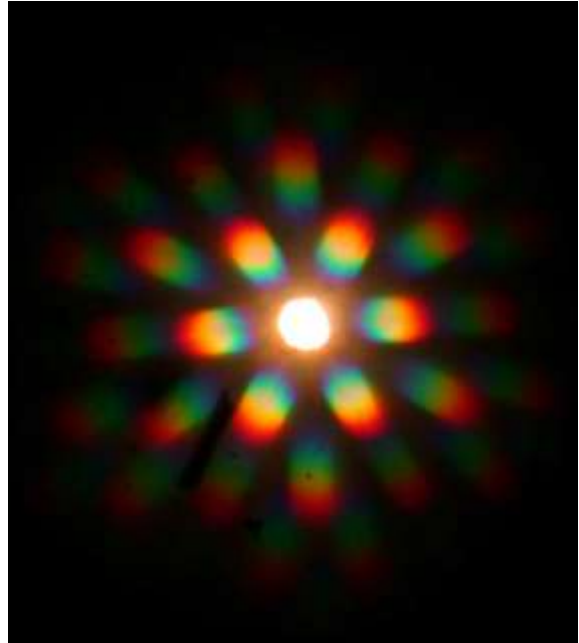


The Amateur Diatomist

Volume 5 Part IV.

Editorial
New Downloads
Uses of Diatomite: Sil-O-Cel
Cleaning Diatoms
Eric Grenville Drake Collection
Vaughan Dodge's Diatom Gallery
My New Diatom Project by Maurice
Vaughan
Diatoms moving relative to the tides



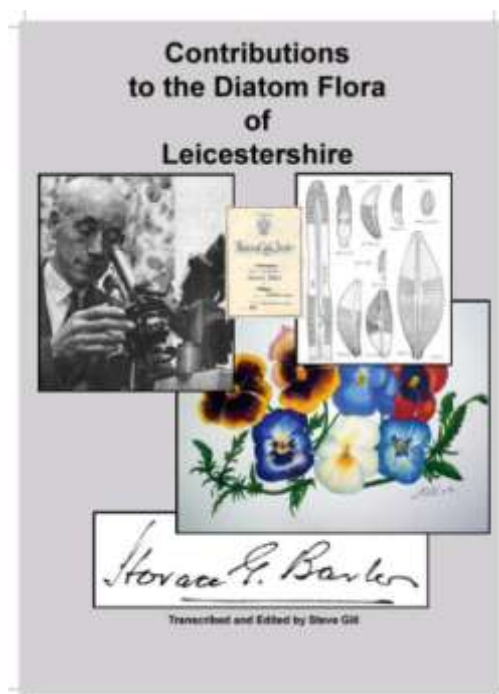
Diffraction Pattern of Coscinodiscus lineatus

Editorial

I'm afraid it takes a while to accumulate enough information to make a new issue worthwhile. But here it is, warts and all.

If some of you readers, and we know there are more than two, would like to contribute any articles or notes we would be delighted to include them.

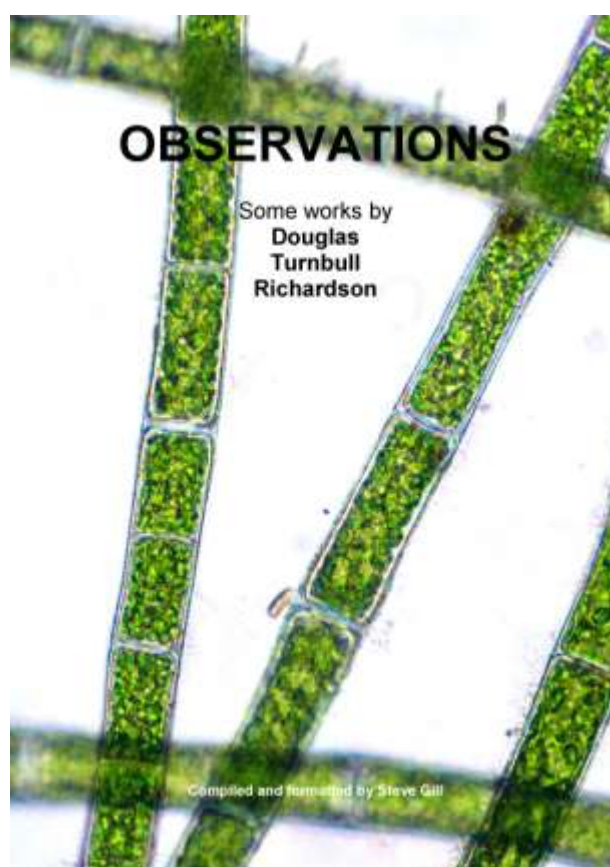
New Downloads



This volume is a transcription of the work and plates of Horace Barber in relation to collections made, in the main, in Leicestershire. It includes numerous plates and additional sketches as well as notes by himself and additions by John Carter.

