed of stones and blanket peat and exposed but submerged tree stumps (pine?) are present. It is described by Ward (1931) as a good trout lake. 210

Epilithon is fairly abundant as are the aquatic macrophytes, *Littorella*, *Lobelia* and *Equisetum*. Despite the apparent abundance of blanket peat the lake water is fairly clear with a secchi-disc depth of c. 4 m. Maximum depth was 10 m and cores of black sediment were collected from 9.5 m.

pH	6.2	Cond.	42 $\mu\text{S cm}^{-1}$
Ca	133.2 $\mu\text{eq l}^{-1}$	DOC	1.8 mg l^{-1}

Most common diatom: *Brachysira vitrea*

Llyn Penrhaiadr, sampled 17th May 1987, 16.30.

This lake (OS grid ref. SN 753933) lies at 410 m in a peatland catchment where upland grasses predominate, afforestation is absent and some sheep grazing occurs. The lake has been sluiced but otherwise it is relatively undisturbed. According to Ward (1931) the lake contained good trout and perch.

The water is moderately peaty but secchi-disc depth was not determined. Littoral aquatic macrophytes consisted of *Juncus bulbosus*, *Carex rostrata* and *Littorella*. The deepest point of 7 m was located near the western shore and two cores of black organic sediment were collected from 6.5 m.

pH	5.2	Cond.	31 $\mu\text{S cm}^{-1}$
Ca	44.9 $\mu\text{eq l}^{-1}$	DOC	2.8 mg l^{-1}

Most common diatom: *Eunotia incisa*

Llyn Tecwyn Isaf, sampled 18th May 1987, 18.00.

This relatively undisturbed and sheltered lake (OS grid ref. SH 629370) lies east of Harlech at 100 m altitude in a small catchment partially forested with oak woodland. The catchment also contains several fields with cattle grazing pasture. Ward (1931) noted that the lake supported trout and perch and that *Nuphar* was abundant, perch are still to be caught in the lake.

The current macrophytic vegetation of the lake consists of Nuphar, *Equisetum* and *Carex rostrata* with *Lythrum portula* common in the narrow littoral zone. Water is clear although slightly brown with a secchi-disc depth of c. 5 m. Most of the lake is 3-4 m in depth and the deepest point of 7 m occurs in the north eastern corner. Two cores were collected and both consisted of black homogeneous sediment.

pH	5.9	Cond.	60 $\mu\text{S cm}^{-1}$
Ca	152.7 $\mu\text{eq l}^{-1}$	DOC	1.4 mg l^{-1}

Most common diatom: *Fragilaria virescens* v. *exigua*

Llyn y Gadair, sampled 14th May 1987, 15.00.

This lake (OS grid ref. SH 648564) lies in a glacial valley bottom at 380 m altitude and the western slopes of the catchment form part of the Snowdon massif. Improved quality pasture surrounds most of the lake and a raised trackway embankment has been constructed along the western shore. Conifers have been planted on the southern side and a disused quarry occupies the an area immediately to the west of the lake. Ward (1931) noted that the lake supported a good trout population.

Extensive beds of submerged *Juncus bulbosus* occur throughout the lake and *Callitriche* was also abundant. The lake is everywhere shallow with a maximum depth of about 3 m and the entire lake bed lies within the photic zone. Cores consisted of black organic sediment.

pH	6.1	Cond.	35 $\mu\text{S cm}^{-1}$
Ca	93.3 $\mu\text{eq l}^{-1}$	DOC	1.8 mg l^{-1}

Most common diatom: *Fragilaria virescens* v. *exigua*

Llyn y Garn, sampled 13th May 1987, 12.00.

This lake is situated (OS grid ref. SH 762377) north east of Trawsfynydd at an altitude of 510 m. The catchment is a rocky terrain and piles of frost shattered rock abound; large areas of rock debris are bare of vegetation. Bushy *Calluna* is the dominant vegetation type with occasional patches of *Molinia*. Land-management is minimal and consists of very irregular burning and light grazing by sheep, although little sign of sheep activity was seen. Oddly, Ward (1931) stated that the site held only perch at that time although it seems to resemble a typical upland trout lake.

In the littoral, epilithon was scarce and aquatic macrophytes were infrequent, only a few *Lobelia* were observed. Maximum depth was 19.5 m and cores of black sediment were collected from 18.5 m depth. The water was fairly clear, secchi-disc depth being 5.5 m.

pH	6.2	Cond.	38 $\mu\text{S cm}^{-1}$
Ca	110.8 $\mu\text{eq l}^{-1}$	DOC	1.1 mg l^{-1}

Most common diatom: *Cyclotella kutzinghiana* v. *minor*

Llyn y Parc, sampled 15th May 1987, 16.00.

The long narrow valley which contains this lake (OS grid ref. SH 793587) has been exploited in the past for mining purposes, zinc blende being the principal ore exploited (Dewey and Smith 1922). The lake lies at 246 m altitude and has had a sluice system installed at the southern end, although it is now inoperative. The lake is natural in origin although the water level was maintained several metres higher in the past (probably up until the 1930s), when the mine was worked. At the northern end there is a now redundant mine shaft and spoil heap. The lake catchment is wholly afforested with conifers except for a fringe of birch around the lake shore. There are at least two inflows to the lake and the one at the extreme north end is fed directly by mine drainage water.

Submerged aquatic macrophytes were mainly represented by large beds of *Juncus bulbosus* at the northern and southern ends of the lake. Additionally, a few small stands of *Potamogeton* were present at the southern extremity and at the northern end some *Phragmites* and *Carex rostrata* also occur. Aquatic invertebrates were few and a brief inspection revealed only corixids and midge larvae. Stones in the littoral were covered with fine silt and since catchment erosion appears to be minimal at present, this indicates that previously inwashed inorganic sediment (now forming the lake margins) is still being reworked within the lake during periods of wind induced water turbulence. Compared with other Gwydyr Forest lakes the secchi-disc depth of <4 m also indicated a higher loading of inorganic suspended material. The lake is divided into two main sub-basins of almost equal depth and at 11 m the north basin is the deepest by 0.5 m. A sediment core was collected from 10.5 m water depth in the northern basin. The core had a brown oxidized layer at the surface about 1 cm thick overlying a band of grey silt/clay also about 1 cm thick; the remaining c. 12 cm of mud was brownish grey and silty in nature. The inorganic appearance of the sediment strongly indicates that the lake has been impacted by inwash of mineral rich sediment, soil or mine waste. Although mining has now ceased it is possible that high rainfall could inwash old mine spoil to the lake.

The two factors affecting water quality in Llyn y Parc today are high silt loading and trace metal contamination (note high zinc values - Appendix 2) and both are a consequence of previous mining within the catchment. The lake was fishless before 1930 (Ward 1930) and apparently remains so today, almost certainly as a result of mining activity. Preliminary diatom analysis of the sediment core shows that although the lake possessed a substantial diatom phytoplankton in the past it is absent in the most recent sediment.

pH	6.8	Cond.	81 $\mu\text{S cm}^{-1}$
Ca	208.6 $\mu\text{eq l}^{-1}$	DOC	1.1 mg l^{-1}

Most common diatom: *Brachysira vitrea*

3.2 Additional sites

Recent limnological and acidification histories of the following lakes are described in Palaeoecology Research Unit Research papers and are only briefly noted here.

Llyn y Bi; cored 1985 (Fritz *et al.* 1987)

1985-1987 mean:	pH	4.9	Cond.	43 $\mu\text{S cm}^{-1}$
	Ca	53.1 $\mu\text{eq l}^{-1}$		

Most common diatom: *Tabellaria binialis*

Llyn Llagi; cored 1985 (Patrick *et al.* 1987)

1985-1987 mean:	pH	4.9	Cond.	31 $\mu\text{S cm}^{-1}$
	Ca	60.5 $\mu\text{eq l}^{-1}$		

Most common diatom: *Tabellaria quadriseptata*

Llyn Gynon; cored 1985 (Stevenson *et al.* 1987b)

1984-1987 mean:	pH	5.2	Cond.	34 $\mu\text{S cm}^{-1}$
	Ca	41.4 $\mu\text{eq l}^{-1}$		

Most common diatom: *Fragilaria virescens v. exigua*

Llyn Dulyn; cored 1985 (Stevenson *et al.* 1987c)

pH 4.9 Cond. 36.2 $\mu\text{S cm}^{-1}$
Ca 49.4 $\mu\text{eq l}^{-1}$
Most common diatom: *Aulacoseira* [sp. 4] Loch Moan
(R.J.F) 1988 (= *A. lyrata* v. *alpegina* Haworth)

Llyn Berwyn; cored 1984 (Kreiser *et al.* 1986)

1984-1987 mean: pH 4.4 Cond. 58 $\mu\text{S cm}^{-1}$
(pre-liming) Ca 41.2 $\mu\text{eq l}^{-1}$
Most common diatom: *Eunotia incisa*

Llyn Hir; cored 1984 (Fritz *et al.* 1986)

1984-1987 mean: pH 4.8 Cond. 44 $\mu\text{S cm}^{-1}$
(pre-liming) Ca 46.3 $\mu\text{eq l}^{-1}$
Most common diatom: *Eunotia incisa*

4 General observations and conclusions

- 1) The spatial distribution of sediment was strongly asymmetric in several lake basins (Glaslyn, upper and lower Cwm Silyn, Irddyn and Diwaunedd). A combination of basin morphometry and wind induced water movements may be responsible for depositing detrital sediments in shallower areas.
- 2) Palaeolimnological studies have shown that Llyn Gynon, Llyn y Bi, Llyn Dulyn, Llyn Berwyn and Llyn Hir are all recently acidified. From a brief consideration of the diatoms and water chemistry, several lakes in this study set have almost certainly acidified in recent years (eg. Glaslyn - pH <5, clear water).
- 3) Llyn y Garn is probably the best example of an upland acid lake which still possesses a rich *Cyclotella* flora. This site has catchment vegetation consisting predominantly of *Calluna* and in recent decades active land-management appears to have been minimal. This site would make a good comparison with sites with managed grassland catchments (eg. in the Rhinnogs).

4) Some of these Welsh lakes (eg. Llyn Berwyn and Llyn Hir - pre-liming) appear to have a less acidobiontic diatom flora than some Galloway lakes of comparable pH. This suggests that other factors in addition to pH may be important here.

5) Lakes in the Gwydyr Forest and Llyn Gwynant have been severely impacted by mining activity in the past. Diatom analysis of cores from these sites could provide important information on the ecological effects of this form of pollution and help in establishing restoration plans. Zinc pollution could account for the very high frequencies of *Brachysira vitrea* in Llyn y Parc and Llyn Geirionydd.

6) The surface sediment diatoms of these Welsh lakes show a strong correspondence with lake water pH and following numerical analysis (Birks *et al.* 1990) should provide a useful calibrational data sub-set.

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Appendix 1 Frequency diatom abundances in surface sediment samples from the 33 lakes used in the SWAP calibration diatom-pH calibration procedures (Birks *et al* 1990).

Llyn Tecwyn

PI9999 .192% Pinnularia sp.

Llyn Bartwyd

0093	14.841%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1144	13.251%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1141/1	6.184%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
CM052A	6.007%	<i>Cymbella descripta</i> (Hust.) Krammer & Lange-Bertalot 1985
0779	4.947%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
1132	4.770%	<i>Fragilaria pinnata pinnata</i> Ehrenb. 1843
1263/2	4.417%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
2079	3.004%	<i>Navicula tantula</i> Hust. 1943
2237	2.473%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
0601/2	2.297%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
0762	2.120%	<i>Cymbella gaeumannii</i> Meister 1934
2081/1	2.120%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2241/1	1.943%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
0089	1.767%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
1834	1.590%	<i>Navicula mediocris</i> Krasske 1932
1952	1.413%	<i>Navicula pseudoscutiformis</i> Hust. 1930
0599/1	1.237%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
AC9969	1.237%	<i>Achnanthes</i> [scotica/marginulata] Groningen (RJF) 1988
NA9955	1.237%	<i>Navicula</i> [cf. vitiosa] L. Hir (SF) 1986
0112	1.060%	<i>Achnanthes pseudoswazi</i> J.R. Carter 1963
0129	1.060%	<i>Achnanthes sublaevis</i> Hust. 1936
0780	1.060%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
AC042A	1.060%	<i>Achnanthes detha</i>
0994	.883%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1079/1	.883%	<i>Fragilaria vaucheriae vaucheriae</i> (Kutz.) J.B. Petersen 1938
0210/1	.707%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
1303/1	.707%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1998	.707%	<i>Navicula schassmannii</i> Hust. 1937
AC9999	.707%	<i>Achnanthes</i> sp.
CM051A	.707%	<i>Cymbella elginensis</i> Krammer 1981
EU9961	.707%	<i>Eunotia</i> [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
EU9999	.707%	<i>Eunotia</i> sp.
NA9963	.707%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0389	.530%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0956	.530%	<i>Eunotia arcus arcus</i> Ehrenb. 1837
1170/1	.530%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1216	.530%	<i>Gomphonema gracile</i> Ehrenb. 1838
2730	.530%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
NA9973	.530%	<i>Navicula</i> [cf. digitulus] L. Urr (RJF) 1985
0115	.353%	<i>Achnanthes pusilla pusilla</i> Grun. in Cleve & Grun. 1880
0737	.353%	<i>Cymbella amphicephala amphicephala</i> Naegeli ex Kutz. 1849
1113/2	.353%	<i>Krasskella kriegerana</i> (Krasske) R. Ross & Sims 1978
1215/2	.353%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1443	.353%	<i>Navicula angusta</i> Grun. 1860
1592	.353%	<i>Navicula digitulus</i> Hust. 1943
2401	.353%	<i>Pinnularia biceps biceps</i> Greg. 1856
2974	.353%	<i>Tabellaria quadrisepitata</i> Knudson 1952
NA9962	.353%	<i>Navicula</i> [sp. 2] L. Hir (SF) 1986
NA9964	.353%	<i>Navicula</i> [cf. spirata] L. Hir (SF) 1986
NA9999	.353%	<i>Navicula</i> sp.
0008	.177%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
0153/1	.177%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
0919/1	.177%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
0961/1	.177%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
0966	.177%	<i>Eunotia bidentula</i> W. Sm. 1856
1009	.177%	<i>Eunotia naegelii</i> Migula 1907
1051	.177%	<i>Eunotia tridentula</i> Ehrenb. 1843
1076/1	.177%	<i>Eunotia curvata curvata</i> (Kutz.) Lagerst. 1884

Llyn Barlwyd

1106	.177%	<i>Fragilaria elliptica</i> Schum. 1867
1163/1	.177%	<i>Pinnularia major major</i> (Kutz.) W. Sm. 1853
1298/1	.177%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1404/1	.177%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1418/1	.177%	<i>Neidium affine affine</i> (Ehrenb.) Pfitz. 1871
1504	.177%	<i>Navicula bryophila bryophila</i> J.B. Petersen 1928
1536	.177%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
1845	.177%	<i>Navicula minima minima</i> Grun. in Van Heurck 1880
2073	.177%	<i>Navicula subtilissima</i> Cleve 1891
2319	.177%	<i>Nitzschia recta</i> Hantzsch ex Rabenh. 1861
2736/1	.177%	<i>Caloneis bacillum bacillum</i> (Grun.) Cleve 1894
AC9996	.177%	<i>Achnanthes cf. levanderi</i>
CM9999	.177%	<i>Cymbella</i> sp.
FU002C	.177%	<i>Frustulia rhomboides elongatissima</i> Bour.& Mang.
NA156A	.177%	<i>Navicula leptostriata</i> Jorgensen 1948
NI9999	.177%	<i>Nitzschia</i> sp.
SY9999	.177%	<i>Synedra</i> sp.

Llyn Berwyn

0994	27.950%	Eunotia incisa W. Sm. ex Greg. 1854
0794	16.356%	Cymbella perpusilla A. Cleve 1895
0344	14.493%	Asterionella ralfsii W. Sm. 1856
0601/2	9.731%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
1034	7.039%	Eunotia rhomboidea Hust. 1950
0599/1	4.969%	Frustulia rhomboides viridula (Breb. ex Kutz.) Cleve 1894
1170/1	4.141%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
2459a/1	3.106%	Pinnularia subcapitata hilseana (Janisch ex Rabenh.) O. Mull. 1898
2034	1.863%	Navicula soehrensensis soehrensensis Krasske 1923
FR9991	1.449%	Fragilaria [cf. oldenburgiana PIRLA pl 20, 61-2] PIRLA 1987
0961/1	1.035%	Eunotia tenella (Grun. in Van Heurck) A. Cleve 1895
1013	1.035%	Eunotia paludosa Grun. 1862
1981/1	1.035%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
1076/1	.828%	Eunotia curvata curvata (Kutz.) Lagerst. 1884
PI9999	.828%	Pinnularia sp.
1298/1	.621%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
1449/1	.621%	Pinnularia irrorata (Grun. in Van Heurck) Hust. 1939
EU9999	.414%	Eunotia sp.
0093	.207%	Achnanthes minutissima minutissima Kutz. 1833
0364/2	.207%	Pinnularia viridis viridis (Nitzsch) Ehrenb. 1843
0389	.207%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
1004	.207%	Eunotia minutissima A. Cleve-Euler 1934
1009	.207%	Eunotia naegelii Migula 1907
1053	.207%	Eunotia trinacria trinacria Krasske 1929
1303/1	.207%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
1404/1	.207%	Pinnularia abaujensis abaujensis (Pant.) R. Ross in Hartley 1986
1706	.207%	Navicula hassiaca Krasske 1925
2401	.207%	Pinnularia biceps biceps Greg. 1856
2431	.207%	Pinnularia divergens divergens W. Sm. 1853
AC048A	.207%	Achnanthes scotica Jones & Flower