It is not a taxonomic guide to diatoms but amply illustrates the mechanisms and thought processes of this enthusiastic and capable amateur diatomist.

The volume above is now available in the Downloads section of this site.



This volume is a compilation of some of the notes and observations made by Douglas Turnbull Richardson during his lifetime. It is not specifically aimed at the diatomist, though it contains much of interest to that group.

The following review by Mike Samworth gives a flavour of its scope.

"In 1985 I was working at Malham Tarn Field Centre in the Yorkshire Dales. An enterprising tutor there, and one or two local friends and colleagues started a small group called 'Craven Conservation'. Very early on, some meetings down in Settle were arranged, with evening sessions taking place in a back room of The Golden Lion, and some field excursions at weekends. At one of these evening sessions, I met the indefatigable Doug Richardson. It was not an auspicious start, as I seem to recall that the small notice in the 'Craven Herald' newspaper had described the group as 'Craven Conservatives' and one visitor at least was not expecting a talk on centipedes, millipedes and woodlice ! However, the knowledge and enthusiasm of the speaker very soon had us all enthralled, and he was quickly asked to a field meeting ,where he was even more in his element, guiding us around the environs of Skipton Castle woods, seemingly aware of more of its flora and fauna than any one person could be expected to be.

Doug was in his mid sixties then, and about twenty years later, got his first computer, donated by Steve Gill. He had already been contributing to the pages of Balsam Post for many years, firstly handwriting text, then using an electronic typewriter that saved files on disks. A full-blown computer, albeit a modest second-hand model, was seen by Doug as a means to record in electronic form a lifetime of naturalising. Thus, he spent a great deal of time and effort transcribing material from his notebooks. He would freely admit that he was not a natural on the thing, but he persevered, and with Steve only a phone-call away, overcame any frustrations, and marched on. On one occasion, I delivered a second, more compact machine (again from Steve) and installed it downstairs, and moved the original up into his loft so that he could continue there too.

He augmented his notes with illustrations, by scanning hundreds of his 35mm transparencies with a small compact consumer digital camera mounted on a small stand. Using cardboard, he made an adapter to allow him to take photomicrographs using this same camera, and thus utilise the many slides he had made over the years of numerous subjects.

Following his death in December of 2013, all this material was pulled together by Steve Gill, in pdf format, and made freely available to download from the internet. Whilst the document is quite large, it is in effect, a guide to much of the flora and fauna of North Yorkshire. However, this local aspect, though important for those that live there, should not put anybody off, as it includes so many species that are likely to be found anywhere by those who wish to look for it, and learn. An excerpt from the contents should be enough to illustrate the vast scope;

Sand and Marine Debris

Spiders

Staining Arthropds and Insects

Tardigrades

List of Interesting Pollens

List of Plant Seeds for Microscoical Examination

Insect Notes

Clubmosses

Liverworts

Mosses

Plant Galls

Seeds

Alder Flies

Amphibians

Ash Aphids

Bees, Wasps Etc.

Beetles (Coleoptera)

Butterflies

Caddis Flies (Trichoptera)

Centipedes (Chilopoda)

Crustaceae (Crayfish Etc.)

Earthworms

Earwigs (Dermaptera)

Flies (Diptera)

Freshwater Flatworms (Tricladia)

Harvestmen (Opiliones)

Leeches (Hirudinea)

Mammals

Mayflies (Ephemera)

Millipedes (Diploda)

Mites (Acari)
Mollusca
Moths (Lepidoptera)
Owl Pellets
Sea Urchins
Scorpions
Spiders
Sponges
Springtails
Stoneflies (Plecoptera)
True Bugs
Whip Spiders
Woodlice (Isopoda)
Animal and Human Histology
Freshwater Algae
Freshwater Bugs (Hemiptera)
Fungi
Hydrozoa
Lichens
Mollusca
Petrology
Plant Anatomy and Histology
Plant Galls
Protozoa

There are also articles from Balsam Posts, and of particular interest practical protocols for sample preparation and slide-making, together with a full analysis of many reagents, including the chemical recipes for several NBS concoctions. Where else would you find details of how best to prepare and mount ants? (page 28) Or, see how he has gone about mending or re-mounting old Victorian slides that were damaged? Some sections are very habitat specific, or indeed location specific, but this does not make them any less interesting. I know that I shall be visiting some of these sites in the future.

All in all, this is a tremendous work. From one viewpoint, it is testament to the man himself, and the interest and enthusiasm he had for the natural world around him, all that he stood for as a person, and the way he gave of his time so freely to help others. This is all true, but it almost hides the fact that this is such a great guide to living things, and something that we can all learn from."

The volume above is now available in the Downloads section of this site.

SIL - O - CEL

The mark SIL-O-CEL was officially filed as a trademark by MANVILLE CORPORATION DENVER, CO 80217 on 09 Jun 1905 with it's first use in commerce on 19th October 1903. The mark was lodged to cover Vehicles; apparatus for locomotion by land, air or water. FIREPROOF INSULATION FOR FLOORS AND WALLS are also covered by this mark. As at 26th May 2007, the mark has a status of Expired.

CELITE PRODUCTS CO., New York.
[9578, 9579
Heat flow, temperature gradients,
C19. [Blueprint] © July 29, 1918,
2 c. Aug. 1, 1918; I 3872.
Typical furnace insulated with sil-
o-cel brick and powder, 79. [Blue-
print] © July 29, 1918; 2 c. Aug. 19,
1918; I 3885.

Catalog of copyright entries Works of art etc Part 4, Volumes 13 and 14 1918

CELITE PRODUCTS CO., New York.
[885-890
Construction for insulating walls. ©
Jan. 10, 1919; 2 c. Jan. 7, 1919; I 4042.
Heat flow, temperature gradients and
fuel loss in uninsulated and insulated
furnace walls [Blueprint] © Feb. 11,
1919; 2 c. Feb. 12, 1919; I 4127.
[Insulation of by-products coke
oven] © Jan. 1, 1919; 2 c. Jan. 3,
1919; I 4037.
Marine or steel encased boiler insu-
lated with sil-o-cel, 84 [Blueprint] ©
Mar. 3, 1919; 2 c. Mar. 7, 1919; I 4161.
Rotary cement kiln insulated with
sil-o-cel brick, 85 [Blueprint] © Mar.
3, 1919; 2 c. Mar. 7, 1919; I 4162.
Typical coke oven insulated with sil-
o-cel brick, 86 [Blueprint] © Feb. 19,
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The image below is a sample block of SIL-O-CEL.



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Products

Sil-O-Cel Insulating Brick, C-22 Brick Blocks, Powder, coarse grade, and C-3 CEMENTS for heated equipment, (also for cold storage insulation, and sound deadening and fireproofing in building construction).

Also manufacturers of:

Praxite (High Temperature Cements) for Laying and Facing Fire Brick subjected to high temperatures.

Celcote for Preventing Infiltration of Air in Brick Settings in heated equipment, also as a Waterproofing Coat for Sil-O-Cel Insulation.

Filter-Cel, an Inert Mineral Powder, used with filtering equipment to improve the clarity of liquids.

Sil-O-Cel Insulating Brick

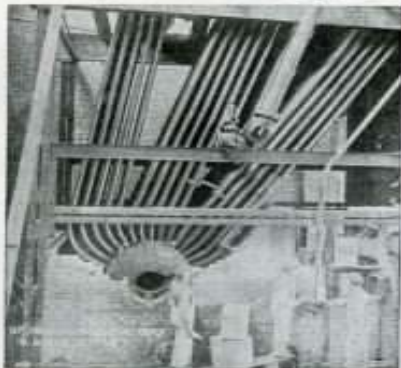
Made in standard fire brick sizes. Used as an insulating backing to refractory linings of boilers, furnaces, ovens, gas equipment, kilns, etc., where temperatures against insulation do not exceed 1600° F. These brick weigh 19½ lb. each and have a crushing strength of 28 tons per sq. ft. They are one-tenth as conductive as fire brick inch for inch.

Sil-O-Cel C-22 Brick

For use where the temperature behind the refractory ranges from 1600° to 2000° F. They have somewhat lower insulating value than Sil-O-Cel Insulating Brick, but are capable of standing higher temperatures.