Llyn Bodgynedd

CY9991	62.571%	<i>Cyclotella kuetzingiana</i> agg.
0093	11.248%	<i>Achnanthes minutissima</i> minutissima Kutz. 1833
1144	3.308%	<i>Fragilaria virescens</i> exigua Grun. in Van Heurck 1881
0909/1	2.647%	<i>Cyclotella comta</i> comta (Ehrenb.) Kutz. 1849
1263/2	2.647%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0780	1.229%	<i>Cymbella microcephala</i> microcephala Grun. in Van Heurck 1880
2081/1	.945%	<i>Navicula radiosa</i> tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
AC9996	.945%	<i>Achnanthes</i> cf. <i>levanderi</i>
0601/2	.756%	<i>Tabellaria flocculosa</i> flocculosa (Roth) Kutz. 1844
0681	.756%	<i>Cyclotella comensis</i> Grun. in Van Heurck 1882
1106	.756%	<i>Fragilaria elliptica</i> Schum. 1867
0779	.662%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
1170/1	.662%	<i>Frustulia rhomboides</i> saxonica (Rabenh.) De Toni 1891
1303/1	.662%	<i>Eunotia pectinalis</i> minor (Kutz.) Rabenh. 1864
2237	.662%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
NA9955	.662%	<i>Navicula</i> [cf. <i>vitiosa</i>] L. Hir (SF) 1986
2718/1	.567%	<i>Gomphonema angustatum</i> angustatum (Kutz.) Rabenh. 1864
0153/1	.473%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
0389	.473%	<i>Brachysira brebissonii</i> brebissonii R. Ross in Hartley 1986
0336	.378%	<i>Asterionella formosa</i> formosa Hassall 1850
2241/1	.378%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
2319	.378%	<i>Nitzschia recta</i> Hantzsch ex Rabenh. 1861
0210/1	.284%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
1984	.284%	<i>Navicula rhyncocephala</i> rhyncocephala Kutz. 1844
AC9969	.284%	<i>Achnanthes</i> [<i>scotica</i> / <i>marginulata</i>] Groningen (RJF) 1988
CM052A	.284%	<i>Cymbella descripta</i> (Hust.) Krammer & Lange-Bertalot 1985
NA9963	.284%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
SY9999	.284%	<i>Synedra</i> sp.
0112	.189%	<i>Achnanthes pseudoswazi</i> J.R. Carter 1963
0607/1	.189%	<i>Eunotia pectinalis</i> pectinalis (O.F. Mull.) Rabenh. 1864
0794	.189%	<i>Cymbella perpusilla</i> A. Cleve 1895
0983	.189%	<i>Eunotia flexuosa</i> flexuosa Kutz. 1849
1209/1	.189%	<i>Gomphonema acuminatum</i> coronatum (Ehrenb.) W. Sm. 1853
1215/2	.189%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1443	.189%	<i>Navicula angusta</i> Grun. 1860
1536	.189%	<i>Navicula cocconeiformis</i> cocconeiformis Greg. ex Greville 1855
1834	.189%	<i>Navicula mediocris</i> Krasske 1932
2953	.189%	<i>Synedra rumpens</i> rumpens Kutz. 1844
AC9999	.189%	<i>Achnanthes</i> sp.
0032	.095%	<i>Achnanthes flexella</i> alpestris Brun 1880
0089	.095%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0599/1	.095%	<i>Frustulia rhomboides</i> viridula (Breb. ex Kutz.) Cleve 1894
0785/2	.095%	<i>Cymbella scotica</i> naviculacea (Grun. ex Cleve) R. Ross 1947
0842	.095%	<i>Denticula tenuis</i> tenuis Kutz. 1844
0855/1	.095%	<i>Tabellaria fenestrata</i> (Lyngb.) Kutz. 1844
0956	.095%	<i>Eunotia arcus</i> arcus Ehrenb. 1837
1076/1	.095%	<i>Eunotia curvata</i> curvata (Kutz.) Lagerst. 1884
1216	.095%	<i>Gomphonema gracile</i> Ehrenb. 1838
1404/1	.095%	<i>Pinnularia abaujensis</i> abaujensis (Pant.) R. Ross in Hartley 1986
1592	.095%	<i>Navicula digitulus</i> Hust. 1943
1952	.095%	<i>Navicula pseudoscutiformis</i> Hust. 1930
1968	.095%	<i>Navicula radiosa</i> radiosa Kutz. 1844
2137/2	.095%	<i>Caloneis ventricosa</i> (Ehrenb.) Meister 1912
2374/2	.095%	<i>Synedra parasitica</i> parasitica (W. Sm.) Hust. 1930
2498/1	.095%	<i>Diploneis ovalis</i> (Hilse) Cleve 1894
2733	.095%	<i>Stauroneis anceps</i> anceps Ehrenb. 1843
2793/1	.095%	<i>Pinnularia microstauron</i> microstauron (Ehrenb.) Cleve 1891
2889	.095%	<i>Synedra acus</i> acus Kutz. 1844

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AU005E	.095%	Aulacoseira distans nivalis
AU9999	.095%	Aulacoseira sp.
EU9999	.095%	Eunotia sp.
FR9999	.095%	Fragilaria sp.
NA9973	.095%	Navicula [cf. digitulus] L. Urr (RJF) 1985
NA9999	.095%	Navicula sp.
NI9999	.095%	Nitzschia sp.

Llyn Bodlyn

0601/2	13.670%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
1144	9.738%	Fragilaria virescens exigua Grun. in Van Heurck 1881
0994	8.989%	Eunotia incisa W. Sm. ex Greg. 1854
2974	7.491%	Tabellaria quadrisepitata Knudson 1952
AC9968	5.993%	Achnanthes marginulata major Uaine (VJJ) 1988
NA9963	4.494%	Navicula [sp. 1] L. Hir (SF) 1986
1263/2	3.933%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
0794	3.184%	Cymbella perpusilla A. Cleve 1895
NA156A	2.996%	Navicula leptostriata Jorgensen 1948
0089	2.622%	Achnanthes marginulata Grun. in Cleve & Grun. 1880
0093	2.060%	Achnanthes minutissima minutissima Kutz. 1833
0389	2.060%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
1170/1	2.060%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
0599/1	1.873%	Frustulia rhomboides viridula (Breb. ex Kutz.) Cleve 1894
1981/1	1.873%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
AU005E	1.873%	Aulacoseira distans nivalis
1034	1.685%	Eunotia rhomboidea Hust. 1950
AC048A	1.498%	Achnanthes scotica Jones & Flower
NA9962	1.498%	Navicula [sp. 2] L. Hir (SF) 1986
0779	1.124%	Cymbella lunata W. Sm. in Grev. 1855
1303/1	1.124%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
1536	1.124%	Navicula cocconeiformis cocconeiformis Greg. ex Greville 1855
1018	.749%	Eunotia pectinalis ventricosa Grun. in Van Heurck 1881
2081/1	.749%	Navicula radiosa tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2730	.749%	Stauroneis anceps gracilis Rabenh. 1864
1058	.562%	Eunotia vanheurckii vanheurckii Patr. 1958
1079/1	.562%	Fragilaria vaucheriae vaucheriae (Kutz.) J.B. Petersen 1938
1215/2	.562%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
2241/1	.562%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
2459a/1	.562%	Pinnularia subcapitata hilseana (Janisch ex Rabenh.) O. Mull. 1898
AC9999	.562%	Achnanthes sp.
0008	.375%	Achnanthes austriaca helvetica Hust. 1933
0607/1	.375%	Eunotia pectinalis pectinalis (O.F. Mull.) Rabenh. 1864
0961/1	.375%	Eunotia tenella (Grun. in Van Heurck) A. Cleve 1895
0992	.375%	Eunotia iatriaensis Foged 1970
1009	.375%	Eunotia naegelii Migula 1907
1190/4	.375%	Aulacoseira lirata lirata (Ehrenb.) R. Ross in Hartley 1986
1216	.375%	Gomphonema gracile Ehrenb. 1838
1298/1	.375%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
1749	.375%	Navicula indifferens Hust. 1942
1834	.375%	Navicula mediocris Krasske 1932
1998	.375%	Navicula schassmannii Hust. 1937
2084	.375%	Navicula tenuicephala Hust. 1942
AU9999	.375%	Aulacoseira sp.
EU9965	.375%	Eunotia [sp. 10 (minima)] L. Grannoch (RJF) 1988
FR9999	.375%	Fragilaria sp.
NA9964	.375%	Navicula [cf. spirata] L. Hir (SF) 1986
NA9999	.375%	Navicula sp.
0153/1	.187%	Achnanthes linearis (W. Sm.) Grun. in Cleve & Grun. 1880
0210/1	.187%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
0602/2	.187%	Diatoma hyemale hyemale (Roth) Heib. 1863
0782	.187%	Cymbella minuta minuta Hilse ex Rabenh. 1862
0855/1	.187%	Tabellaria fenestrata (Lyngb.) Kutz. 1844
0966	.187%	Eunotia bidentula W. Sm. 1856
1004	.187%	Eunotia minutissima A. Cleve-Euler 1934
1041	.187%	Eunotia serra serra Ehrenb. 1837
1095	.187%	Fragilaria constricta constricta Ehrenb. 1843
1141/1	.187%	Fragilaria construens venter (Ehrenb.) Grun. in Van Heurck 1881

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1160/1	.187%	<i>Pinnularia lata lata</i> (Breb.) W. Sm. 1853
1187/2	.187%	<i>Aulacoseira distans distans</i> (Ehrenb.) Simonsen 1979
1297/1	.187%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
1443	.187%	<i>Navicula angusta</i> Grun. 1860
1485/1	.187%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
1504	.187%	<i>Navicula bryophila bryophila</i> J.B. Petersen 1928
1592	.187%	<i>Navicula digitulus</i> Hust. 1943
1826	.187%	<i>Navicula madumensis</i> E.G. Jorg. 1948
2832	.187%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
2920/1	.187%	<i>Nitzschia frustulum</i> (Kutz.) Grun. in Cleve & Grun. 1880
AC014B	.187%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986
AC9975	.187%	<i>Achnanthes [altaica var. 1 (minor)]</i> L. Grannoch (RJF) 1988
AU010B	.187%	<i>Aulacoseira perglabra floriniae</i>
CY9991	.187%	<i>Cyclotella kuetzingiana</i> agg.
EU9969	.187%	<i>Eunotia denticulata/lapponica</i> 1987
NA006B	.187%	<i>Navicula mediocris atomus</i> Hust.
PI9999	.187%	<i>Pinnularia</i> sp.

Llyn Bugeilyn

0994	28.022%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
AU010B	8.242%	<i>Aulacoseira perglabra floriniae</i>
0601/2	6.044%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
AU9997	6.044%	<i>Aulacoseira</i> [sp. 4] L. Moan (RJF) 1988
0599/1	4.029%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0007	2.747%	<i>Achnanthes austriaca austriaca</i> Hust. 1922
0794	2.747%	<i>Cymbella perpusilla</i> A. Cleve 1895
1034	2.747%	<i>Eunotia rhomboidea</i> Hust. 1950
1141/1	2.747%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1095	2.564%	<i>Fragilaria constricta constricta</i> Ehrenb. 1843
AU010A	2.381%	<i>Aulacoseira perglabra</i>
1588	2.198%	<i>Navicula difficillima</i> Hust. 1950
1132	2.015%	<i>Fragilaria pinnata pinnata</i> Ehrenb. 1843
1144	2.015%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
AC014B	1.832%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986
AU014A	1.648%	<i>Aulacoseira nygaardii</i> Camburn
1981/1	1.465%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
2034	1.282%	<i>Navicula soehrensensis soehrensensis</i> Krasske 1923
NA9964	1.282%	<i>Navicula</i> [cf. <i>spirata</i>] L. Hir (SF) 1986
1018	1.099%	<i>Eunotia pectinalis ventricosa</i> Grun. in Van Heurck 1881
2317	.916%	<i>Nitzschia pusilla</i> Grun. 1862
2832	.916%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
0966	.733%	<i>Eunotia bidentula</i> W. Sm. 1856
1298/1	.733%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
2459a/1	.733%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
AC042A	.733%	<i>Achnanthes detha</i>
0344	.549%	<i>Asterionella ralfsii</i> W. Sm. 1856
1148	.549%	<i>Fragilaria virescens virescens</i> Ralfs 1843
1418/1	.549%	<i>Neidium affine affine</i> (Ehrenb.) Pfitz. 1871
1764	.549%	<i>Navicula jaernefeltii</i> Hust. 1942
2401	.549%	<i>Pinnularia biceps biceps</i> Greg. 1856
2524	.549%	<i>Pinnularia subcapitata subcapitata</i> Greg. 1856
2974	.549%	<i>Tabellaria quadriseptata</i> Knudson 1952
0008	.366%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
1041	.366%	<i>Eunotia serra serra</i> Ehrenb. 1837
1115/1	.366%	<i>Fragilaria pinnata lancettula</i> (Schum.) Hust. in A. Schmidt 1913
1170/1	.366%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1187/2	.366%	<i>Aulacoseira distans distans</i> (Ehrenb.) Simonsen 1979
1303/1	.366%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1449/1	.366%	<i>Pinnularia irrorata</i> (Grun. in Van Heurck) Hust. 1939
1592	.366%	<i>Navicula digitulus</i> Hust. 1943
1834	.366%	<i>Navicula mediocris</i> Krasske 1932
EU049D	.366%	<i>Eunotia curvata attenuata</i> A. Berg (Cleve Euler)
NA9999	.366%	<i>Navicula</i> sp.
0089	.183%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0093	.183%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
0123	.183%	<i>Achnanthes saxonica</i> Krasske in Hust. 1933
0607/1	.183%	<i>Eunotia pectinalis pectinalis</i> (O.F. Mull.) Rabenh. 1864
0733	.183%	<i>Cymbella aequalis</i> W. Sm. ex Grev. 1855
0779	.183%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0961/1	.183%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
0976	.183%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1004	.183%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1051	.183%	<i>Eunotia tridentula</i> Ehrenb. 1843
1053	.183%	<i>Eunotia trinacria trinacria</i> Krasske 1929
1076/1	.183%	<i>Eunotia curvata curvata</i> (Kutz.) Lagerst. 1884
1382/2	.183%	<i>Aulacoseira lirata lacustris</i> (Grun. in Van Heurck) R. Ross in Hartley 1986
1404/1	.183%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986

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1485/1	.183%	Neidium bisulcatum bisulcatum (Lagerst.) Cleve 1894
1737	.183%	Navicula impexa Hust. 1961
1952	.183%	Navicula pseudoscutiformis Hust. 1930
1959	.183%	Navicula pupula pupula Kutz. 1844
2134	.183%	Navicula ventosa Hust. 1957
2390	.183%	Pinnularia acuminata W. Sm. 1853
2709/3	.183%	Frustulia vulgaris vulgaris (Thwaites) De Toni 1891
AC9999	.183%	Achnanthes sp.
AU9999	.183%	Aulacoseira sp.

Llyn Bychan

0093	29.559%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1132	10.365%	<i>Fragilaria pinnata pinnata</i> Ehrenb. 1843
0780	8.829%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
1263/2	8.829%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
1144	8.253%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
CY9991	4.798%	<i>Cyclotella kuetzingiana</i> agg.
1090	3.839%	<i>Fragilaria brevistriata brevistriata</i> Grun. in Van Heurck 1885
0601/2	1.536%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
0842	1.536%	<i>Denticula tenuis tenuis</i> Kutz. 1844
1106	1.536%	<i>Fragilaria elliptica</i> Schum. 1867
CM052A	1.536%	<i>Cymbella descripta</i> (Hust.) Krammer & Lange-Bertalot 1985
FR9999	1.344%	<i>Fragilaria</i> sp.
0766	1.152%	<i>Cymbella helvetica helvetica</i> Kutz. 1844
0153/1	.960%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
2081/1	.960%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
0779	.768%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0782	.768%	<i>Cymbella minuta minuta</i> Hilse ex Rabenh. 1862
1894/1	.768%	<i>Diploneis oculata</i> (Breb.) Cleve 1894
NA9955	.768%	<i>Navicula</i> [cf. <i>vitiosa</i>] L. Hir (SF) 1986
0032	.576%	<i>Achnanthes flexella alpestris</i> Brun 1880
2237	.576%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
2498/1	.576%	<i>Diploneis ovalis</i> (Hilse) Cleve 1894
2718/1	.576%	<i>Gomphonema angustatum angustatum</i> (Kutz.) Rabenh. 1864
NI9999	.576%	<i>Nitzschia</i> sp.
0209/1	.384%	<i>Amphora ovalis affinis</i> (Kutz.) Van Heurck 1885
0389	.384%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
1521/1	.384%	<i>Cymbella cesatii cesatii</i> (Rabenh.) Grun. in A. Schmidt 1881
1783	.384%	<i>Navicula laevissima</i> Kutz. 1844
1968	.384%	<i>Navicula radiosa radiosa</i> Kutz. 1844
2730	.384%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
AC9999	.384%	<i>Achnanthes</i> sp.
0364/2	.192%	<i>Pinnularia viridis viridis</i> (Nitzsch) Ehrenb. 1843
0599/1	.192%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0607/1	.192%	<i>Eunotia pectinalis pectinalis</i> (O.F. Mull.) Rabenh. 1864
0608/2	.192%	<i>Berkeleya rutilans</i> (Trentepohl ex Roth) Grun. 1868
0762	.192%	<i>Cymbella gaeumannii</i> Meister 1934
0855/1	.192%	<i>Tabellaria fenestrata</i> (Lyngb.) Kutz. 1844
0942	.192%	<i>Epithemia sorex sorex</i> Kutz. 1844
0956	.192%	<i>Eunotia arcus arcus</i> Ehrenb. 1837
0983	.192%	<i>Eunotia flexuosa flexuosa</i> Kutz. 1849
1058	.192%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
1141/1	.192%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1148	.192%	<i>Fragilaria virescens virescens</i> Ralfs 1843
1170/1	.192%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1209/1	.192%	<i>Gomphonema acuminatum coronatum</i> (Ehrenb.) W. Sm. 1853
1216	.192%	<i>Gomphonema gracile</i> Ehrenb. 1838
1303/1	.192%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1404/1	.192%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1536	.192%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
1959	.192%	<i>Navicula pupula pupula</i> Kutz. 1844
2073	.192%	<i>Navicula subtilissima</i> Cleve 1891
2079	.192%	<i>Navicula tantula</i> Hust. 1943
2203	.192%	<i>Nitzschia angustata acuta</i> Grun. in Cleve & Grun. 1880
2319	.192%	<i>Nitzschia recta</i> Hantzsch ex Rabenh. 1861
2431	.192%	<i>Pinnularia divergens divergens</i> W. Sm. 1853
2733	.192%	<i>Stauroneis anceps anceps</i> Ehrenb. 1843
2819	.192%	<i>Surirella biseriata biseriata</i> Breb. & Godey 1835
2934	.192%	<i>Synedra minuscula</i> Grun. in Van Heurck 1881

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2942/1	.192%	Nitzschia palea palea (Kutz.) W. Sm. 1856
2953	.192%	Synedra rumpens rumpens Kutz. 1844
2974	.192%	Tabellaria quadrisepata Knudson 1952
CM9999	.192%	Cymbella sp.
NA006B	.192%	Navicula mediocris atomus Hust.
NE9999	.192%	Neidium sp.