Sil-O-Cel Blocks

A bonded form of Sil-O-Cel and long fibered asbestos is produced in block form 6 or 12 in. wide by 18 or 36 in. long, in thicknesses of 1, 1½, 2, 3 and 4 in.



LAYING SIL-O-CEL INSULATING BRICK IN A STEERING BOILER



TRADE MARK

Sil-O-Cel Powder

Ideally adapted for packing hollow walls, where structural strength is not required of the insulation. When packed to a density of 15 lb. per cubic foot it will not settle. It has approximately the same insulating value as Sil-O-Cel insulating brick.

Sil-O-Cel Coarse Grade

More easily packed than the more finely ground Sil-O-Cel powder. Ideally adapted for hollow walls, and for covering the tops of equipment, where structural strength is not essential.

Sil-O-Cel C-3

This is coarsely ground Sil-O-Cel, calcined in order that it may be used at temperatures up to 2200° F, without shrinkage. It can be used dry in walls or bases, or it can be made into concrete form by the addition of portland cement and water for use as a monolithic door lining for heat treating, annealing and enameling furnaces; as a damper in waste heat flues; for insulating floors of tunnel kiln cars, bases of oil fired boilers, etc.

Sil-O-Cel Cements

Sil-O-Cel Insulating Cements are prepared in three grades and are used for covering irregular surfaces to which brick, blocks or powder are not adapted.

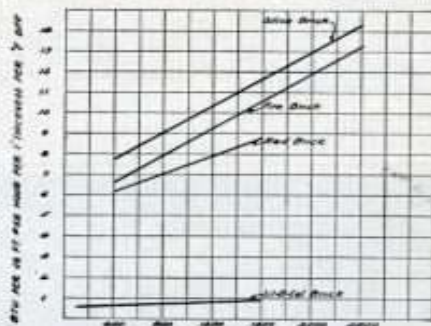
Contracting Department

A contracting department is maintained for the application of Sil-O-Cel to any type of equipment, including boilers, breechings, flues and ducts, tanks, stills, etc.

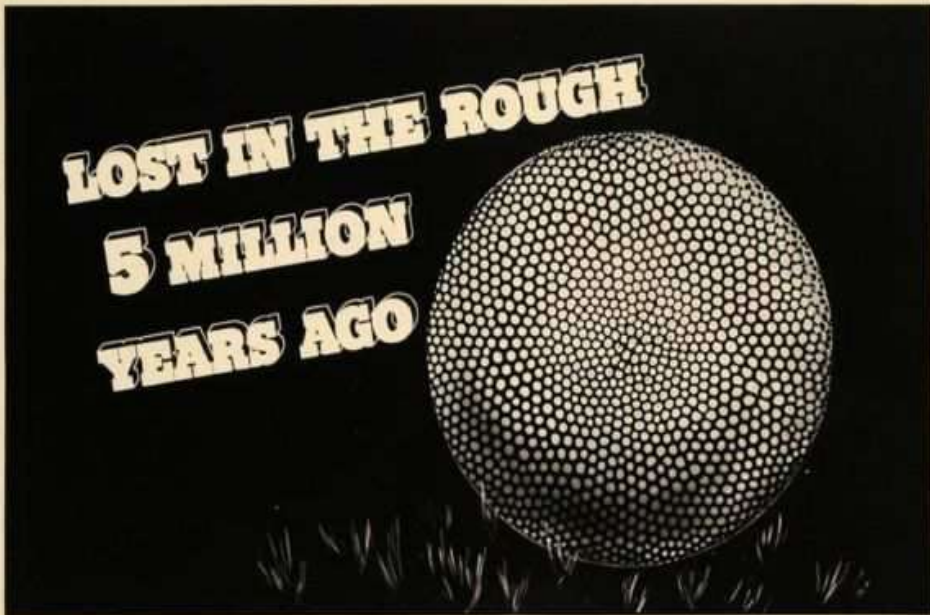
Bids gladly submitted on request.




Service

The services of our technical staff are available to any one desiring information on heating insulation.



CONDUCTIVITY OF SIL-O-CEL BRICK, RED BRICK AND REFRACTORIES



OF COURSE it isn't a "golf ball"; nor is this  a "crown"; nor this  a "diamond brooch"; nor this  a "pin cushion." They are the magnified fossils of diatoms, tiny sea plants that died 5 million years ago.

The diatom is an amazing organism. A plant, yet it "moves." Invisible, yet its family numbers 8,000 varieties. And finally, it has a silica covering, or "shell."

The fossilized diatom (quarried from huge natural deposits known as diatomaceous earth) has always been a fascinating subject for the scholar's microscope. But serious investigation into its commercial possibilities was not begun until 1912.

Today, as Johns-Manville carries that

research program into its 25th year, the diatom has become one of man's most versatile and industrious servants.

Amazingly porous, the fossil diatom clarifies the sugar with which we sweeten our coffee, the beer we drink at lunch, the vinegar and oil with which we dress our salads. And clarifies them quickly, thoroughly and far more cheaply.

Successfully withstanding temperatures as high as 4500° F., and remarkably efficient as an insulation, the diatom has helped make possible the development of the modern industrial furnace from which come our drinking glasses, our gas ranges, our lawn mowers—and myriads of other products in common use. Products that are higher in quality and lower in cost, because the diatom enables man to utilize

heat more effectively, more economically.

Light in weight, chemically inert, diatomaceous earth serves as an efficient mineral filler in paints and depilatories, match heads and insecticides, book paper and molded plastics, and countless other highly diversified products. Delicately abrasive, it is the principal constituent of many of the finest polishes and cleansers.

The most modest estimate of the diatom's annual savings to industry runs well into the hundreds of millions of dollars.

Do you operate high-temperature industrial equipment? Have you a filtration or a filler problem? Then perhaps you would like to know how this tiny little "vegetable" can be put to work for you. Let us send you the biographical sketch, "After 20,000 Centuries, Research Finds the Diatom to Work." Johns-Manville, 22 East 40th Street, New York.

JOHNS-MANVILLE

Controls HEAT, COLD, SOUND, MOTION



Protects against FIRE, WEATHER, WEAR

MOUNTAIN OF SKELETONS—Five million years ago, the diatoms pictured above were living sea plants, members of an enormous colony living in the waters off the California coast. As they and their fellows died, they sank to the bottom, where, during some 30,000 years or more, their tiny "shells"

formed a 1,000-foot deposit. Today, by reason of the continental rise, that mountain of skeletons, known as the "Celite Deposit," is many miles inland at White Hills, near Lompoc, California. A Johns-Manville property, it is the world's largest and most uniform source of pure diatomaceous earth.



Work Sheet 3.

Protocol for cleaning a fresh diatom sample using dilute Hydrochloric Acid and Domestos Drain and Pipe Unblocker (Sodium Hypochlorite [NaOCl])

Cautionary Notes:

Always wear rubber gloves when dealing with these chemicals. Immediately wash any area of your skin that comes in contact with the chemicals. Wear safety glasses - these are available at extremely low cost (see *Note f*). Always follow the suppliers instructions as regards safety recommendations.

A. Freshwater, Brackish or Marine

If the sample is from a freshwater source then proceed directly to **B**.

Samples from Brackish or Marine sources should be washed two or three times to remove any salts. This is easiest achieved with a centrifuge, either a hand-operated or electric motor-driven device. Mix the sample with distilled water and shake vigorously. Either leave to settle and decant off the supernatant liquid or split into two tubes and set into opposite sides of your centrifuge and spin until the sample forms a small pellet in the bottom of the tube. Discard the supernatant liquid and repeat.

B. Removing any carbonates that would precipitate out in the later stages.

1. Add a small drop of Hydrochloric Acid [HCl] (see *Note a*) to the fresh sample.

If no 'fizzing' occurs then the sample is clear of any carbonates and no further HCL need be added. If 'fizzing' does occur then let it subside, then add another drop and repeat this process until there is no further reaction.

Add distilled water (see *Note g*), shake and pipette off the supernatant after settling or centrifuging.

C. Digesting the living material.

2. Put sample to be processed into two centrifuge tubes in equal measure.

Add distilled water to half fill the centrifuge tube. Shake well. Place tubes in centrifuge opposite each other. Centrifuge for about a minute or until a small pellet forms in the bottom of each tube. Pipette off most of the supernatant liquid.

3. Pipette Drain and Pipe Unblocker into tubes, again to half fill the tubes.

Note: The main active ingredient in this product is Sodium Hypochlorite.

Using a "draw and squirt" action with the pipette mix the sample and the liquid.