Llyn Clyd

1144	20.935%	Fragilaria virescens exigua Grun. in Van Heurck 1881
0093	14.837%	Achnanthes minutissima minutissima Kutz. 1833
1263/2	13.618%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
1170/1	5.691%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
0779	4.675%	Cymbella lunata W. Sm. in Grev. 1855
0794	4.675%	Cymbella perpusilla A. Cleve 1895
0599/1	3.659%	Frustulia rhomboides viridula (Breb. ex Kutz.) Cleve 1894
0601/2	3.455%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
0389	2.642%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
NA156A	2.642%	Navicula leptostriata Jorgensen 1948
2241/1	2.439%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
2081/1	2.236%	Navicula radiosa tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
1443	1.423%	Navicula angusta Grun. 1860
AC048A	1.220%	Achnanthes scotica Jones & Flower
0994	1.016%	Eunotia incisa W. Sm. ex Greg. 1854
2237	1.016%	Nitzschia fonticola Grun. in Van Heurck 1881
AC9969	1.016%	Achnanthes [scotica/marginulata] Groningen (RJF) 1988
AC9996	1.016%	Achnanthes cf. levanderi
0089	.813%	Achnanthes marginulata Grun. in Cleve & Grun. 1880
0748	.813%	Cymbella cesatii capitata Krieger 1933
GO9999	.813%	Gomphonema sp.
0133	.610%	Achnanthes suchlandtii Hust. 1933
1968	.610%	Navicula radiosa radiosa Kutz. 1844
2730	.610%	Stauroneis anceps gracilis Rabenh. 1864
0210/1	.407%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
0607/1	.407%	Eunotia pectinalis pectinalis (O.F. Mull.) Rabenh. 1864
0780	.407%	Cymbella microcephala microcephala Grun. in Van Heurck 1880
1215/2	.407%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
1216	.407%	Gomphonema gracile Ehrenb. 1838
1297/1	.407%	Eunotia denticulata denticulata (Breb. ex Kutz.) Rabenh. 1864
1981/1	.407%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
2319	.407%	Nitzschia recta Hantzsch ex Rabenh. 1861
2733	.407%	Stauroneis anceps anceps Ehrenb. 1843
0364/2	.203%	Pinnularia viridis viridis (Nitzsch) Ehrenb. 1843
0785/2	.203%	Cymbella scotica naviculacea (Grun. ex Cleve) R. Ross 1947
0975	.203%	Eunotia elegans Ostr. 1910
0983	.203%	Eunotia flexuosa flexuosa Kutz. 1849
1018	.203%	Eunotia pectinalis ventricosa Grun. in Van Heurck 1881
1058	.203%	Eunotia vanheurckii vanheurckii Patr. 1958
1079/1	.203%	Fragilaria vaucheriae vaucheriae (Kutz.) J.B. Petersen 1938
1209/1	.203%	Gomphonema acuminatum coronatum (Ehrenb.) W. Sm. 1853
1298/1	.203%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
1404/1	.203%	Pinnularia abaujensis abaujensis (Pant.) R. Ross in Hartley 1986
1578/1	.203%	Achnanthes depressa (Cleve) Hust. 1933
1761/2	.203%	Neidium iridis iridis (Ehrenb.) Cleve 1894
1834	.203%	Navicula mediocris Krasske 1932
1959	.203%	Navicula pupula pupula Kutz. 1844
2050/3	.203%	Brachysira styriaca (Grun. in Van Heurck) R. Ross in Hartley 1986
2459a/1	.203%	Pinnularia subcapitata hilseana (Janisch ex Rabenh.) O. Mull. 1898
AC9999	.203%	Achnanthes sp.
NA9964	.203%	Navicula [cf. spirata] L. Hir (SF) 1986
SY9999	.203%	Synedra sp.

Llyn Conwy

0994	17.045%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
CY9991	16.558%	<i>Cyclotella kuetzingiana</i> agg.
0794	8.604%	<i>Cymbella perpusilla</i> A. Cleve 1895
1144	6.494%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
0601/2	6.331%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
2974	5.844%	<i>Tabellaria quadrisepata</i> Knudson 1952
0344	4.870%	<i>Asterionella ralfsii</i> W. Sm. 1856
0599/1	4.383%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
1170/1	2.760%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
NA158A	2.597%	<i>Navicula cumbriensis</i> Haworth 1987
1034	2.110%	<i>Eunotia rhomboidea</i> Hust. 1950
0093	1.623%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
0389	1.623%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0779	1.623%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
AU010A	1.623%	<i>Aulacoseira perglabra</i>
1215/2	1.136%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1263/2	.974%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
2237	.812%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
NA167A	.812%	<i>Navicula hoefleri</i> Sensu Ross et Sims
1981/1	.649%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
AU9999	.649%	<i>Aulacoseira</i> sp.
0782	.487%	<i>Cymbella minuta minuta</i> Hilse ex Rabenh. 1862
1449/1	.487%	<i>Pinnularia irrorata</i> (Grun. in Van Heurck) Hust. 1939
1834	.487%	<i>Navicula mediocris</i> Krasske 1932
2401	.487%	<i>Pinnularia biceps biceps</i> Greg. 1856
NA006B	.487%	<i>Navicula mediocris atomus</i> Hust.
PI9999	.487%	<i>Pinnularia</i> sp.
TA9999	.487%	<i>Tabellaria</i> sp.
1004	.325%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1128/1	.325%	<i>Eunotia pectinalis undulata</i> (Ralfs) Rabenh. 1864
1141/1	.325%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1303/1	.325%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1536	.325%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
1968	.325%	<i>Navicula radiosa radiosa</i> Kutz. 1844
2736/1	.325%	<i>Caloneis bacillum bacillum</i> (Grun.) Cleve 1894
2832	.325%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
0153/1	.162%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
0210/1	.162%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0780	.162%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
0855/1	.162%	<i>Tabellaria fenestrata</i> (Lyngb.) Kutz. 1844
1009	.162%	<i>Eunotia naegelii</i> Migula 1907
1018	.162%	<i>Eunotia pectinalis ventricosa</i> Grun. in Van Heurck 1881
1163/1	.162%	<i>Pinnularia major major</i> (Kutz.) W. Sm. 1853
1404/1	.162%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1418/1	.162%	<i>Neidium affine affine</i> (Ehrenb.) Pfitz. 1871
1504	.162%	<i>Navicula bryophila bryophila</i> J.B. Petersen 1928
2081/1	.162%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2241/1	.162%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
2333/2	.162%	<i>Stenopterobia sigmatella</i> (Greg.) R. Ross in Hartley 1986
2431	.162%	<i>Pinnularia divergens divergens</i> W. Sm. 1853
2533	.162%	<i>Pinnularia undulata</i> Greg. 1854
2730	.162%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
2733	.162%	<i>Stauroneis anceps anceps</i> Ehrenb. 1843
2798/1	.162%	<i>Fragilaria construens construens</i> (Ehrenb.) Grun. 1862
2934	.162%	<i>Synedra minuscula</i> Grun. in Van Heurck 1881
AC048A	.162%	<i>Achnanthes scotica</i> Jones & Flower
AC9999	.162%	<i>Achnanthes</i> sp.
AU010B	.162%	<i>Aulacoseira perglabra floriniae</i>

Llyn Conway

CM052A	.162%	Cymbella descripta (Hust.) Krammer & Lange-Bertalot 1985
CM9995	.162%	Cymbella [PIRLA sp. 1] PIRLA 1985
GO9999	.162%	Gomphonema sp.
NA156A	.162%	Navicula leptostriata Jorgensen 1948
NA9962	.162%	Navicula [sp. 2] L. Hir (SF) 1986
NA9999	.162%	Navicula sp.
NE9999	.162%	Neidium sp.
SU9999	.162%	Surirella sp.

Llyn Cwm Bychan

0994	26.667%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
0601/2	11.183%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
2084	9.677%	<i>Navicula tenuicephala</i> Hust. 1942
1298/1	5.376%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
0089	4.946%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0389	3.656%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
1034	2.796%	<i>Eunotia rhomboidea</i> Hust. 1950
1215/2	2.796%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
0976	2.366%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1297/1	2.151%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
AC9975	2.151%	<i>Achnanthes [altaica var. 1 (minor)]</i> L. Grannoch (RJF) 1988
0093	1.505%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
0794	1.505%	<i>Cymbella perpusilla</i> A. Cleve 1895
NA156A	1.505%	<i>Navicula leptostriata</i> Jorgensen 1948
1009	1.075%	<i>Eunotia naegelii</i> Migula 1907
1144	1.075%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1263/2	1.075%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
1303/1	1.075%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
EU9961	1.075%	<i>Eunotia [vanheurckii var. 1]</i> Round L. Glenhead (RJF) 1988
0733	.860%	<i>Cymbella aequalis</i> W. Sm. ex Grev. 1855
1170/1	.860%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
2974	.860%	<i>Tabellaria quadriseptata</i> Knudson 1952
EU049D	.860%	<i>Eunotia curvata attenuata</i> A. Berg (Cleve Euler)
1004	.645%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
AU010A	.645%	<i>Aulacoseira perglabra</i>
FR9991	.645%	<i>Fragilaria [cf. oldenburgiana PIRLA pl 20, 61-2]</i> PIRLA 1987
0966	.430%	<i>Eunotia bidentula</i> W. Sm. 1856
1018	.430%	<i>Eunotia pectinalis ventricosa</i> Grun. in Van Heurck 1881
1058	.430%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
1088/1	.430%	<i>Tabellaria binialis</i> (Ehrenb.) Grun. in Van Heurck 1881
1443	.430%	<i>Navicula angusta</i> Grun. 1860
1588	.430%	<i>Navicula difficillima</i> Hust. 1950
1981/1	.430%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
2241/1	.430%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
2459a/1	.430%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
EU9963	.430%	<i>Eunotia [sp. 13 (minutissima)]</i> Round L. Glenhead (RJF) 1988
EU9999	.430%	<i>Eunotia</i> sp.
FR9999	.430%	<i>Fragilaria</i> sp.
GO017A	.430%	<i>Gomphonema lanceolatum</i> Ehr.
NA167A	.430%	<i>Navicula hoefleri</i> Ssensu Ross et Sims
0112	.215%	<i>Achnanthes pseudoswazi</i> J.R. Carter 1963
0607/1	.215%	<i>Eunotia pectinalis pectinalis</i> (O.F. Mull.) Rabenh. 1864
0695/1	.215%	<i>Cyclotella stelligera</i> (Cleve & Grun. in Cleve) Van Heurck 1882
0762	.215%	<i>Cymbella gaeumannii</i> Meister 1934
0779	.215%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0919/1	.215%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
1002	.215%	<i>Eunotia meisteri meisteri</i> Hust. 1930
1013	.215%	<i>Eunotia paludosa</i> Grun. 1862
1051	.215%	<i>Eunotia tridentula</i> Ehrenb. 1843
1536	.215%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
2019/2	.215%	<i>Brachysira serians</i> (Breb. ex Kutz.) Round & Mann 1981
2819	.215%	<i>Surirella biseriata biseriata</i> Breb. & Godey 1835
2832	.215%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
AC9999	.215%	<i>Achnanthes</i> sp.
AU005E	.215%	<i>Aulacoseira distans nivalis</i>
AU010B	.215%	<i>Aulacoseira perglabra floriniae</i>
EU028B	.215%	<i>Eunotia microcephala tridentata</i> (A. Mayer) Hust.
EU9960	.215%	<i>Eunotia [tenella/paludosa]</i> L. Dee (RJF) 1988

Llyn Cwm Bychan

EU9969	.215%	Eunotia denticulata/lapponica 1987
NA9964	.215%	Navicula [cf. spirata] L. Hir (SF) 1986
NA9999	.215%	Navicula sp.
NE9999	.215%	Neidium sp.
PI9999	.215%	Pinnularia sp.

Llyn Cwm Ffynnon

1144	18.504%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
NA156A	17.717%	<i>Navicula leptostriata</i> Jorgensen 1948
2974	10.827%	<i>Tabellaria quadrisepitata</i> Knudson 1952
0601/2	4.921%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1170/1	4.724%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
0599/1	4.134%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
1263/2	3.740%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0389	3.543%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
1215/2	3.346%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
0794	2.953%	<i>Cymbella perpusilla</i> A. Cleve 1895
0919/1	2.362%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
2241/1	2.165%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
0994	1.969%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1034	1.378%	<i>Eunotia rhomboidea</i> Hust. 1950
2733	1.181%	<i>Stauroneis anceps anceps</i> Ehrenb. 1843
1834	.984%	<i>Navicula mediocris</i> Krasske 1932
EU051B	.984%	<i>Eunotia vanheurckii intermedia</i> (Krasske) Cleve
NA9963	.984%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0210/1	.787%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
1297/1	.787%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
1404/1	.787%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1981/1	.787%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
2401	.787%	<i>Pinnularia biceps biceps</i> Greg. 1856
EU9965	.787%	<i>Eunotia</i> [sp. 10 (minima)] L. Grannoch (RJF) 1988
1009	.591%	<i>Eunotia naegelii</i> Migula 1907
0976	.394%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1190/4	.394%	<i>Aulacoseira lirata lirata</i> (Ehrenb.) R. Ross in Hartley 1986
1298/1	.394%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1418/1	.394%	<i>Neidium affine affine</i> (Ehrenb.) Pfitz. 1871
2832	.394%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
AU010A	.394%	<i>Aulacoseira perglabra</i>
AU010B	.394%	<i>Aulacoseira perglabra floriniae</i>
EU9961	.394%	<i>Eunotia</i> [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
EU9999	.394%	<i>Eunotia</i> sp.
CY9991	.394%	<i>Cyclotella kuetzingiana</i> agg.
0008	.197%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
0093	.197%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
0364/2	.197%	<i>Pinnularia viridis viridis</i> (Nitzsch) Ehrenb. 1843
0762	.197%	<i>Cymbella gaeumannii</i> Meister 1934
0779	.197%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0961/1	.197%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
0992	.197%	<i>Eunotia iatriaensis</i> Foged 1970
1004	.197%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1006	.197%	<i>Eunotia monodon monodon</i> Ehrenb. 1843
1301/3	.197%	<i>Eunotia tibia bidens</i> (W. Sm.) A. Cleve-Euler 1953
1303/1	.197%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1382/2	.197%	<i>Aulacoseira lirata lacustris</i> (Grun. in Van Heurck) R. Ross in Hartley 1986
2016	.197%	<i>Navicula seminulum</i> Grun. 1860
2072/1	.197%	<i>Pinnularia subsolaris</i> (Grun.) Cleve 1896
2081/1	.197%	<i>Navicula radiososa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2793/1	.197%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
2819	.197%	<i>Surirella biseriata biseriata</i> Breb. & Godey 1835
AC048A	.197%	<i>Achnanthes scotica</i> Jones & Flower
NA167A	.197%	<i>Navicula hoefleri</i> Sensus Ross et Sims
NA9962	.197%	<i>Navicula</i> [sp. 2] L. Hir (SF) 1986
NE9999	.197%	<i>Neidium</i> sp.
PI9999	.197%	<i>Pinnularia</i> sp.

Llyn Cwm Silyn Lower

AC9968	13.873%	Achnanthes marginulata major Uaine (VJJ) 1988
2084	12.139%	Navicula tenuicephala Hust. 1942
0733	8.478%	Cymbella aequalis W. Sm. ex Grev. 1855
AU005E	8.478%	Aulacoseira distans nivalis
1826	6.551%	Navicula madumensis E.G. Jorg. 1948
1297/1	4.239%	Eunotia denticulata denticulata (Breb. ex Kutz.) Rabenh. 1864
0389	3.468%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
0794	2.312%	Cymbella perpusilla A. Cleve 1895
1498	2.312%	Navicula bremensis Hust. 1957
NA156A	2.312%	Navicula leptostriata Jorgensen 1948
1144	2.119%	Fragilaria virescens exigua Grun. in Van Heurck 1881
0994	1.927%	Eunotia incisa W. Sm. ex Greg. 1854
1170/1	1.734%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
2819	1.734%	Surirella biseriata biseriata Breb. & Godey 1835
0008	1.541%	Achnanthes austriaca helvetica Hust. 1933
0976	1.541%	Eunotia exgracilis A. Berg ex A. Cleve-Euler 1953
1018	1.541%	Eunotia pectinalis ventricosa Grun. in Van Heurck 1881
1263/2	1.541%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
2793/1	1.541%	Pinnularia microstauron microstauron (Ehrenb.) Cleve 1891
0093	1.349%	Achnanthes minutissima minutissima Kutz. 1833
1981/1	1.349%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
AC9975	1.349%	Achnanthes [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
2401	1.156%	Pinnularia biceps biceps Greg. 1856
1215/2	.963%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
AU010B	.963%	Aulacoseira perglabra floriniae
1009	.771%	Eunotia naegelii Migula 1907
1216	.771%	Gomphonema gracile Ehrenb. 1838
1382/2	.771%	Aulacoseira lirata lacustris (Grun. in Van Heurck) R. Ross in Hartley 1986
NE9999	.771%	Neidium sp.
0089	.578%	Achnanthes marginulata Grun. in Cleve & Grun. 1880
0599/1	.578%	Frustulia rhomboides viridula (Breb. ex Kutz.) Cleve 1894
1053	.578%	Eunotia trinacria trinacria Krasske 1929
1298/1	.578%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
1536	.578%	Navicula cocconeiformis cocconeiformis Greg. ex Greville 1855
2459a/1	.578%	Pinnularia subcapitata hilseana (Janisch ex Rabenh.) O. Mull. 1898
AC048A	.578%	Achnanthes scotica Jones & Flower
AU9997	.578%	Aulacoseira [sp. 4] L. Moan (RJF) 1988
CY9991	.578%	Cyclotella kuetzingiana agg.
1006	.385%	Eunotia monodon monodon Ehrenb. 1843
1034	.385%	Eunotia rhomboidea Hust. 1950
1187/2	.385%	Aulacoseira distans distans (Ehrenb.) Simonsen 1979
1190/4	.385%	Aulacoseira lirata lirata (Ehrenb.) R. Ross in Hartley 1986
2019/2	.385%	Brachysira serians (Breb. ex Kutz.) Round & Mann 1981
2832	.385%	Surirella delicatissima delicatissima Lewis 1864
PI030A	.385%	Pinnularia acoricola Hust.
0695/1	.193%	Cyclotella stelligera (Cleve & Grun. in Cleve) Van Heurck 1882
0919/1	.193%	Cymbella hebridica (Grun. ex Cleve) Cleve 1894
1013	.193%	Eunotia paludosa Grun. 1862
1443	.193%	Navicula angusta Grun. 1860
1737	.193%	Navicula impexa Hust. 1961
1834	.193%	Navicula mediocris Krasske 1932
2241/1	.193%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
CM9999	.193%	Cymbella sp.
EU002E	.193%	Eunotia pectinalis minor impressa (Ehr.) Hust.
EU9961	.193%	Eunotia [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
NA006B	.193%	Navicula mediocris atomus Hust.
NA9999	.193%	Navicula sp.
PI9999	.193%	Pinnularia sp

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AC9968	34.483%	<i>Achnanthes marginulata major</i> Uaine (VJJ) 1988
2084	32.454%	<i>Navicula tenuicephala</i> Hust. 1942
0733	6.694%	<i>Cymbella aequalis</i> W. Sm. ex Grev. 1855
1297/1	4.057%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
2793/1	2.434%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
1215/2	2.231%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
0794	1.420%	<i>Cymbella perpusilla</i> A. Cleve 1895
AC9975	1.217%	<i>Achnanthes</i> [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
0210/1	1.014%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
1263/2	1.014%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
1826	1.014%	<i>Navicula madumensis</i> E.G. Jorg. 1948
AC048A	1.014%	<i>Achnanthes scotica</i> Jones & Flower
0389	1.014%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0093	.811%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
EU9961	.811%	<i>Eunotia</i> [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
0008	.609%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
0601/2	.609%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
0976	.609%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1298/1	.609%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
0089	.406%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0919/1	.406%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
1144	.406%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
2819	.406%	<i>Surirella biseriata biseriata</i> Breb. & Godey 1835
CY9991	.406%	<i>Cyclotella kuetzingiana</i> agg.
0607/1	.203%	<i>Eunotia pectinalis pectinalis</i> (O.F. Mull.) Rabenh. 1864
0779	.203%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0956	.203%	<i>Eunotia arcus arcus</i> Ehrenb. 1837
1013	.203%	<i>Eunotia paludosa</i> Grun. 1862
1170/1	.203%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1443	.203%	<i>Navicula angusta</i> Grun. 1860
1485/1	.203%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
1536	.203%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
1549	.203%	<i>Navicula contenta contenta</i> Grun. in Van Heurck 1885
2019/2	.203%	<i>Brachysira seriens</i> (Breb. ex Kutz.) Round & Mann 1981
2073	.203%	<i>Navicula subtilissima</i> Cleve 1891
2459a/1	.203%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
2832	.203%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
AC014B	.203%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986
AC9999	.203%	<i>Achnanthes</i> sp.
EU9999	.203%	<i>Eunotia</i> sp.
NA006B	.203%	<i>Navicula mediocris atomus</i> Hust.
NA167A	.203%	<i>Navicula hoefleri</i> Sensu Ross et Sims
PI9999	.203%	<i>Pinnularia</i> sp.

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0389	9.244%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
1144	8.613%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1263/2	8.403%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
AC9968	5.672%	<i>Achnanthes marginulata major</i> Uaine (VJJ) 1988
0093	5.042%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1297/1	4.202%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
AC048A	3.782%	<i>Achnanthes scotica</i> Jones & Flower
0599/1	3.571%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
CY9991	3.151%	<i>Cyclotella kuetzingiana</i> agg.
0601/2	2.941%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
0779	2.521%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
1170/1	2.521%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
BR9997	2.521%	<i>Brachysira</i> [sp. 1] Round L. Glenhead (VJJ) 1985
0976	2.311%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
0994	2.101%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1215/2	2.101%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
EU9999	1.471%	<i>Eunotia</i> sp.
0983	1.261%	<i>Eunotia flexuosa flexuosa</i> Kutz. 1849
1004	1.261%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
2081/1	1.261%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2459a/1	1.261%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
0733	1.050%	<i>Cymbella aequalis</i> W. Sm. ex Grev. 1855
0961/1	1.050%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
1190/4	1.050%	<i>Aulacoseira lirata lirata</i> (Ehrenb.) R. Ross in Hartley 1986
1298/1	1.050%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1536	1.050%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
EU9961	1.050%	<i>Eunotia</i> [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
1443	.840%	<i>Navicula angusta</i> Grun. 1860
2241/1	.840%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
2376	.840%	<i>Opephora martyi</i> Herib. 1902
NA156A	.840%	<i>Navicula leptostriata</i> Jorgensen 1948
0966	.630%	<i>Eunotia bidentula</i> W. Sm. 1856
1034	.630%	<i>Eunotia rhomboidea</i> Hust. 1950
1090	.630%	<i>Fragilaria brevistriata brevistriata</i> Grun. in Van Heurck 1885
1216	.630%	<i>Gomphonema gracile</i> Ehrenb. 1838
2730	.630%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
EU002E	.630%	<i>Eunotia pectinalis minor impressa</i> (Ehr.) Hust.
NA9964	.630%	<i>Navicula</i> [cf. spirata] L. Hir (SF) 1986
0364/2	.420%	<i>Pinnularia viridis viridis</i> (Nitzsch) Ehrenb. 1843
1006	.420%	<i>Eunotia monodon monodon</i> Ehrenb. 1843
1018	.420%	<i>Eunotia pectinalis ventricosa</i> Grun. in Van Heurck 1881
1303/1	.420%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1498	.420%	<i>Navicula bremensis</i> Hust. 1957
1737	.420%	<i>Navicula impexa</i> Hust. 1961
1826	.420%	<i>Navicula madumensis</i> E.G. Jorg. 1948
1834	.420%	<i>Navicula mediocris</i> Krasske 1932
2718/1	.420%	<i>Gomphonema angustatum angustatum</i> (Kutz.) Rabenh. 1864
AC9996	.420%	<i>Achnanthes</i> cf. <i>levanderi</i>
AC9999	.420%	<i>Achnanthes</i> sp.
AU9997	.420%	<i>Aulacoseira</i> [sp. 4] L. Moan (RJF) 1988
EU9960	.420%	<i>Eunotia</i> [tenella/paludosa] L. Dee (RJF) 1988
EU9963	.420%	<i>Eunotia</i> [sp. 13 (minutissima)] Round L. Glenhead (RJF) 1988
NA9999	.420%	<i>Navicula</i> sp.
0008	.210%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
0153/1	.210%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
0209/1	.210%	<i>Amphora ovalis affinis</i> (Kutz.) Van Heurck 1885
0681	.210%	<i>Cyclotella comensis</i> Grun. in Van Heurck 1882
0780	.210%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880

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1009	.210%	<i>Eunotia naegelia</i> Migula 1907
1028	.210%	<i>Eunotia praerupta praerupta</i> Ehrenb. 1843
1209/1	.210%	<i>Gomphonema acuminatum coronatum</i> (Ehrenb.) W. Sm. 1853
1404/1	.210%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1418/1	.210%	<i>Neidium affine affine</i> (Ehrenb.) Pfitz. 1871
1521/1	.210%	<i>Cymbella cesatii cesatii</i> (Rabenh.) Grun. in A. Schmidt 1881
1549	.210%	<i>Navicula contenta contenta</i> Grun. in Van Heurck 1885
2401	.210%	<i>Pinnularia biceps biceps</i> Greg. 1856
2431	.210%	<i>Pinnularia divergens divergens</i> W. Sm. 1853
2720/1	.210%	<i>Gomphonema parvulum parvulum</i> (Kutz.) Kutz. 1849
2793/1	.210%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
2795/1	.210%	<i>Pinnularia platycephala</i> (Ehrenb.) Cleve 1891
2832	.210%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
2974	.210%	<i>Tabellaria quadriseptata</i> Knudson 1952
AC042A	.210%	<i>Achnanthes detha</i>
FR9999	.210%	<i>Fragilaria</i> sp.

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1144	28.862%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
0093	20.935%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
0601/2	4.878%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1263/2	4.878%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
1079/1	4.065%	<i>Fragilaria vaucheriae vaucheriae</i> (Kutz.) J.B. Petersen 1938
NA9963	3.049%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0994	2.846%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
0779	1.626%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0782	1.423%	<i>Cymbella minuta minuta</i> Hilse ex Rabenh. 1862
1216	1.423%	<i>Gomphonema gracile</i> Ehrenb. 1838
1303/1	1.423%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
2720/1	1.423%	<i>Gomphonema parvulum parvulum</i> (Kutz.) Kutz. 1849
1034	1.220%	<i>Eunotia rhomboidea</i> Hust. 1950
1141/1	1.220%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
2934	1.220%	<i>Synedra minuscula</i> Grun. in Van Heurck 1881
NA156A	1.220%	<i>Navicula leptostriata</i> Jorgensen 1948
1018	1.016%	<i>Eunotia pectinalis ventricosa</i> Grun. in Van Heurck 1881
1132	1.016%	<i>Fragilaria pinnata pinnata</i> Ehrenb. 1843
AC042A	1.016%	<i>Achnanthes detha</i>
2081/1	.813%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2241/1	.813%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
0983	.610%	<i>Eunotia flexuosa flexuosa</i> Kutz. 1849
1592	.610%	<i>Navicula digitulus</i> Hust. 1943
2016	.610%	<i>Navicula seminulum</i> Grun. 1860
2237	.610%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
AC9999	.610%	<i>Achnanthes</i> sp.
NA006B	.610%	<i>Navicula mediocris atomus</i> Hust.
0364/2	.407%	<i>Pinnularia viridis viridis</i> (Nitzsch) Ehrenb. 1843
0599/1	.407%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0855/1	.407%	<i>Tabellaria fenestrata</i> (Lyngb.) Kutz. 1844
1215/2	.407%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1418/1	.407%	<i>Neidium affine affine</i> (Ehrenb.) Pfitz. 1871
1834	.407%	<i>Navicula mediocris</i> Krasske 1932
1952	.407%	<i>Navicula pseudoscutiformis</i> Hust. 1930
2079	.407%	<i>Navicula tantula</i> Hust. 1943
AC9996	.407%	<i>Achnanthes</i> cf. <i>levanderi</i>
0149/1	.203%	<i>Achnanthes lanceolata</i> (Breb. ex Kutz.) Grun. in Cleve & Grun. 1880
0769	.203%	<i>Cymbella hilliardii</i> Manguin 1960
0780	.203%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
0794	.203%	<i>Cymbella perpusilla</i> A. Cleve 1895
0956	.203%	<i>Eunotia arcus arcus</i> Ehrenb. 1837
1004	.203%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1009	.203%	<i>Eunotia naegelia</i> Migula 1907
1013	.203%	<i>Eunotia paludosa</i> Grun. 1862
1090	.203%	<i>Fragilaria brevistriata brevistriata</i> Grun. in Van Heurck 1885
1095	.203%	<i>Fragilaria constricta constricta</i> Ehrenb. 1843
1170/1	.203%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1209/1	.203%	<i>Gomphonema acuminatum coronatum</i> (Ehrenb.) W. Sm. 1853
1298/1	.203%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1443	.203%	<i>Navicula angusta</i> Grun. 1860
1563	.203%	<i>Navicula cryptocephala cryptocephala</i> Kutz. 1844
1588	.203%	<i>Navicula difficillima</i> Hust. 1950
1776	.203%	<i>Navicula krasskei</i> Hust. 1930
1981/1	.203%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
1998	.203%	<i>Navicula schassmannii</i> Hust. 1937
2459a/1	.203%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
2736/1	.203%	<i>Caloneis bacillum bacillum</i> (Grun.) Cleve 1894
AC014B	.203%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986

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AC048A	.203%	Achnanthes scotica Jones & Flower
AC9975	.203%	Achnanthes [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
AU010B	.203%	Aulacoseira perglabra florinae
AU9997	.203%	Aulacoseira [sp. 4] L. Moan (RJF) 1988
CY9991	.203%	Cyclotella kuetzingiana agg.
EU060A	.203%	Eunotia pirla Carter et Flower 1988
EU9961	.203%	Eunotia [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
FR9999	.203%	Fragilaria sp.
NA9962	.203%	Navicula [sp. 2] L. Hir (SF) 1986

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AU9997	9.437%	Aulacoseira [sp. 4] L. Moan (RJF) 1988
AU010B	8.893%	Aulacoseira perglabra floriniae
1144	7.804%	Fragilaria virescens exigua Grun. in Van Heurck 1881
AU005E	7.260%	Aulacoseira distans nivalis
NA156A	6.715%	Navicula leptostriata Jorgensen 1948
0976	5.626%	Eunotia exgracilis A. Berg ex A. Cleve-Euler 1953
0994	5.445%	Eunotia incisa W. Sm. ex Greg. 1854
1981/1	3.085%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
2084	2.904%	Navicula tenuicephala Hust. 1942
AU9990	2.541%	Aulacoseira [small] Dulyn (RJF) 1988
NA9963	2.541%	Navicula [sp. 1] L. Hir (SF) 1986
1263/2	2.178%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
0089	1.815%	Achnanthes marginulata Grun. in Cleve & Grun. 1880
0389	1.815%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
1009	1.815%	Eunotia naegelii Migula 1907
NA006B	1.633%	Navicula mediocris atomus Hust.
0794	1.452%	Cymbella perpusilla A. Cleve 1895
1034	1.452%	Eunotia rhomboidea Hust. 1950
1834	1.452%	Navicula mediocris Krasske 1932
AC9999	1.270%	Achnanthes sp.
0093	1.089%	Achnanthes minutissima minutissima Kutz. 1833
0779	1.089%	Cymbella lunata W. Sm. in Grev. 1855
2073	1.089%	Navicula subtilissima Cleve 1891
AU010A	1.089%	Aulacoseira perglabra
0961/1	.907%	Eunotia tenella (Grun. in Van Heurck) A. Cleve 1895
1004	.907%	Eunotia minutissima A. Cleve-Euler 1934
1170/1	.907%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
1298/1	.907%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
AC014B	.907%	Achnanthes austriaca minor L. Grannoch (RJF) 1986
0601/2	.726%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
2241/1	.726%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
2459a/1	.726%	Pinnularia subcapitata hilseana (Janisch ex Rabenh.) O. Mull. 1898
FR9991	.726%	Fragilaria [cf. oldenburgiana PIRLA pl 20, 61-2] PIRLA 1987
0008	.544%	Achnanthes austriaca helvetica Hust. 1933
1216	.544%	Gomphonema gracile Ehrenb. 1838
1303/1	.544%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
1485/1	.544%	Neidium bisulcatum bisulcatum (Lagerst.) Cleve 1894
1536	.544%	Navicula cocconeiformis cocconeiformis Greg. ex Greville 1855
2081/1	.544%	Navicula radiosa tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2401	.544%	Pinnularia biceps biceps Greg. 1856
2974	.544%	Tabellaria quadriseptata Knudson 1952
AC9969	.544%	Achnanthes [scotica/marginulata] Groningen (RJF) 1988
0733	.363%	Cymbella aequalis W. Sm. ex Grev. 1855
1706	.363%	Navicula hassiaca Krasske 1925
1952	.363%	Navicula pseudoscutiformis Hust. 1930
AC048A	.363%	Achnanthes scotica Jones & Flower
AC9996	.363%	Achnanthes cf. levanderi
NA167A	.363%	Navicula hoeffleri Sensu Ross et Sims
0210/1	.181%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
0966	.181%	Eunotia bidentula W. Sm. 1856
1006	.181%	Eunotia monodon monodon Ehrenb. 1843
1013	.181%	Eunotia paludosa Grun. 1862
1046	.181%	Eunotia sudetica O. Mull. 1898
1058	.181%	Eunotia vanheurckii vanheurckii Patr. 1958
1079/1	.181%	Fragilaria vaucheriae vaucheriae (Kutz.) J.B. Petersen 1938
1215/2	.181%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
1297/1	.181%	Eunotia denticulata denticulata (Breb. ex Kutz.) Rabenh. 1864
1443	.181%	Navicula angusta Grun. 1860

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1826	.181%	Navicula madumensis E.G. Jorg. 1948
2065	.181%	Navicula submolesta Hust. 1949
2333/2	.181%	Stenopterobia sigmatella (Greg.) R. Ross in Hartley 1986
2730	.181%	Stauroneis anceps gracilis Rabenh. 1864
2832	.181%	Surirella delicatissima delicatissima Lewis 1864
2959/2	.181%	Eunotia curvata subarcuata (Naegeli ex Kutz.) Woodhead & Tweed 1954
AU9998	.181%	Aulacoseira [sp. 1] L. Tecwyn (RJF) 1988
AU9999	.181%	Aulacoseira sp.
CY9991	.181%	Cyclotella kuetzingiana agg.
EU9963	.181%	Eunotia [sp. 13 (minutissima)] Round L. Glenhead (RJF) 1988
NA158A	.181%	Navicula cumbriensis Haworth 1987
NA9962	.181%	Navicula [sp. 2] L. Hir (SF) 1986

Llyn Edno

CY9991	65.701%	Cyclotella kuetzingiana agg.
0994	5.098%	Eunotia incisa W. Sm. ex Greg. 1854
1263/2	3.592%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
0794	2.317%	Cymbella perpusilla A. Cleve 1895
1170/1	2.317%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
0601/2	1.738%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
0093	1.622%	Achnanthes minutissima minutissima Kutz. 1833
0089	1.506%	Achnanthes marginulata Grun. in Cleve & Grun. 1880
0599/1	1.159%	Frustulia rhomboides viridula (Breb. ex Kutz.) Cleve 1894
1845	1.043%	Navicula minima minima Grun. in Van Heurck 1880
1215/2	.927%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
1303/1	.695%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
0112	.579%	Achnanthes pseudoswazi J.R. Carter 1963
1034	.579%	Eunotia rhomboidea Hust. 1950
1449/1	.579%	Pinnularia irrorata (Grun. in Van Heurck) Hust. 1939
NA158A	.579%	Navicula cumbriensis Haworth 1987
1009	.463%	Eunotia naegelii Migula 1907
AC048A	.463%	Achnanthes scotica Jones & Flower
AC9968	.463%	Achnanthes marginulata major Uaine (VJJ) 1988
AC9975	.463%	Achnanthes [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
NA156A	.463%	Navicula leptostriata Jorgensen 1948
NA167A	.463%	Navicula hoeffleri Sensus Ross et Sims
NA9999	.463%	Navicula sp.
0779	.348%	Cymbella lunata W. Sm. in Grev. 1855
1144	.348%	Fragilaria virescens exigua Grun. in Van Heurck 1881
1298/1	.348%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
EU049D	.348%	Eunotia curvata attenuata A. Berg (Cleve Euler)
1058	.232%	Eunotia vanheurckii vanheurckii Patr. 1958
1076/1	.232%	Eunotia curvata curvata (Kutz.) Lagerst. 1884
1434/1	.232%	Neidium affine amphirhynchus (Ehrenb.) Cleve 1894
2081/1	.232%	Navicula radiosa tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2333/2	.232%	Stenopterobia sigmatella (Greg.) R. Ross in Hartley 1986
2401	.232%	Pinnularia biceps biceps Greg. 1856
2974	.232%	Tabellaria quadrisepitata Knudson 1952
CM9999	.232%	Cymbella sp.
EU9999	.232%	Eunotia sp.
PI9999	.232%	Pinnularia sp.
0129	.116%	Achnanthes sublaevis Hust. 1936
0138	.116%	Achnanthes umara J.R. Carter 1970
0210/1	.116%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
0389	.116%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
0607/1	.116%	Eunotia pectinalis pectinalis (O.F. Mull.) Rabenh. 1864
0909/1	.116%	Cyclotella comta comta (Ehrenb.) Kutz. 1849
0966	.116%	Eunotia bidentula W. Sm. 1856
1004	.116%	Eunotia minutissima A. Cleve-Euler 1934
1079/1	.116%	Fragilaria vaucheriae vaucheriae (Kutz.) J.B. Petersen 1938
1485/1	.116%	Neidium bisulcatum bisulcatum (Lagerst.) Cleve 1894
1826	.116%	Navicula madumensis E.G. Jorg. 1948
1959	.116%	Navicula pupula pupula Kutz. 1844
1981/1	.116%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
2073	.116%	Navicula subtilissima Cleve 1891
2241/1	.116%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
2319	.116%	Nitzschia recta Hantzsch ex Rabenh. 1861
2459a/1	.116%	Pinnularia subcapitata hilseana (Janisch ex Rabenh.) O. Mull. 1898
2819	.116%	Surirella biseriata biseriata Breb. & Godey 1835
AC042A	.116%	Achnanthes detha
AC9967	.116%	Achnanthes cf. adnata RJF 1988
EU9962	.116%	Eunotia [exigua var. 2 (kummer.)] Cranmer Pond (RJF) 1988

Llyn Edno

NA9963	.116%	Navicula [sp. 1] L. Hir (SF) 1986
NA9964	.116%	Navicula [cf. spirata] L. Hir (SF) 1986
NE9999	.116%	Neidium sp.
PI9995	.116%	Pinnularia [cf. angulata] L. Valley (RJF) 1984
SY9999	.116%	Synedra sp.