Set aside in a warm room for about 15 minutes in total, mixing with the pipette as above after 5 minutes and 10 minutes.

4. The contents should go white or clouded but have no other colour.

If this is not the case then centrifuge, pipette off the supernatant liquid and return to step 3.

5. Centrifuge again when a small white pellet will be seen to have collected at the bottom of the tubes.

Add distilled water, shake well, centrifuge, pipette off the supernatant liquid and repeat this step once more to clear the sample of any remaining drain cleaner.

6. I also did an HCl wash at this stage which really seemed to make a difference to the final result.

7. Add a small amount of distilled water to the tubes, shake well to suspend the diatoms and transfer to a small bottle that should have been previously labelled with the sample details.

D. Removal of clay and mud that may remain

8. If the sample has been taken from a mud surface then some of the clay or mud may remain in the sample.

A useful tip is to add a couple of drops of a weak Ammonia [NH₃] solution (see *Note d*) at the final wash which action will hopefully cause much of that clayey material to remain in suspension and discarded with the supernatant liquid.

The cleaned diatoms are now ready for mounting (you may well have to dilute the final sample to obtain a satisfactory strew).

Chemicals etc.



Note a.: Many patio/brick paving cleaners contain Hydrochloric Acid of sufficient concentration for this exercise (usually about 10%).
Note d.: A 25% Ammonia solution

is available on eBay = 200gm for about £6.

Note e.: 250ml Plastic wash bottles are available on eBay for about £3 each

Note f.: Safety Glasses are available via eBay for as little as £1 + 50p post and packing.

Note g.: If you have or know someone that has a de-humidifier then this is an ideal source of distilled water. And, of course, it's free.

Always keep your chemicals out of the reach of the young or vulnerable.

Always mark your chemical containers clearly.

Disclaimer.

People using this protocol do so entirely at their own risk and the authors cannot and will not be held responsible for any accidents or mishaps. Only attempt the protocol if you accept liability yourself.

The Eric Grenville Drake Collection

The “Eric Grenville Drake” Diatom sample, slide and notebook collection.



Moved to Salisbury at the age of 14 when his father, a Ministry of Defence photographer, was posted to Boscombe Down. Though he had a microscope at the age of 9 his main interest at that stage was butterflies. Only when an article in English Mechanic sparked his interest did he turn to diatoms. The early samples of his collected material center very much around the 1941 period and then spasmodically until the mid-1960s when he collected in earnest. Many of his slides were selected monuts though by far the majority are strews.

Eric served in the Army (Royal Artillery) towards the end of the war (1944-46) and subsequently began work for the Ministry of Defence where he was employed as a Mathematician and Statistician working at Orfordness and Shoeburyness. He also played the drums to supplement his income. As is often the case middle-age saw him resume his hobby and diatom collecting

Elected to the Quekett Microscopical Club at the 991st Ordinary Meeting on the 9th May 1967.

In the 1969 Membership list recorded at - 1A St. Augustine Road, Ipswich Suffolk (Stated interests - Diatoms [fresh-water])

In the 1974 Membership list recorded at – “Chando”, Burnt Common, Send, Woking, Surrey, GU23 7LA. Telephone: Ripley 3091. (Stated Interests - Diatoms [Freshwater])

In the 1973 and 1974 Post Office Directories of Epsom-Leatherhead & West Thames & Guildford Area the above telephone number is recorded against one S. V. Drake, Chandos, Burnt Com. X Rds, Send.

Note: S. V. Drake - his wife.

Notebooks

Note Vol. or Pages	Pages (in brackets = un-numbered)	Slide Ref.	Slide present	Location	Coll. Date	Sample Code (if known)	Sample available
Vol. 1.	1	1/I	Yes	<i>Collection Notes (Page 1):</i> AAA (Fresh Water) Early 1941 Stratford Bridge & Woodford, nr. Salisbury, Wilts, River Avon. The Avon is deep, fast flowing in this region, with long strands of water weed, & in wide valley. Nothing else known about this. Slides: 1/I, 9/I		AAA	No
Vol. 1.		1/II	Yes				
Vol. 1.	2	2/I	Yes	<i>Collection Notes (Page 1):</i> AAB (Fresh Water) Early 1941 Bemerton Water-meadows, Salisbury, Wilts. Very low-lying area of marshy pools & ditches, bordering the R. Avon, & traversed by the River Nadder, fast flowing, chalky bed & long strands of water weed. The area is open, with clumps of trees scattered. This is probably a Mixed gathering. Slides: 2/I, 3/I, 5/I		AAB	No