Llyn Geirionydd

1263/2	48.312%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0093	28.481%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1216	2.532%	<i>Gomphonema gracile</i> Ehrenb. 1838
0599/1	1.688%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
AC9969	1.477%	<i>Achnanthes</i> [scotica/marginulata] Groningen (RJF) 1988
CY9991	1.477%	<i>Cyclotella kuetzingiana</i> agg.
1170/1	1.266%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
CM052A	1.266%	<i>Cymbella descripta</i> (Hust.) Krammer & Lange-Bertalot 1985
SY9999	1.266%	<i>Synedra</i> sp.
0779	1.055%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
1536	1.055%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
1079/1	.844%	<i>Fragilaria vaucheriae vaucheriae</i> (Kutz.) J.B. Petersen 1938
1404/1	.844%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
GO9999	.844%	<i>Gomphonema</i> sp.
0601/2	.633%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1838	.633%	<i>Navicula menda</i> J.R. Carter in J.R. Carter & Watts 1981
PI9999	.633%	<i>Pinnularia</i> sp.
0780	.422%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
0811	.422%	<i>Cymbella subaequalis</i> Grun. in Van Heurck 1880
1034	.422%	<i>Eunotia rhomboidea</i> Hust. 1950
2459a/1	.422%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
2736/1	.422%	<i>Caloneis bacillum bacillum</i> (Grun.) Cleve 1894
2832	.422%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
2889	.422%	<i>Synedra acus acus</i> Kutz. 1844
0089	.211%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0909/1	.211%	<i>Cyclotella comta comta</i> (Ehrenb.) Kutz. 1849
1076/1	.211%	<i>Eunotia curvata curvata</i> (Kutz.) Lagerst. 1884
1215/2	.211%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1229	.211%	<i>Gomphonema lagerheimi</i> A. Cleve 1895
1297/1	.211%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
1298/1	.211%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1303/1	.211%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1485/1	.211%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
1563	.211%	<i>Navicula cryptocephala cryptocephala</i> Kutz. 1844
2237	.211%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
2333/2	.211%	<i>Stenopterobia sigmatella</i> (Greg.) R. Ross in Hartley 1986
2849	.211%	<i>Surirella linearis linearis</i> W. Sm. 1853

Llyn Glas

AC042A	21.654%	Achnanthes detha
1144	11.811%	Fragilaria virescens exigua Grun. in Van Heurck 1881
AC9996	11.220%	Achnanthes cf. levanderi
0093	10.827%	Achnanthes minutissima minutissima Kutz. 1833
0210/1	5.906%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
AC048A	5.315%	Achnanthes scotica Jones & Flower
1998	4.921%	Navicula schassmannii Hust. 1937
1094	2.362%	Fragilaria capucina lanceolata Grun. in Van Heurck 1881
1116	2.165%	Fragilaria lapponica Grun. in Van Heurck 1881
1382/2	2.165%	Aulacoseira lirata lacustris (Grun. in Van Heurck) R. Ross in Hartley 1986
1592	2.165%	Navicula digitulus Hust. 1943
AC9965	1.969%	Achnanthes austriaca alpina Uaine (VJJ) 1988
2016	1.575%	Navicula seminulum Grun. 1860
NA9999	1.378%	Navicula sp.
AC9999	1.181%	Achnanthes sp.
1952	.984%	Navicula pseudoscutiformis Hust. 1930
AU9997	.984%	Aulacoseira [sp. 4] L. Moan (RJF) 1988
NI9999	.984%	Nitzschia sp.
0089	.787%	Achnanthes marginulata Grun. in Cleve & Grun. 1880
0779	.787%	Cymbella lunata W. Sm. in Grev. 1855
FR9999	.787%	Fragilaria sp.
0008	.591%	Achnanthes austriaca helvetica Hust. 1933
0133	.591%	Achnanthes suchlandtii Hust. 1933
2720/1	.591%	Gomphonema parvulum parvulum (Kutz.) Kutz. 1849
0007	.394%	Achnanthes austriaca austriaca Hust. 1922
0602/2	.394%	Diatoma hyemale hyemale (Roth) Heib. 1863
0782	.394%	Cymbella minuta minuta Hilse ex Rabenh. 1862
1141/1	.394%	Fragilaria construens venter (Ehrenb.) Grun. in Van Heurck 1881
1215/2	.394%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
1263/2	.394%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
1959	.394%	Navicula pupula pupula Kutz. 1844
2319	.394%	Nitzschia recta Hantzsch ex Rabenh. 1861
GO9999	.394%	Gomphonema sp.
0123	.197%	Achnanthes saxonica Krasske in Hust. 1933
0389	.197%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
0994	.197%	Eunotia incisa W. Sm. ex Greg. 1854
1090	.197%	Fragilaria brevistriata brevistriata Grun. in Van Heurck 1885
1303/1	.197%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
1485/1	.197%	Neidium bisulcatum bisulcatum (Lagerst.) Cleve 1894
2081/1	.197%	Navicula radiosa tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2237	.197%	Nitzschia fonticola Grun. in Van Heurck 1881
2730	.197%	Stauroneis anceps gracilis Rabenh. 1864
2733	.197%	Stauroneis anceps anceps Ehrenb. 1843
2736/1	.197%	Caloneis bacillum bacillum (Grun.) Cleve 1894
2798/1	.197%	Fragilaria construens construens (Ehrenb.) Grun. 1862
2819	.197%	Surirella biseriata biseriata Breb. & Godey 1835
2920/1	.197%	Nitzschia frustulum (Kutz.) Grun. in Cleve & Grun. 1880

Llyn Glasfryn

1106	34.292%	<i>Fragilaria elliptica</i> Schum. 1867
0093	14.579%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
0546/1	10.062%	<i>Cocconeis placentula euglypta</i> (Ehrenb.) Grun. 1884
2079	5.544%	<i>Navicula tantula</i> Hust. 1943
1144	5.339%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1079/1	2.875%	<i>Fragilaria vaucheriae vaucheriae</i> (Kutz.) J.B. Petersen 1938
1952	2.464%	<i>Navicula pseudoscutiformis</i> Hust. 1930
1984	2.464%	<i>Navicula rhyncocephala rhyncocephala</i> Kutz. 1844
1141/1	1.848%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1563	1.848%	<i>Navicula cryptocephala cryptocephala</i> Kutz. 1844
1959	1.437%	<i>Navicula pupula pupula</i> Kutz. 1844
1968	1.437%	<i>Navicula radiosa radiosa</i> Kutz. 1844
NA9999	1.437%	<i>Navicula</i> sp.
1132	1.232%	<i>Fragilaria pinnata pinnata</i> Ehrenb. 1843
CM9999	1.232%	<i>Cymbella</i> sp.
GO9999	1.232%	<i>Gomphonema</i> sp.
0153/1	.821%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
2237	.821%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
0209/1	.616%	<i>Amphora ovalis affinis</i> (Kutz.) Van Heurck 1885
0782	.616%	<i>Cymbella minuta minuta</i> Hilse ex Rabenh. 1862
1513	.616%	<i>Navicula capitata capitata</i> Ehrenb. 1838
2145	.616%	<i>Navicula vitabunda</i> Hust. 1930
AU010B	.616%	<i>Aulacoseira perglabra floriniae</i>
0779	.411%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0994	.411%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1303/1	.411%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1845	.411%	<i>Navicula minima minima</i> Grun. in Van Heurck 1880
1866/1	.411%	<i>Navicula pupula mutata</i> (Krasske) Hust. 1930
2889	.411%	<i>Synedra acus acus</i> Kutz. 1844
AU9999	.411%	<i>Aulacoseira</i> sp.
NE9999	.411%	<i>Neidium</i> sp.
0115	.205%	<i>Achnanthes pusilla pusilla</i> Grun. in Cleve & Grun. 1880
0364/2	.205%	<i>Pinnularia viridis viridis</i> (Nitzsch) Ehrenb. 1843
0601/2	.205%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
0780	.205%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
1058	.205%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
1727/1	.205%	<i>Navicula capitata hungarica</i> (Grun.) R. Ross 1947
1958	.205%	<i>Navicula pupula elliptica</i> Hust. 1911
2081/1	.205%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2720/1	.205%	<i>Gomphonema parvulum parvulum</i> (Kutz.) Kutz. 1849
2730	.205%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
2798/1	.205%	<i>Fragilaria construens construens</i> (Ehrenb.) Grun. 1862
2920/1	.205%	<i>Nitzschia frustulum</i> (Kutz.) Grun. in Cleve & Grun. 1880
SY9999	.205%	<i>Synedra</i> sp.

Llyn Glaslyn

0089	16.143%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
2974	14.885%	<i>Tabellaria quadriseptata</i> Knudson 1952
0601/2	11.950%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
NA156A	7.966%	<i>Navicula leptostriata</i> Jorgensen 1948
0389	6.709%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0794	6.080%	<i>Cymbella perpusilla</i> A. Cleve 1895
NA006B	5.660%	<i>Navicula mediocris atomus</i> Hust.
1298/1	2.935%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
0994	2.725%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1034	2.725%	<i>Eunotia rhomboidea</i> Hust. 1950
AC9975	2.096%	<i>Achnanthes</i> [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
NA158A	2.096%	<i>Navicula cumbriensis</i> Haworth 1987
1170/1	1.887%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
0992	1.048%	<i>Eunotia iatriaensis</i> Foged 1970
1009	1.048%	<i>Eunotia naegelia</i> Migula 1907
1981/1	1.048%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
0599/1	.839%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
2459a/1	.839%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
CY9991	.839%	<i>Cyclotella kuetzingiana</i> agg.
0733	.629%	<i>Cymbella aequalis</i> W. Sm. ex Grev. 1855
2819	.629%	<i>Surirella biseriata biseriata</i> Breb. & Godey 1835
NA9964	.629%	<i>Navicula</i> [cf. spirata] L. Hir (SF) 1986
1006	.419%	<i>Eunotia monodon monodon</i> Ehrenb. 1843
1058	.419%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
1485/1	.419%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
1498	.419%	<i>Navicula bremensis</i> Hust. 1957
2065	.419%	<i>Navicula submolesta</i> Hust. 1949
2401	.419%	<i>Pinnularia biceps biceps</i> Greg. 1856
FR9999	.419%	<i>Fragilaria</i> sp.
GO9999	.419%	<i>Gomphonema</i> sp.
NE9999	.419%	<i>Neidium</i> sp.
TA9999	.419%	<i>Tabellaria</i> sp.
0210/1	.210%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0779	.210%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0855/1	.210%	<i>Tabellaria fenestrata</i> (Lyngb.) Kutz. 1844
0919/1	.210%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
1013	.210%	<i>Eunotia paludosa</i> Grun. 1862
1144	.210%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1215/2	.210%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1297/1	.210%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
1393/3	.210%	<i>Aulacoseira distans tenella</i> (Nygaard) R. Ross in Hartley 1986
1404/1	.210%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1432/3	.210%	<i>Neidium iridis amphigomphus</i> (Ehrenb.) A. Mayer 1917
1464/1	.210%	<i>Caloneis bacillaris bacillaris</i> (Greg.) Cleve 1894
2081/1	.210%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2084	.210%	<i>Navicula tenuicephala</i> Hust. 1942
2161	.210%	<i>Neidium affine humerus</i> Reimer in Patr. & Reimer 1966
2832	.210%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
AC014B	.210%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986
AC048A	.210%	<i>Achnanthes scotica</i> Jones & Flower
AC9969	.210%	<i>Achnanthes</i> [scotica/marginulata] Groningen (RJF) 1988
BR9999	.210%	<i>Brachysira</i> sp.
EU9963	.210%	<i>Eunotia</i> [sp. 13 (minutissima)] Round L. Glenhead (RJF) 1988

Llyn Goddienduon

1144	51.129%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1263/2	5.968%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0794	4.032%	<i>Cymbella perpusilla</i> A. Cleve 1895
NA156A	2.903%	<i>Navicula leptostriata</i> Jorgensen 1948
0093	2.581%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1106	2.258%	<i>Fragilaria elliptica</i> Schum. 1867
NA9955	2.258%	<i>Navicula</i> [cf. <i>vitiosa</i>] L. Hir (SF) 1986
NA9963	2.258%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0389	2.097%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
1034	1.935%	<i>Eunotia rhomboidea</i> Hust. 1950
1170/1	1.613%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
2241/1	1.290%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
1834	1.129%	<i>Navicula mediocris</i> Krasske 1932
AC9996	1.129%	<i>Achnanthes</i> cf. <i>levanderi</i>
AU014A	.968%	<i>Aulacoseira nygaardii</i> Camburn
0089	.806%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
2081/1	.806%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2730	.806%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
0210/1	.645%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0599/1	.645%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0601/2	.645%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
0779	.645%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0994	.645%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1215/2	.645%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1298/1	.645%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
AC9969	.645%	<i>Achnanthes</i> [scotica/marginulata] Groningen (RJF) 1988
AC9999	.645%	<i>Achnanthes</i> sp.
AU9999	.645%	<i>Aulacoseira</i> sp.
CY9991	.645%	<i>Cyclotella kuetzingiana</i> agg.
1141/1	.484%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1297/1	.484%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
0112	.323%	<i>Achnanthes pseudoswazi</i> J.R. Carter 1963
0976	.323%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1216	.323%	<i>Gomphonema gracile</i> Ehrenb. 1838
1443	.323%	<i>Navicula angusta</i> Grun. 1860
1498	.323%	<i>Navicula bremensis</i> Hust. 1957
2733	.323%	<i>Stauroneis anceps anceps</i> Ehrenb. 1843
2798/1	.323%	<i>Fragilaria construens construens</i> (Ehrenb.) Grun. 1862
NA167A	.323%	<i>Navicula hoefleri</i> Sensus Ross et Sims
0129	.161%	<i>Achnanthes sublaevis</i> Hust. 1936
0607/1	.161%	<i>Eunotia pectinalis pectinalis</i> (O.F. Mull.) Rabenh. 1864
0780	.161%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
0909/1	.161%	<i>Cyclotella comta comta</i> (Ehrenb.) Kutz. 1849
0919/1	.161%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
0961/1	.161%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
1209/1	.161%	<i>Gomphonema acuminatum coronatum</i> (Ehrenb.) W. Sm. 1853
1303/1	.161%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1393/3	.161%	<i>Aulacoseira distans tenella</i> (Nygaard) R. Ross in Hartley 1986
1592	.161%	<i>Navicula digitulus</i> Hust. 1943
2065	.161%	<i>Navicula submolesta</i> Hust. 1949
2237	.161%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
2319	.161%	<i>Nitzschia recta</i> Hantzsch ex Rabenh. 1861
2459a/1	.161%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
2718/1	.161%	<i>Gomphonema angustatum angustatum</i> (Kutz.) Rabenh. 1864
2793/1	.161%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
GO9999	.161%	<i>Gomphonema</i> sp.
NA006B	.161%	<i>Navicula mediocris atomus</i> Hust.
NA158A	.161%	<i>Navicula cumbriensis</i> Haworth 1987

Llyn Goddionduon

NA9973	.161%	Navicula [cf. digitulus] L. Urr (RJF) 1985
PI9999	.161%	Pinnularia sp.

Llyn Gwynant

0093	44.694%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1263/2	10.204%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0780	5.510%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
0601/2	2.857%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1144	1.837%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1079/1	1.633%	<i>Fragilaria vaucheriae vaucheriae</i> (Kutz.) J.B. Petersen 1938
CY9991	1.429%	<i>Cyclotella kuetzingiana</i> agg.
0779	1.224%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0994	1.224%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
AC9969	1.224%	<i>Achnanthes</i> [scotica/marginulata] Groningen (RJF) 1988
AC9996	1.224%	<i>Achnanthes</i> cf. <i>levanderi</i>
1170/1	1.020%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1215/2	1.020%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
0389	.816%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0914/1	.816%	<i>Meridion circulare circulare</i> (Grev.) Ag. 1831
1216	.816%	<i>Gomphonema gracile</i> Ehrenb. 1838
1549	.816%	<i>Navicula contenta contenta</i> Grun. in Van Heurck 1885
2730	.816%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
AC042A	.816%	<i>Achnanthes detha</i>
NA006B	.816%	<i>Navicula mediocris atomus</i> Hust.
PI9999	.816%	<i>Pinnularia</i> sp.
0782	.612%	<i>Cymbella minuta minuta</i> Hilse ex Rabenh. 1862
1034	.612%	<i>Eunotia rhomboidea</i> Hust. 1950
1298/1	.612%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1563	.612%	<i>Navicula cryptocephala cryptocephala</i> Kutz. 1844
1845	.612%	<i>Navicula minima minima</i> Grun. in Van Heurck 1880
2081/1	.612%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2934	.612%	<i>Synedra minuscula</i> Grun. in Van Heurck 1881
NA9963	.612%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0089	.408%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0607/1	.408%	<i>Eunotia pectinalis pectinalis</i> (O.F. Mull.) Rabenh. 1864
0786	.408%	<i>Cymbella naviculiformis</i> Auersw. ex Heib. 1863
0793/2	.408%	<i>Amphora ovalis pediculus</i> (Kutz.) Van Heurck 1885
0976	.408%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1148	.408%	<i>Fragilaria virescens virescens</i> Ralfs 1843
1303/1	.408%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1737	.408%	<i>Navicula impexa</i> Hust. 1961
1838	.408%	<i>Navicula menda</i> J.R. Carter in J.R. Carter & Watts 1981
2237	.408%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
2319	.408%	<i>Nitzschia recta</i> Hantzsch ex Rabenh. 1861
2718/1	.408%	<i>Gomphonema angustatum angustatum</i> (Kutz.) Rabenh. 1864
CM052A	.408%	<i>Cymbella descripta</i> (Hust.) Krammer & Lange-Bertalot 1985
CM9999	.408%	<i>Cymbella</i> sp.
EU9999	.408%	<i>Eunotia</i> sp.
FR9999	.408%	<i>Fragilaria</i> sp.
NI9999	.408%	<i>Nitzschia</i> sp.
SY9999	.408%	<i>Synedra</i> sp.
0008	.204%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
0129	.204%	<i>Achnanthes sublaevis</i> Hust. 1936
0138	.204%	<i>Achnanthes umara</i> J.R. Carter 1970
0363/1	.204%	<i>Synedra ulna ulna</i> (Nitzsch) Ehrenb. 1836
0602/2	.204%	<i>Diatoma hyemale hyemale</i> (Roth) Heib. 1863
0681	.204%	<i>Cyclotella comensis</i> Grun. in Van Heurck 1882
0761/1	.204%	<i>Achnanthes flexella</i> (Kutz.) Brun 1880
0807	.204%	<i>Cymbella sinuata sinuata</i> Greg. 1856
0981	.204%	<i>Eunotia fallax</i> A. Cleve 1895
1013	.204%	<i>Eunotia paludosa</i> Grun. 1862
1058	.204%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958

Llyn Gwynant

1076/1	.204%	<i>Eunotia curvata curvata</i> (Kutz.) Lagerst. 1884
1209/1	.204%	<i>Gomphonema acuminatum coronatum</i> (Ehrenb.) W. Sm. 1853
1223/1	.204%	<i>Gomphonema vibrio intricatum</i> (Kutz.) R. Ross in Hartley 1986
1444/1	.204%	<i>Cymbella angustata</i> (W. Sm.) Cleve 1894
1449/1	.204%	<i>Pinnularia irrorata</i> (Grun. in Van Heurck) Hust. 1939
1592	.204%	<i>Navicula digitulus</i> Hust. 1943
1998	.204%	<i>Navicula schassmannii</i> Hust. 1937
2073	.204%	<i>Navicula subtilissima</i> Cleve 1891
2203	.204%	<i>Nitzschia angustata acuta</i> Grun. in Cleve & Grun. 1880
2241/1	.204%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
2920/1	.204%	<i>Nitzschia frustulum</i> (Kutz.) Grun. in Cleve & Grun. 1880
AC014B	.204%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986
AC9964	.204%	<i>Achnanthes minutissima scotica</i> (Carter) RJF 1988
CY9999	.204%	<i>Cyclotella</i> sp.
EU049D	.204%	<i>Eunotia curvata attenuata</i> A. Berg (Cleve Euler)
EU9961	.204%	<i>Eunotia</i> [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
NA9964	.204%	<i>Navicula</i> [cf. spirata] L. Hir (SF) 1986
NA9999	.204%	<i>Navicula</i> sp.
SU9999	.204%	<i>Surirella</i> sp.

Llyn Gynon

1144	41.372%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
0994	14.345%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
0794	7.277%	<i>Cymbella perpusilla</i> A. Cleve 1895
0599/1	6.445%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0601/2	5.613%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
2974	4.366%	<i>Tabellaria quadrisepitata</i> Knudson 1952
1170/1	3.534%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
NA158A	1.663%	<i>Navicula cumbriensis</i> Haworth 1987
2733	1.455%	<i>Stauroneis anceps anceps</i> Ehrenb. 1843
EU9965	1.040%	<i>Eunotia</i> [sp. 10 (minima)] L. Grannoch (RJF) 1988
1058	.832%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
0389	.624%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0779	.624%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
1009	.624%	<i>Eunotia naegelii</i> Migula 1907
1034	.624%	<i>Eunotia rhomboidea</i> Hust. 1950
1263/2	.624%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
NA156A	.624%	<i>Navicula leptostriata</i> Jorgensen 1948
NA9963	.624%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0138	.416%	<i>Achnanthes umara</i> J.R. Carter 1970
0607/1	.416%	<i>Eunotia pectinalis pectinalis</i> (O.F. Mull.) Rabenh. 1864
0961/1	.416%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
1981/1	.416%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
2431	.416%	<i>Pinnularia divergens divergens</i> W. Sm. 1853
2459a/1	.416%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
2793/1	.416%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
AC9999	.416%	<i>Achnanthes</i> sp.
NA006B	.416%	<i>Navicula mediocris atomus</i> Hust.
NA9973	.416%	<i>Navicula</i> [cf. <i>digitulus</i>] L. Urr (RJF) 1985
PI9999	.416%	<i>Pinnularia</i> sp.
0210/1	.208%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
1215/2	.208%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1298/1	.208%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1303/1	.208%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1485/1	.208%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
1504	.208%	<i>Navicula bryophila bryophila</i> J.B. Petersen 1928
1536	.208%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
1764	.208%	<i>Navicula jaernefeltii</i> Hust. 1942
2081/1	.208%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2319	.208%	<i>Nitzschia recta</i> Hantzsch ex Rabenh. 1861
2333/2	.208%	<i>Stenopterobia sigmatella</i> (Greg.) R. Ross in Hartley 1986
2401	.208%	<i>Pinnularia biceps biceps</i> Greg. 1856
2725	.208%	<i>Stauroneis alpina</i> Hust. 1943
AU010B	.208%	<i>Aulacoseira perglabra floriniae</i>
EU9961	.208%	<i>Eunotia</i> [vanheurckii var. 1] Round L. Glenhead (RJF) 1988

Llyn Hir

0994	11.479%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1144	9.533%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
AU010B	8.755%	<i>Aulacoseira perglabra floriniae</i>
NA156A	6.226%	<i>Navicula leptostriata</i> Jorgensen 1948
NA9963	5.642%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
1170/1	5.253%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
NA158A	4.669%	<i>Navicula cumbriensis</i> Haworth 1987
0599/1	4.280%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
NA9962	4.086%	<i>Navicula</i> [sp. 2] L. Hir (SF) 1986
2974	3.696%	<i>Tabellaria quadriseptata</i> Knudson 1952
0794	3.113%	<i>Cymbella perpusilla</i> A. Cleve 1895
NA006B	2.529%	<i>Navicula mediocris atomus</i> Hust.
1190/4	2.140%	<i>Aulacoseira lirata lirata</i> (Ehrenb.) R. Ross in Hartley 1986
1187/2	1.751%	<i>Aulacoseira distans distans</i> (Ehrenb.) Simonsen 1979
1263/2	1.556%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
PI9999	1.556%	<i>Pinnularia</i> sp.
0601/2	1.362%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1034	1.362%	<i>Eunotia rhomboidea</i> Hust. 1950
CY9991	1.362%	<i>Cyclotella kuetzingiana</i> agg.
1981/1	1.167%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
2459a/1	1.167%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
2832	1.167%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
AU004C	1.167%	<i>Aulacoseira lirata biseriata</i>
1141/1	.973%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1058	.778%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
2081/1	.778%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2401	.778%	<i>Pinnularia biceps biceps</i> Greg. 1856
1004	.584%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1132	.584%	<i>Fragilaria pinnata pinnata</i> Ehrenb. 1843
1216	.584%	<i>Gomphonema gracile</i> Ehrenb. 1838
2730	.584%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
2793/1	.584%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
2959/2	.584%	<i>Eunotia curvata subarcuata</i> (Naegeli ex Kutz.) Woodhead & Tweed 1954
0093	.389%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1009	.389%	<i>Eunotia naegelii</i> Migula 1907
1090	.389%	<i>Fragilaria brevistriata brevistriata</i> Grun. in Van Heurck 1885
1215/2	.389%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1303/1	.389%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1485/1	.389%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
2084	.389%	<i>Navicula tenuicephala</i> Hust. 1942
2733	.389%	<i>Stauroneis anceps anceps</i> Ehrenb. 1843
2798/1	.389%	<i>Fragilaria construens construens</i> (Ehrenb.) Grun. 1862
NA9955	.389%	<i>Navicula</i> [cf. <i>vitiosa</i>] L. Hir (SF) 1986
NA9999	.389%	<i>Navicula</i> sp.
0129	.195%	<i>Achnanthes sublaevis</i> Hust. 1936
0210/1	.195%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0779	.195%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
1018	.195%	<i>Eunotia pectinalis ventricosa</i> Grun. in Van Heurck 1881
1041	.195%	<i>Eunotia serra serra</i> Ehrenb. 1837
1076/1	.195%	<i>Eunotia curvata curvata</i> (Kutz.) Lagerst. 1884
1404/1	.195%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1504	.195%	<i>Navicula bryophila bryophila</i> J.B. Petersen 1928
1761/2	.195%	<i>Neidium iridis iridis</i> (Ehrenb.) Cleve 1894
1952	.195%	<i>Navicula pseudoscutiformis</i> Hust. 1930
2015	.195%	<i>Navicula seminuloides</i> Hust. 1937
2073	.195%	<i>Navicula subtilissima</i> Cleve 1891
2241/1	.195%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
2533	.195%	<i>Pinnularia undulata</i> Greg. 1854

Llyn Hir

AC042A	.195%	Achnanthes detha
AU9999	.195%	Aulacoseira sp.
EU049D	.195%	Eunotia curvata attenuata A. Berg (Cleve Euler)
EU9961	.195%	Eunotia [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
NA9964	.195%	Navicula [cf. spirata] L. Hir (SF) 1986
NA9973	.195%	Navicula [cf. digitulus] L. Urr (RJF) 1985

Llyn Irddyn

1144	23.810%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
0089	6.667%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
CY9991	6.667%	<i>Cyclotella kuetzingiana</i> agg.
0794	5.905%	<i>Cymbella perpusilla</i> A. Cleve 1895
0093	4.381%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
NA156A	3.810%	<i>Navicula leptostriata</i> Jorgensen 1948
0994	3.238%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1263/2	3.238%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
AU010B	2.667%	<i>Aulacoseira perglabra floriniae</i>
AC9996	2.286%	<i>Achnanthes</i> cf. <i>levanderi</i>
NA9963	2.286%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0389	2.095%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
AC048A	2.095%	<i>Achnanthes scotica</i> Jones & Flower
2081/1	1.524%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
AU010A	1.524%	<i>Aulacoseira perglabra</i>
1215/2	1.333%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1834	1.333%	<i>Navicula mediocris</i> Krasske 1932
2241/1	1.143%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
AU9999	1.143%	<i>Aulacoseira</i> sp.
0780	.952%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
1592	.952%	<i>Navicula digitulus</i> Hust. 1943
2084	.952%	<i>Navicula tenuicephala</i> Hust. 1942
NA9962	.952%	<i>Navicula</i> [sp. 2] L. Hir (SF) 1986
0599/1	.762%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0601/2	.762%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1303/1	.762%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1382/2	.762%	<i>Aulacoseira lirata lacustris</i> (Grun. in Van Heurck) R. Ross in Hartley 1986
1749	.762%	<i>Navicula indifferens</i> Hust. 1942
1826	.762%	<i>Navicula madumensis</i> E.G. Jorg. 1948
0210/1	.571%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0779	.571%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
1009	.571%	<i>Eunotia naegelii</i> Migula 1907
1536	.571%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
2065	.571%	<i>Navicula submolesta</i> Hust. 1949
2401	.571%	<i>Pinnularia biceps biceps</i> Greg. 1856
AC9999	.571%	<i>Achnanthes</i> sp.
NA158A	.571%	<i>Navicula cumbriensis</i> Haworth 1987
0153/1	.381%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
0681	.381%	<i>Cyclotella comensis</i> Grun. in Van Heurck 1882
1004	.381%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1170/1	.381%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1393/3	.381%	<i>Aulacoseira distans tenella</i> (Nygaard) R. Ross in Hartley 1986
1485/1	.381%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
1737	.381%	<i>Navicula impexa</i> Hust. 1961
1981/1	.381%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
1998	.381%	<i>Navicula schassmannii</i> Hust. 1937
2237	.381%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
2793/1	.381%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
2798/1	.381%	<i>Fragilaria construens construens</i> (Ehrenb.) Grun. 1862
2832	.381%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
AC9975	.381%	<i>Achnanthes</i> [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
AU9997	.381%	<i>Aulacoseira</i> [sp. 4] L. Moan (RJF) 1988
0008	.190%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
0032	.190%	<i>Achnanthes flexella alpestris</i> Brun 1880
0053	.190%	<i>Achnanthes hyperborea</i> Grun. 1884
0073	.190%	<i>Achnanthes laterostrata</i> Hust. 1933
0782	.190%	<i>Cymbella minuta minuta</i> Hilse ex Rabenh. 1862
0855/1	.190%	<i>Tabellaria fenestrata</i> (Lyngb.) Kutz. 1844

Llyn Irddyn

1028	.190%	<i>Eunotia praerupta praerupta</i> Ehrenb. 1843
1034	.190%	<i>Eunotia rhomboidea</i> Hust. 1950
1141/1	.190%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1216	.190%	<i>Gomphonema gracile</i> Ehrenb. 1838
1297/1	.190%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
2016	.190%	<i>Navicula seminulum</i> Grun. 1860
2079	.190%	<i>Navicula tantula</i> Hust. 1943
2459a/1	.190%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
2730	.190%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
AC042A	.190%	<i>Achnanthes detha</i>
AU014A	.190%	<i>Aulacoseira nygaardii</i> Camburn
NA9955	.190%	<i>Navicula</i> [cf. <i>vitiosa</i>] L. Hir (SF) 1986
NA9964	.190%	<i>Navicula</i> [cf. <i>spirata</i>] L. Hir (SF) 1986
NA9999	.190%	<i>Navicula</i> sp.
SY9999	.190%	<i>Synedra</i> sp.
TA9999	.190%	<i>Tabellaria</i> sp.

Llyn Llgi

2974	47.771%	Tabellaria quadriseptata Knudson 1952
0994	14.225%	Eunotia incisa W. Sm. ex Greg. 1854
NA156A	9.766%	Navicula leptostriata Jorgensen 1948
0601/2	4.034%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
1170/1	4.034%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
1263/2	2.123%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
1144	1.274%	Fragilaria virescens exigua Grun. in Van Heurck 1881
0794	1.062%	Cymbella perpusilla A. Cleve 1895
1303/1	1.062%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
AC9975	1.062%	Achnanthes [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
AU004C	1.062%	Aulacoseira lirata biseriata
0093	.849%	Achnanthes minutissima minutissima Kutz. 1833
NA9963	.849%	Navicula [sp. 1] L. Hir (SF) 1986
0089	.637%	Achnanthes marginulata Grun. in Cleve & Grun. 1880
0607/1	.637%	Eunotia pectinalis pectinalis (O.F. Mull.) Rabenh. 1864
1011	.637%	Eunotia nymanniana Grun. in Van Heurck 1881
1058	.637%	Eunotia vanheurckii vanheurckii Patr. 1958
2459a/1	.637%	Pinnularia subcapitata hilseana (Janisch ex Rabenh.) O. Mull. 1898
AC9999	.637%	Achnanthes sp.
0782	.425%	Cymbella minuta minuta Hilse ex Rabenh. 1862
1004	.425%	Eunotia minutissima A. Cleve-Euler 1934
1298/1	.425%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
2241/1	.425%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
2832	.425%	Surirella delicatissima delicatissima Lewis 1864
AU010A	.425%	Aulacoseira perglabra
AU010B	.425%	Aulacoseira perglabra floriniae
NE9999	.425%	Neidium sp.
NI9999	.425%	Nitzschia sp.
0115	.212%	Achnanthes pusilla pusilla Grun. in Cleve & Grun. 1880
0129	.212%	Achnanthes sublaevis Hust. 1936
0210/1	.212%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
0779	.212%	Cymbella lunata W. Sm. in Grev. 1855
0919/1	.212%	Cymbella hebridica (Grun. ex Cleve) Cleve 1894
1018	.212%	Eunotia pectinalis ventricosa Grun. in Van Heurck 1881
1034	.212%	Eunotia rhomboidea Hust. 1950
1128/1	.212%	Eunotia pectinalis undulata (Ralfs) Rabenh. 1864
1141/1	.212%	Fragilaria construens venter (Ehrenb.) Grun. in Van Heurck 1881
1209/1	.212%	Gomphonema acuminatum coronatum (Ehrenb.) W. Sm. 1853
1215/2	.212%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
1443	.212%	Navicula angusta Grun. 1860
1588	.212%	Navicula difficillima Hust. 1950
1981/1	.212%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
GO9999	.212%	Gomphonema sp.