Vol. 1.	12	2/II	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
Vol. 1.	(110-117) + 1 loose page	2/III	No	<i>Collection Notes (Page 3):</i> ZAAK (Fresh Water) 23rd August 1966 Pond on Foxley Estate, nr. Bucklesham Rd, Ipswich, Suffolk. This pond is fed by a very small stream, & water escapes at E. end by another stream. Gathering made at E. end, both in pond, at very shallow part, and the stream, also very shallow (1/2 inch or so). Clumps of weed & bottom mud. Weather cool.		ZAAK	No
Vol. 1.	3	3/I	Yes	<i>Collection Notes (Page 1):</i> AAB (Fresh Water) Early 1941 Bemerton Water-meadows, Salisbury, Wilts. Very low-lying area of marshy pools & ditches, bordering the R. Avon, & traversed by the River Nadder, fast flowing, chalky bed & long strands of water weed. The area is open, with clumps of trees scattered. This is probably a Mixed gathering. Slides: 2/I, 3/I, 5/I		AAB	No
Vol. 1.	13	3/II	Yes	<i>Collection Notes (Page 2):</i> AAG (Fresh Water) September 1941 River Ribble, near Broadchalke, Wilts. Little remembered of conditions. River believed shallow, day bright & sunny. Date above may refer merely to date of Mounting. Spot by roadside, probably E. of Broadchalke. Slides: 3/II, 9/II, 10/II, 21/II		AAG	No
Vol. 1.	4	4/I	Yes	<i>Collection Notes (Page 1):</i> AAC (Fresh Water) 1941 Near Salisbury, Wilts. Nothing further known of this gathering, possibly one of others here. Slides: 4/I		AAC	No
Vol. 1.	14-19 & 44-48	4/II	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
Vol. 1.	5	5/I	Yes	<i>Collection Notes (Page 1):</i> AAB (Fresh Water) Early 1941 Bemerton Water-meadows, Salisbury, Wilts. Very low-lying area of marshy pools & ditches, bordering the R. Avon, & traversed by the River Nadder, fast flowing, chalky bed & long strands of water weed. The area is open, with clumps of trees scattered. This is probably a Mixed gathering. Slides: 2/I, 3/I, 5/I		AAB	No
Vol. 1.	20	5/II	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
Vol. 1.	(118-123)	5/III	No	<i>Collection Notes (Page 3):</i> ZAAK (Fresh Water) 23rd August 1966 Pond on Foxley Estate, nr. Bucklesham Rd, Ipswich, Suffolk. This pond is fed by a very small stream, & water escapes at E. end by another stream. Gathering made at E. end, both in pond, at very shallow part, and the stream, also very shallow (1/2 inch or so). Clumps of weed & bottom mud. Weather cool.		ZAAK	No
Vol. 1.	6	6/I	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
		6/II	Yes				
	(124-134)	6/III	No	<i>Collection Notes (Page 3):</i> ZAAL (Fresh Water) 28 th August 1966 Stream by bridge on narrow road connecting Foxhall & Bucklesham Rds (continuation of Bell Lane, Kesgrave), nr. Ipswich, Suffolk. Clean, fast-flowing water. Mainly bottom mud. Shay position under trees. Sunny weather. One or		ZAAL	No