Llyn Llennych

1263/2	15.694%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
0093	13.682%	Achnanthes minutissima minutissima Kutz. 1833
1144	6.237%	Fragilaria virescens exigua Grun. in Van Heurck 1881
CY9991	5.030%	Cyclotella kuetzingiana agg.
0780	4.829%	Cymbella microcephala microcephala Grun. in Van Heurck 1880
1170/1	4.427%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
0112	3.421%	Achnanthes pseudoswazi J.R. Carter 1963
0779	3.421%	Cymbella lunata W. Sm. in Grev. 1855
2081/1	3.219%	Navicula radiosa tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
AC9969	3.018%	Achnanthes [scotica/marginulata] Groningen (RJF) 1988
0389	2.817%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
NA156A	2.817%	Navicula leptostriata Jorgensen 1948
1141/1	2.213%	Fragilaria construens venter (Ehrenb.) Grun. in Van Heurck 1881
1536	2.012%	Navicula cocconeiformis cocconeiformis Greg. ex Greville 1855
1215/2	1.610%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
0794	1.408%	Cymbella perpusilla A. Cleve 1895
2237	1.408%	Nitzschia fonticola Grun. in Van Heurck 1881
0601/2	1.207%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
1834	1.207%	Navicula mediocris Krasske 1932
0599/1	1.006%	Frustulia rhomboides viridula (Breb. ex Kutz.) Cleve 1894
1034	1.006%	Eunotia rhomboidea Hust. 1950
2241/1	1.006%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
CM052A	1.006%	Cymbella descripta (Hust.) Krammer & Lange-Bertalot 1985
1418/1	.805%	Neidium affine affine (Ehrenb.) Pfitz. 1871
2203	.805%	Nitzschia angustata acuta Grun. in Cleve & Grun. 1880
EU9999	.805%	Eunotia sp.
0008	.604%	Achnanthes austriaca helvetica Hust. 1933
0210/1	.604%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
0976	.604%	Eunotia exgracilis A. Berg ex A. Cleve-Euler 1953
0994	.604%	Eunotia incisa W. Sm. ex Greg. 1854
1058	.604%	Eunotia vanheurckii vanheurckii Patr. 1958
1298/1	.604%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
1443	.604%	Navicula angusta Grun. 1860
AC9964	.604%	Achnanthes minutissima scotica (Carter) RJF 1988
AC9999	.604%	Achnanthes sp.
NA9973	.604%	Navicula [cf. digitulus] L. Urr (RJF) 1985
0956	.402%	Eunotia arcus arcus Ehrenb. 1837
0961/1	.402%	Eunotia tenella (Grun. in Van Heurck) A. Cleve 1895
1113/2	.402%	Krasskella kriegera (Krasske) R. Ross & Sims 1978
1209/1	.402%	Gomphonema acuminatum coronatum (Ehrenb.) W. Sm. 1853
1504	.402%	Navicula bryophila bryophila J.B. Petersen 1928
1952	.402%	Navicula pseudoscutiformis Hust. 1930
2073	.402%	Navicula subtilissima Cleve 1891
2920/1	.402%	Nitzschia frustulum (Kutz.) Grun. in Cleve & Grun. 1880
NA9963	.402%	Navicula [sp. 1] L. Hir (SF) 1986
0129	.201%	Achnanthes sublaevis Hust. 1936
0681	.201%	Cyclotella comensis Grun. in Van Heurck 1882
0753	.201%	Cymbella cuspidata Kutz. 1844
0855/1	.201%	Tabellaria fenestrata (Lyngb.) Kutz. 1844
0983	.201%	Eunotia flexuosa flexuosa Kutz. 1849
1013	.201%	Eunotia paludosa Grun. 1862
1018	.201%	Eunotia pectinalis ventricosa Grun. in Van Heurck 1881
1106	.201%	Fragilaria elliptica Schum. 1867
1216	.201%	Gomphonema gracile Ehrenb. 1838
1303/1	.201%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
1498	.201%	Navicula bremensis Hust. 1957
1749	.201%	Navicula indifferens Hust. 1942
1845	.201%	Navicula minima minima Grun. in Van Heurck 1880

Llyn Llennych

1968	.201%	Navicula radiosa radiosa Kutz. 1844
2319	.201%	Nitzschia recta Hantzsch ex Rabenh. 1861
2730	.201%	Stauroneis anceps gracilis Rabenh. 1864
2733	.201%	Stauroneis anceps anceps Ehrenb. 1843
AC9996	.201%	Achnanthes cf. levanderi
EU002E	.201%	Eunotia pectinalis minor impressa (Ehr.) Hust.
GO9999	.201%	Gomphonema sp.
PI9999	.201%	Pinnularia sp.

Llyn Penrhaiadr

0994	27.642%	Eunotia incisa W. Sm. ex Greg. 1854
2974	15.244%	Tabellaria quadrisepata Knudson 1952
AU010B	10.366%	Aulacoseira perglabra floriniae
1170/1	6.707%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
NA158A	4.065%	Navicula cumbriensis Haworth 1987
0601/2	3.659%	Tabellaria flocculosa flocculosa (Roth) Kutz. 1844
0599/1	3.252%	Frustulia rhomboides viridula (Breb. ex Kutz.) Cleve 1894
0794	3.049%	Cymbella perpusilla A. Cleve 1895
NA156A	3.049%	Navicula leptostriata Jorgensen 1948
1034	2.642%	Eunotia rhomboidea Hust. 1950
1215/2	1.626%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
0389	1.423%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
1298/1	1.423%	Eunotia exigua exigua (Breb. ex Kutz.) Rabenh. 1864
1303/1	1.423%	Eunotia pectinalis minor (Kutz.) Rabenh. 1864
0961/1	1.016%	Eunotia tenella (Grun. in Van Heurck) A. Cleve 1895
1981/1	1.016%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
PI9999	1.016%	Pinnularia sp.
1058	.813%	Eunotia vanheurckii vanheurckii Patr. 1958
1834	.813%	Navicula mediocris Krasske 1932
AC014B	.813%	Achnanthes austriaca minor L. Grannoch (RJF) 1986
EU9999	.813%	Eunotia sp.
1009	.610%	Eunotia naegelii Migula 1907
1018	.610%	Eunotia pectinalis ventricosa Grun. in Van Heurck 1881
EU049D	.610%	Eunotia curvata attenuata A. Berg (Cleve Euler)
NI9999	.610%	Nitzschia sp.
0008	.407%	Achnanthes austriaca helvetica Hust. 1933
0210/1	.407%	Achnanthes altaica (Poretzky) A. Cleve-Euler 1953
1141/1	.407%	Fragilaria construens venter (Ehrenb.) Grun. in Van Heurck 1881
1144	.407%	Fragilaria virescens exigua Grun. in Van Heurck 1881
1418/1	.407%	Neidium affine affine (Ehrenb.) Pfitz. 1871
2733	.407%	Stauroneis anceps anceps Ehrenb. 1843
FR9999	.407%	Fragilaria sp.
0733	.203%	Cymbella aequalis W. Sm. ex Grev. 1855
1013	.203%	Eunotia paludosa Grun. 1862
1046	.203%	Eunotia sudetica O. Mull. 1898
1076/1	.203%	Eunotia curvata curvata (Kutz.) Lagerst. 1884
1216	.203%	Gomphonema gracile Ehrenb. 1838
1404/1	.203%	Pinnularia abaujensis abaujensis (Pant.) R. Ross in Hartley 1986
1485/1	.203%	Neidium bisulcatum bisulcatum (Lagerst.) Cleve 1894
1959	.203%	Navicula pupula pupula Kutz. 1844
2081/1	.203%	Navicula radiosa tenella (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2241/1	.203%	Nitzschia perminuta (Grun. in Van Heurck) M. Perag. 1903
2832	.203%	Surirella delicatissima delicatissima Lewis 1864
EU9961	.203%	Eunotia [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
EU9963	.203%	Eunotia [sp. 13 (minutissima)] Round L. Glenhead (RJF) 1988
TA9999	.203%	Tabellaria sp.

Llyn Tecwyn

1144	17.308%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
0093	9.615%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1263/2	9.615%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
AU9998	9.231%	<i>Aulacoseira</i> [sp. 1] L. Tecwyn (RJF) 1988
NA9963	7.115%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0794	6.154%	<i>Cymbella perpusilla</i> A. Cleve 1895
0994	3.462%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
1034	2.885%	<i>Eunotia rhomboidea</i> Hust. 1950
1215/2	2.308%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
2081/1	2.308%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
AU014A	2.308%	<i>Aulacoseira nygaardii</i> Camburn
0779	2.115%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0599/1	1.923%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
NA156A	1.923%	<i>Navicula leptostriata</i> Jorgensen 1948
1018	1.538%	<i>Eunotia pectinalis ventricosa</i> Grun. in Van Heurck 1881
0389	1.346%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
1170/1	1.346%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1002	1.154%	<i>Eunotia meisteri meisteri</i> Hust. 1930
0210/1	.962%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0956	.962%	<i>Eunotia arcus arcus</i> Ehrenb. 1837
1303/1	.962%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1959	.962%	<i>Navicula pupula pupula</i> Kutz. 1844
0601/2	.769%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
2241/1	.769%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
AC9999	.769%	<i>Achnanthes</i> sp.
0138	.577%	<i>Achnanthes umara</i> J.R. Carter 1970
0780	.577%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
1298/1	.577%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
2459a/1	.577%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
AC9969	.577%	<i>Achnanthes</i> [scotica/marginulata] Groningen (RJF) 1988
0976	.385%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1004	.385%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1128/1	.385%	<i>Eunotia pectinalis undulata</i> (Ralfs) Rabenh. 1864
1498	.385%	<i>Navicula bremensis</i> Hust. 1957
1834	.385%	<i>Navicula mediocris</i> Krasske 1932
2319	.385%	<i>Nitzschia recta</i> Hantzsch ex Rabenh. 1861
2730	.385%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
2793/1	.385%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
NI9999	.385%	<i>Nitzschia</i> sp.
0785/2	.192%	<i>Cymbella scotica naviculacea</i> (Grun. ex Cleve) R. Ross 1947
0919/1	.192%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
0983	.192%	<i>Eunotia flexuosa flexuosa</i> Kutz. 1849
1058	.192%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
1216	.192%	<i>Gomphonema gracile</i> Ehrenb. 1838
1404/1	.192%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1443	.192%	<i>Navicula angusta</i> Grun. 1860
1588	.192%	<i>Navicula difficillima</i> Hust. 1950
2431	.192%	<i>Pinnularia divergens divergens</i> W. Sm. 1853
2718/1	.192%	<i>Gomphonema angustatum angustatum</i> (Kutz.) Rabenh. 1864
2832	.192%	<i>Surirella delicatissima delicatissima</i> Lewis 1864
AC014B	.192%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986
AC9996	.192%	<i>Achnanthes</i> cf. <i>levanderi</i>
AU9999	.192%	<i>Aulacoseira</i> sp.
CM9999	.192%	<i>Cymbella</i> sp.
CY9991	.192%	<i>Cyclotella kuetzingiana</i> agg.
EU049D	.192%	<i>Eunotia curvata attenuata</i> A. Berg (Cleve Euler)
EU9999	.192%	<i>Eunotia</i> sp.
NE9999	.192%	<i>Neidium</i> sp.

Llyn y Bi

1088/1	51.489%	Tabellaria binalis (Ehrenb.) Grun. in Van Heurck 1881
CM9995	10.000%	Cymbella [PIRLA sp. 1] PIRLA 1985
NA156A	9.574%	Navicula leptostriata Jorgensen 1948
0994	6.596%	Eunotia incisa W. Sm. ex Greg. 1854
1297/1	2.766%	Eunotia denticulata denticulata (Breb. ex Kutz.) Rabenh. 1864
1215/2	2.553%	Peronia fibula (Breb. ex Kutz.) R. Ross 1956
1498	2.553%	Navicula bremensis Hust. 1957
1009	1.915%	Eunotia naegeli Migula 1907
1826	1.915%	Navicula madumensis E.G. Jorg. 1948
1034	1.489%	Eunotia rhomboidea Hust. 1950
2974	1.489%	Tabellaria quadrisepitata Knudson 1952
1170/1	1.277%	Frustulia rhomboides saxonica (Rabenh.) De Toni 1891
0389	.851%	Brachysira brebissonii brebissonii R. Ross in Hartley 1986
1144	.851%	Fragilaria virescens exigua Grun. in Van Heurck 1881
1981/1	.851%	Frustulia rhomboides rhomboides (Ehrenb.) De Toni 1891
2401	.851%	Pinnularia biceps biceps Greg. 1856
1004	.426%	Eunotia minutissima A. Cleve-Euler 1934
1006	.426%	Eunotia monodon monodon Ehrenb. 1843
1263/2	.426%	Brachysira vitrea (Grun.) R. Ross in Hartley 1986
NA167A	.426%	Navicula hoefleri Sensu Ross et Sims
0966	.213%	Eunotia bidentula W. Sm. 1856
0976	.213%	Eunotia exgracilis A. Berg ex A. Cleve-Euler 1953
1018	.213%	Eunotia pectinalis ventricosa Grun. in Van Heurck 1881
1057	.213%	Eunotia valida Hust. 1930
2073	.213%	Navicula subtilissima Cleve 1891
TA9999	.213%	Tabellaria sp.

Llyn y Gadair

1144	19.388%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1263/2	13.878%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0994	13.265%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
AU9997	8.980%	<i>Aulacoseira</i> [sp. 4] L. Moan (RJF) 1988
0601/2	5.918%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
NA9963	4.694%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
0779	4.082%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
2081/1	3.265%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
0794	3.061%	<i>Cymbella perpusilla</i> A. Cleve 1895
2241/1	2.857%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
1298/1	1.837%	<i>Eunotia exigua exigua</i> (Breb. ex Kutz.) Rabenh. 1864
1170/1	1.633%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
1215/2	1.429%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1034	1.224%	<i>Eunotia rhomboidea</i> Hust. 1950
0093	1.020%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
2459a/1	1.020%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
AC014B	1.020%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJF) 1986
EU9961	1.020%	<i>Eunotia</i> [vanheurckii var. 1] Round L. Glenhead (RJF) 1988
1303/1	.816%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
AC048A	.816%	<i>Achnanthes scotica</i> Jones & Flower
EU9999	.816%	<i>Eunotia</i> sp.
0961/1	.612%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
0976	.612%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
2730	.612%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
0089	.408%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0599/1	.408%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
1443	.408%	<i>Navicula angusta</i> Grun. 1860
2401	.408%	<i>Pinnularia biceps biceps</i> Greg. 1856
AC9999	.408%	<i>Achnanthes</i> sp.
0008	.204%	<i>Achnanthes austriaca helvetica</i> Hust. 1933
0153/1	.204%	<i>Achnanthes linearis</i> (W. Sm.) Grun. in Cleve & Grun. 1880
0210/1	.204%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0733	.204%	<i>Cymbella aequalis</i> W. Sm. ex Grev. 1855
1004	.204%	<i>Eunotia minutissima</i> A. Cleve-Euler 1934
1006	.204%	<i>Eunotia monodon monodon</i> Ehrenb. 1843
1009	.204%	<i>Eunotia naegeli</i> Migula 1907
1041	.204%	<i>Eunotia serra serra</i> Ehrenb. 1837
1095	.204%	<i>Fragilaria constricta constricta</i> Ehrenb. 1843
1141/1	.204%	<i>Fragilaria construens venter</i> (Ehrenb.) Grun. in Van Heurck 1881
1216	.204%	<i>Gomphonema gracile</i> Ehrenb. 1838
1301/3	.204%	<i>Eunotia tibia bidens</i> (W. Sm.) A. Cleve-Euler 1953
1549	.204%	<i>Navicula contenta contenta</i> Grun. in Van Heurck 1885
1834	.204%	<i>Navicula mediocris</i> Krasske 1932
1981/1	.204%	<i>Frustulia rhomboides rhomboides</i> (Ehrenb.) De Toni 1891
2733	.204%	<i>Stauroneis anceps anceps</i> Ehrenb. 1843
AC042A	.204%	<i>Achnanthes detha</i>
AC9975	.204%	<i>Achnanthes</i> [altaica var. 1 (minor)] L. Grannoch (RJF) 1988
EU051B	.204%	<i>Eunotia vanheurckii intermedia</i> (Krasske) Cleve
NA9964	.204%	<i>Navicula</i> [cf. spirata] L. Hir (SF) 1986

Llyn y Garn

CY9991	65.848%	<i>Cyclotella kuetzingiana</i> agg.
1263/2	8.036%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0093	7.366%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1144	4.241%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
0681	1.004%	<i>Cyclotella comensis</i> Grun. in Van Heurck 1882
AC048A	1.004%	<i>Achnanthes scotica</i> Jones & Flower
NA9963	.893%	<i>Navicula</i> [sp. 1] L. Hir (SF) 1986
2081/1	.781%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2241/1	.670%	<i>Nitzschia perminuta</i> (Grun. in Van Heurck) M. Perag. 1903
0389	.670%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0779	.558%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0601/2	.446%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1170/1	.446%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
2459a/1	.446%	<i>Pinnularia subcapitata hilseana</i> (Janisch ex Rabenh.) O. Mull. 1898
0112	.335%	<i>Achnanthes pseudoswazi</i> J.R. Carter 1963
0599/1	.335%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0976	.335%	<i>Eunotia exgracilis</i> A. Berg ex A. Cleve-Euler 1953
1215/2	.335%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
1297/1	.335%	<i>Eunotia denticulata denticulata</i> (Breb. ex Kutz.) Rabenh. 1864
1536	.335%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
2016	.335%	<i>Navicula seminulum</i> Grun. 1860
NA9962	.335%	<i>Navicula</i> [sp. 2] L. Hir (SF) 1986
NA9999	.335%	<i>Navicula</i> sp.
0089	.223%	<i>Achnanthes marginulata</i> Grun. in Cleve & Grun. 1880
0842	.223%	<i>Denticula tenuis tenuis</i> Kutz. 1844
1058	.223%	<i>Eunotia vanheurckii vanheurckii</i> Patr. 1958
1090	.223%	<i>Fragilaria brevistriata brevistriata</i> Grun. in Van Heurck 1885
1303/1	.223%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1443	.223%	<i>Navicula angusta</i> Grun. 1860
1521/1	.223%	<i>Cymbella cesatii cesatii</i> (Rabenh.) Grun. in A. Schmidt 1881
1834	.223%	<i>Navicula mediocris</i> Krasske 1932
2730	.223%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
AC9968	.223%	<i>Achnanthes marginulata major</i> Uaine (VJJ) 1988
AC9999	.223%	<i>Achnanthes</i> sp.
CM9999	.223%	<i>Cymbella</i> sp.
NA006B	.223%	<i>Navicula mediocris atomus</i> Hust.
0210/1	.112%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0909/1	.112%	<i>Cyclotella comta comta</i> (Ehrenb.) Kutz. 1849
1041	.112%	<i>Eunotia serra serra</i> Ehrenb. 1837
1196	.112%	<i>Gomphonema acuminatum acuminatum</i> Ehrenb. 1832
1464/1	.112%	<i>Caloneis bacillaris bacillaris</i> (Greg.) Cleve 1894
1485/1	.112%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
2200	.112%	<i>Nitzschia amphibia amphibia</i> Grun. 1862
2237	.112%	<i>Nitzschia fonticola</i> Grun. in Van Heurck 1881
2333/2	.112%	<i>Stenopterobia sigmatella</i> (Greg.) R. Ross in Hartley 1986
2718/1	.112%	<i>Gomphonema angustatum angustatum</i> (Kutz.) Rabenh. 1864
AC014B	.112%	<i>Achnanthes austriaca minor</i> L. Grannoch (RJJ) 1986
AU014A	.112%	<i>Aulacoseira nygaardii</i> Camburn
EU002E	.112%	<i>Eunotia pectinalis minor impressa</i> (Ehr.) Hust.
NA9964	.112%	<i>Navicula</i> [cf. <i>spirata</i>] L. Hir (SF) 1986
PI9999	.112%	<i>Pinnularia</i> sp.

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1263/2	46.243%	<i>Brachysira vitrea</i> (Grun.) R. Ross in Hartley 1986
0093	16.763%	<i>Achnanthes minutissima minutissima</i> Kutz. 1833
1170/1	4.432%	<i>Frustulia rhomboides saxonica</i> (Rabenh.) De Toni 1891
0779	3.854%	<i>Cymbella lunata</i> W. Sm. in Grev. 1855
0780	2.890%	<i>Cymbella microcephala microcephala</i> Grun. in Van Heurck 1880
0601/2	2.119%	<i>Tabellaria flocculosa flocculosa</i> (Roth) Kutz. 1844
1404/1	1.541%	<i>Pinnularia abaujensis abaujensis</i> (Pant.) R. Ross in Hartley 1986
1443	1.541%	<i>Navicula angusta</i> Grun. 1860
0994	1.156%	<i>Eunotia incisa</i> W. Sm. ex Greg. 1854
AC9969	1.156%	<i>Achnanthes</i> [scotica/marginulata] Groningen (RJF) 1988
1216	.771%	<i>Gomphonema gracile</i> Ehrenb. 1838
1303/1	.771%	<i>Eunotia pectinalis minor</i> (Kutz.) Rabenh. 1864
1485/1	.771%	<i>Neidium bisulcatum bisulcatum</i> (Lagerst.) Cleve 1894
1494/1	.771%	<i>Pinnularia brauniana brauniana</i> (Grun. ex A. Schmidt) Cleve 1896
PI9999	.771%	<i>Pinnularia</i> sp.
0112	.578%	<i>Achnanthes pseudoswazi</i> J.R. Carter 1963
0361/1	.578%	<i>Stauroneis phoenicenteron phoenicenteron</i> (Nitzsch) Ehrenb. 1943
0956	.578%	<i>Eunotia arcus arcus</i> Ehrenb. 1837
0983	.578%	<i>Eunotia flexuosa flexuosa</i> Kutz. 1849
1215/2	.578%	<i>Peronia fibula</i> (Breb. ex Kutz.) R. Ross 1956
2073	.578%	<i>Navicula subtilissima</i> Cleve 1891
2333/2	.578%	<i>Stenopterobia sigmatella</i> (Greg.) R. Ross in Hartley 1986
2730	.578%	<i>Stauroneis anceps gracilis</i> Rabenh. 1864
2793/1	.578%	<i>Pinnularia microstauron microstauron</i> (Ehrenb.) Cleve 1891
CM052A	.578%	<i>Cymbella descripta</i> (Hust.) Krammer & Lange-Bertalot 1985
CY9991	.578%	<i>Cyclotella kuetzingiana</i> agg.
NE9999	.578%	<i>Neidium</i> sp.
0389	.385%	<i>Brachysira brebissonii brebissonii</i> R. Ross in Hartley 1986
0961/1	.385%	<i>Eunotia tenella</i> (Grun. in Van Heurck) A. Cleve 1895
1418/1	.385%	<i>Neidium affine affine</i> (Ehrenb.) Pfitz. 1871
1498	.385%	<i>Navicula bremensis</i> Hust. 1957
1834	.385%	<i>Navicula mediocris</i> Krasske 1932
2081/1	.385%	<i>Navicula radiosa tenella</i> (Breb. ex Kutz.) Grun. ex Van Heurck 1885
2819	.385%	<i>Surirella biseriata biseriata</i> Breb. & Godey 1835
AC9964	.385%	<i>Achnanthes minutissima scotica</i> (Carter) RJF 1988
EU9999	.385%	<i>Eunotia</i> sp.
FR9999	.385%	<i>Fragilaria</i> sp.
0210/1	.193%	<i>Achnanthes altaica</i> (Poretzky) A. Cleve-Euler 1953
0364/2	.193%	<i>Pinnularia viridis viridis</i> (Nitzsch) Ehrenb. 1843
0599/1	.193%	<i>Frustulia rhomboides viridula</i> (Breb. ex Kutz.) Cleve 1894
0785/2	.193%	<i>Cymbella scotica naviculacea</i> (Grun. ex Cleve) R. Ross 1947
0919/1	.193%	<i>Cymbella hebridica</i> (Grun. ex Cleve) Cleve 1894
1076/1	.193%	<i>Eunotia curvata curvata</i> (Kutz.) Lagerst. 1884
1079/1	.193%	<i>Fragilaria vaucheriae vaucheriae</i> (Kutz.) J.B. Petersen 1938
1106	.193%	<i>Fragilaria elliptica</i> Schum. 1867
1144	.193%	<i>Fragilaria virescens exigua</i> Grun. in Van Heurck 1881
1229	.193%	<i>Gomphonema lagerheimi</i> A. Cleve 1895
1521/1	.193%	<i>Cymbella cesatii cesatii</i> (Rabenh.) Grun. in A. Schmidt 1881
1536	.193%	<i>Navicula cocconeiformis cocconeiformis</i> Greg. ex Greville 1855
1959	.193%	<i>Navicula pupula pupula</i> Kutz. 1844
2401	.193%	<i>Pinnularia biceps biceps</i> Greg. 1856
2439	.193%	<i>Pinnularia episcopalis</i> Cleve 1891
2718/1	.193%	<i>Gomphonema angustatum angustatum</i> (Kutz.) Rabenh. 1864
2889	.193%	<i>Synedra acus acus</i> Kutz. 1844
2934	.193%	<i>Synedra minuscula</i> Grun. in Van Heurck 1881
NI9999	.193%	<i>Nitzschia</i> sp.

Appendix 2.

Water chemistry data for the 33 lakes. The data are those used in the SWAP diatom-pH calibration procedures (Birks *et al.* 1990). Note that for the two limed lakes (Llyn Hir and Llyn Berwyn) only mean pH values prior to liming are given.

Site	Date	pH	Cond.	Ca ²⁺	Mg ²⁺	K ⁺	Na ⁺	Cl ⁻	SO ₄ ²⁻	Eqv.		Lab.	
										Alk.	DOC	Al	Zn ²⁺
Llyn Barlwyd	27-Nov-86	6.3	32	84.8	48.5		121.8	169.3	52.1	50.3	1.7	30	30
	03-Mar-87	6.4	37	106.3	52.8	8.7	132.2	141.0	73.7	67.0	1.4	36	49
	13-May-87	6.4	35	130.7	60.1	4.6	134.8	169.3	80.2	112.5	1.9		9
	03-Aug-87	6.7	33	142.7	61.8	2.8	122.7	112.8	70.0	161.8	3.2	30	10
† Llyn Berwyn		4.3											
Llyn Bodgynedd	03-Mar-87	6.3	71	194.1	93.2	9.2	289.7	310.3	158.9	54.5	2.7	79	70
	11-May-87	6.9	94	260.5	118.8	11.5	250.1	282.1	219.7	153.6	1.0		827
	28-Jul-87	6.6	62	188.6	86.3	7.2	262.7	282.1	148.5	102.2	2.0	5	18
Llyn Bodlyn	01-Dec-86	5.3	36	48.4	48.7	7.4	167.9	225.7	64.1	0.0	1.1	29	9
	04-Mar-87	5.3	34	53.4	50.4	9.2	167.9	169.3	79.5	2.9	1.3	39	22
	23-May-87	5.4	32	48.4	48.5	4.4	157.5	169.3	77.0	0.0	0.9		
	04-Aug-87	5.6	25	44.4	33.5	2.6	107.0	141.0	69.8	9.8	1.6	18	22
Llyn Bugeilyn	30-Nov-86	4.6	38	39.9	55.1		160.9	225.7	60.4	0.0	3.0	35	
	05-Mar-87	5.0	34	52.9	55.3	8.7	159.6	169.3	97.4	0.0	2.8	68	26
	04-Aug-87	5.1	26	46.4	42.9	3.1	130.5	112.8	71.8	14.2	9.1		26
Llyn Bychan	28-Nov-86	6.4	58	139.7	119.2		243.6	310.3	112.4	81.5	2.3		80
	04-Mar-87	6.2	58	161.2	118.9	10.0	238.4	282.1	115.3	135.1	1.5	19	73
	15-May-87	6.6	51	145.7	106.8	10.0	211.4	225.7	108.9	153.6	1.7		
	28-Jul-87	6.8	54	170.2	118.8	10.0	220.5	225.7	109.9	208.9	1.7	10	12
Llyn Clyd	26-Nov-86	6.0	29	46.4	44.8		118.8	169.3	57.5	16.4	0.4	8	5
	03-Mar-87	6.2	34	59.9	52.6	16.1	144.0	141.0	68.3	44.0	0.5	10	27
	24-May-87	6.1	28	57.9	46.1		114.0	112.8	64.5	29.2	0.5		
	28-Jul-87	6.3	26	59.4	48.5	5.1	118.8	112.8	72.7	46.1	0.5	4	9
Llyn Conwy	26-Nov-86	4.7	34	37.9	37.6		122.2	169.3	61.0	0.0	2.2	29	23
	03-Mar-87	4.9	36	37.9	36.7	7.7	147.0	169.3	63.3	0.0	2.3	45	29
	26-May-87	4.8	32	39.9	35.4	5.4	140.5	141.0	79.1	0.0	1.9		38
	30-Jul-87	4.9	30	51.4	35.4	6.9	128.8	141.0	75.4	0.0	2.1	33	28
Llyn Cwm Bychan	27-Nov-86	5.0	48	55.4	54.3	6.1	201.8	282.1	78.7	0.0	1.3	88	12
	04-Mar-87	5.1	39	60.4	50.1	13.3	183.1	169.3	103.5	0.0	1.3	81	18
	12-May-87	5.2	36	59.9	52.5	9.0	189.7	169.3	111.2	0.0	0.8		10
	04-Aug-87	5.4	29	46.9	38.2	4.4	151.8	112.8	105.4	9.8	2.1	33	114
Llyn Cwm Ffynnion	27-Nov-86	5.3	24	29.9	26.7	4.4	114.0	141.0	35.4	0.0	0.9	19	7
	03-Mar-87	5.5	44	39.4	31.0	9.5	117.9	112.8	53.3	5.3	0.9	28	32
	14-May-87	5.4	22	40.4	30.5	2.8	110.5	112.8	58.9	2.9	1.1		
	03-Aug-87	5.9	17	31.4	21.8		91.3	84.6	47.5	25.0	1.7	23	7
Llyn Cwm Silyn Lower	26-Nov-86	5.1	36	28.9	51.6	12.5	187.5	197.5	65.6	0.0	0.6	79	12
	04-Mar-87	5.1	42	33.4	55.5	11.0	196.6	197.5	78.1	0.0	0.4	84	34
	14-May-87	5.2	36	35.4	57.6	8.4	179.6	169.3	78.3	0.0			
	04-Aug-87	5.4	32	43.9	52.0	7.7	171.4	141.0	78.7	0.0	0.6	35	17
Llyn Cwm Silyn Upper	14-May-87	5.3	33	35.9	60.3	9.7	194.9	169.3	84.5	0.0	0.3		12
	03-Aug-87	5.4	33	35.9	52.8	12.0	175.7	141.0	82.7	7.5	0.6	72	11
Llyn Diawaunedd	27-Nov-86	5.6	29	41.4	40.1	4.4	133.5	169.3	52.7	2.9	1.1		7
	03-Mar-87	5.6	31	43.9	41.1	9.7	149.2	141.0	59.1	14.2	1.0	39	34
	13-May-87	5.9	26	47.9	42.3	5.1	135.3	141.0	66.8	9.8	0.7		
	03-Aug-87	5.9	23	51.9	33.1		101.4	112.8	70.6	18.5	1.2	28	9
Llyn Du	27-Nov-86	5.5	58	90.3	83.1	7.7	258.8	338.5	95.2	20.7	0.8	101	4
	04-Mar-87	6.0	59	142.7	90.1	14.8	252.7	282.1	132.0	46.1	1.9	18	14
	12-May-87	6.2	52	149.2	85.1	6.9	240.1	253.9	129.1	79.4	2.3		12
Llyn Dulyn	02-Dec-86	5.0	37	37.9	49.5	7.4	157.5	197.5	60.8	0.0		43	9
	04-Mar-87	5.1	35	49.9	55.3	8.4	164.4	141.0	80.8	0.0	1.1	82	11
	23-May-87	5.2	32	43.9	53.5	4.4	161.4	169.3	85.4	0.0	1.8		40
	04-Aug-87	5.5	21	30.9	27.2		93.1	84.6	63.1	0.0	1.9	15	28

Site	Date	pH	Cond.	Ca ²⁺	Mg ²⁺	K ⁺	Na ⁺	Cl ⁻	SO ₄ ²⁻	Eqv.		Lab.	
										Alk.	DOC	Al	Zn ²⁺
Llyn Edno	03-Mar-87	5.0	32	37.9	32.0	7.4	148.8	169.3	57.5	0.0	1.5	57	20
	24-May-87	5.0	28	38.9	28.8	4.1	130.1	141.0	60.4	0.0	1.2		
	03-Aug-87	5.1	26	37.4	25.8	4.1	124.4	141.0	61.2	0.0	1.6	52	9
Llyn Geirionydd	03-Mar-87	6.6	79	213.1	109.0	11.8	266.6	310.3	191.1	118.7	2.1	28	795
	28-Jul-87	7.0	71	239.0	114.3	10.0	240.5	282.1	202.4	157.7	1.2	10	643
Llyn Glas	26-Nov-86	6.2	30	65.9	41.2	8.7	116.6	112.8	48.1	27.1		4	9
	05-Mar-87	6.2	31	80.8	49.8	7.7	150.9	169.3	62.0	33.5		13	14
	24-May-87	6.2	26	65.9	41.9	5.6	125.7	112.8	58.3	27.1			31
	03-Aug-87	6.4	26	72.4	40.5	9.2	127.0	112.8	60.8	46.1	0.5	14	20
Llyn Glasfryn	18-May-87	6.9	99	390.7	143.1	35.8	372.8	479.5	93.7	394.2	5.7		8
Llyn Glaslyn	26-Nov-86	4.8	36	33.4	62.3	8.7	147.0	141.0	89.1	0.0	1.3	61	10
	05-Mar-87	5.0	34	41.9	58.5	7.4	151.8	169.3	88.3	0.0	1.5	75	27
	17-May-87	4.9	30	34.9	55.6	7.2	143.5	141.0	90.6	0.0	0.8		
	04-Aug-87	5.0	31	48.4	59.2	6.1	160.1	141.0	103.5	0.0	1.3	36	13
Llyn Goddionduon	28-Nov-86	5.3	68	98.3	100.5	7.7	307.5	366.7	124.5	0.0	2.3	30	59
	04-Mar-87	5.7	68	108.3	116.0	5.4	344.9	394.9	133.3	18.5	1.2	30	42
	15-May-87	5.9	52	102.3	94.2	7.9	282.7	310.3	137.4	22.8	1.4		40
	28-Jul-87	6.3	54	99.3	87.3	5.9	254.9	282.1	120.3	64.9	1.5	18	19
Llyn Gwynant	18-May-87	6.6	37	117.8	46.9	4.9	144.9	169.3	68.7	77.4	0.8		19
	30-Jul-87	6.8	34	152.2	47.0	7.4	140.5	112.8	77.0	122.8	1.4	18	6
Llyn Gynon	06-Mar-87	4.9	38	45.4	65.5	3.8	161.8	169.3	98.5	0.0	2.2	43	45
	05-Aug-87	5.6	28	41.4	43.8	8.4	130.1	141.0	66.4	18.5	5.0	5	12
† Llyn Hir		4.8											
Llyn Irdryn	01-Dec-86	5.2	45	62.4	59.8	7.4	204.9	225.7	86.2	0.0	0.9	33	8
	04-Mar-87	5.4	43	67.4	63.5	7.4	205.7	225.7	96.0	2.9	0.6	45	22
	23-May-87	5.1	39	60.4	58.4	5.9	190.1	197.5	99.9	0.0	0.8		10
	04-Jul-87	5.4	33	51.4	48.8	3.6	176.6	141.0	99.3	5.3	1.5	34	10
Llyn Llagi	02-Dec-86	5.0	32	40.9	37.3	2.6	143.5	169.3	48.1	0.0	2.0		9
	03-Mar-87	5.3	31	56.9	38.7	7.9	143.1	141.0	69.5	0.0	2.2	42	21
	18-May-87	5.3	27	47.9	37.0	2.8	127.0	141.0	72.9	0.0	1.5		11
	03-Aug-87	5.5	21	38.4	28.5	3.3	98.3	84.6	61.8	14.2	3.7	38	9
Llyn Llennych	27-Nov-86	6.2	49	121.8	65.4	4.1	184.9	197.5	97.0	33.5	2.1	17	6
	04-Mar-87	6.1	45	125.8	63.9	8.7	194.9	197.5	103.1	35.6	2.8	25	24
	15-May-87	6.2	42	133.2	62.6	7.9	188.3	197.5	107.9	50.3	1.8		8
	30-Jul-87	6.6	42	175.2	57.2	4.6	146.6	169.3	110.4	91.9	2.9	17	5
Llyn Penrhaiadr	01-Dec-86	4.8	39	46.4	55.3	5.6	149.6	169.3	72.7	0.0	2.8	59	11
	05-Mar-87	5.0	34	50.9	59.4	9.5	167.9	169.3	93.5	0.0	2.7	84	13
	17-May-87	5.2	31	44.9	51.8	5.6	147.0	141.0	81.2	2.9	2.8		
	04-Aug-87	5.4	25	55.9	46.0	4.1	127.5	112.8	73.9	12.0	5.1		13
Llyn Tecwyn	18-May-87	5.9	60	152.7	90.5	10.0	254.5	282.1	162.4	20.7	1.4		
	30-Jul-87	6.3	58	161.7	95.5	8.2	270.6	282.1	164.9	52.4	2.0	15	7
Llyn y Bi	29-Nov-86	4.9	43	38.4	48.8	13.6	172.7	197.5	67.3	0.0	1.0	104	6
	05-Mar-87	5.1	34	43.4	50.0	11.0	170.9	169.3	91.4	0.0	0.7	117	2
	26-May-87	5.3	34	47.9	49.3	7.7	171.8	169.3	95.8	0.0	1.0		
	04-Aug-87	5.4	25	48.4	38.7	7.4	145.3	84.6	101.4	2.9	2.2	45	8
Llyn y Gadair	26-Nov-86	5.4	32	60.4	40.0	15.1	151.8	169.3	58.5	7.5	0.3	33	7
	14-May-87	6.1	35	93.3	48.8	4.1	180.1	169.3	90.2	31.4	1.8		12
	03-Aug-87	6.2	29	84.3	37.6	6.7	138.3	169.3	72.0	50.3	3.3	9	8
Llyn y Garn	29-Nov-86	6.3	38	112.8	48.0	17.1	143.1	197.5	84.1	39.8	1.3	8	4
	02-Mar-87	6.2	39	106.8	46.0	7.7	163.1	197.5	92.0	37.7	1.6	23	16
	13-May-87	6.2	35	110.8	45.6	4.4	150.9	169.3	92.7	37.7	1.1		13
	30-Jul-87	6.3	35	121.3	44.7	6.9	154.9	141.0	91.4	52.4	1.1	12	6
Llyn y Parc	15-May-87	6.8	81	208.6	159.7	9.7	336.2	394.9	234.0	112.5	1.1		730

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