				two inches deep.			
Vol. 1.	7	7/I	Yes	<i>Collection Notes (Page 1):</i> AAE (Fresh Water) 1941 Stratford Bridge, nr. Salisbury, Wilts. The bridge spans the R. Avon North of Salisbury, in fairly open country in a wide, shallow valley. The gathering, however, was from a roadside ditch in a field, North of the Bridge. Slides 7/I		AAE	No
Vol. 1.	21	7/II	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
Vol. 1.	(135-150) + 1 loose page	7/III	No	<i>Collection Notes (Page 3):</i> ZAAL (Fresh Water) 28 th August 1966 Stream by bridge on narrow road connecting Foxhall & Bucklesham Rds (continuation of Bell Lane, Kesgrave), nr. Ipswich, Suffolk. Clean, fast-flowing water. Mainly bottom mud. Shay position under trees. Sunny weather. One or two inches deep.		ZAAL	No
Vol. 1.	8	8/I	Yes	<i>Collection Notes (Page 1):</i> AAF (Fresh Water) 1941 Near Salisbury, Wilts. This gathering may be one of the others listed here. Slides 8/I		AAF	No
Vol. 1.	22	8/II	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
Vol. 1.	9	9/I	Yes	<i>Collection Notes (Page 1):</i> AAA (Fresh Water) Early 1941 Stratford Bridge & Woodford, nr. Salisbury, Wilts, River Avon. The Avon is deep, fast flowing in this region, with long strands of water weed, & in wide valley. Nothing else known about this. Slides: 1/I, 9/I		AAA	No
Vol. 1.	23	9/II	Yes	<i>Collection Notes (Page 2):</i> AAG (Fresh Water) September 1941 River Ribble, near Broadchalke, Wilts. Little remembered of conditions. River believed shallow, day bright & sunny. Date above may refer merely to date of Mounting. Spot by roadside, probably E. of Broadchalke. Slides: 3/II, 9/II, 10/II, 21/II		AAG	No
Vol. 1.	10	10/I	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
Vol. 1.	24	10/II	Yes	<i>Collection Notes (Page 2):</i> AAG (Fresh Water) September 1941 River Ribble, near Broadchalke, Wilts. Little remembered of conditions. River believed shallow, day bright & sunny. Date above may refer merely to date of Mounting. Spot by roadside, probably E. of Broadchalke. Slides: 3/II, 9/II, 10/II, 21/II		AAG	No
Vol. 1.	(150-160)	10/III	No	<i>Collection Notes (Page 3):</i> AAN (Fresh Water) 28 th August 1966 Stream just South of Foxhall Road, near Ipswich Sanatorium, Suffolk. Mainly mud & fragments of cress-like water weed. Warm sunny weather. Part-shaded by thin tree cover. 3 or 4 inches deep.		AAN	No
Vol. 1.	11	11/I	Yes	<i>Collection Notes (Page 1):</i> AAD (Fresh Water) Early 1941 Bemerton Water-Meadows, Salisbury, Wilts. Probably a Mixed gathering, possibly this & AAB are one & the same. Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II		AAD	No
		11/II	Yes				
Vol. 1.	(161-166)	11/III	No	<i>Collection Notes (Page 3):</i> AAN (Fresh Water) 28 th August 1966 Stream just South of Foxhall Road, near Ipswich Sanatorium, Suffolk.		AAN	No

				Mainly mud & fragments of cress-like water weed. Warm sunny weather. Part-shaded by thin tree cover. 3 or 4 inches deep.		
Vol. 1.		12/I	Yes			
Vol. 1.		12/II	Yes			
Vol. 1.		13/I	Yes			
Vol. 1.		13/II	Yes			
Vol. 1.		14/I	Yes			
Vol. 1.		14/II	Yes			
Vol. 1.		15/I	Yes			
Vol. 1.		15/II	Yes			
Vol. 1.		16/I	Yes			
Vol. 1.	25	16/II	Yes	<i>Collection Notes (Page 2):</i> AAH (Fresh Water) October 1941 Stratford-sub-Castle, nr. Salisbury, Wilts. River Avon. Conditions believed dull. Open river valley with clumps of tress. Slides: 16/II, 22/II, 23/II, 24/II, 25/II, 26/II	AAH	No
Vol. 1.		17/I	Yes			
Vol. 1.		17/II	Yes			
Vol. 1.		18/I	Yes			
Vol. 1.		18/II	Yes			
Vol. 1.		19/I	Yes			
Vol. 1.		19/II	Yes			
Vol. 1.		20/I	Yes			
Vol. 1.		20/II	Yes			
Vol. 1.		21/I	Yes			
Vol. 1.	26	21/II	Yes	<i>Collection Notes (Page 2):</i> AAG (Fresh Water) September 1941 River Ribble, near Broadchalke, Wilts. Little remembered of conditions. River believed shallow, day bright & sunny. Date above may refer merely to date of Mounting. Spot by roadside, probably E. of Broadchalke. Slides: 3/II, 9/II, 10/II, 21/II	AAG	No
Vol. 1.		22/I	Yes			
Vol. 1.	27	22/II	Yes	<i>Collection Notes (Page 2):</i> AAH (Fresh Water) October 1941 Stratford-sub-Castle, nr. Salisbury, Wilts. River Avon. Conditions believed dull. Open river valley with clumps of tress. Slides: 16/II, 22/II, 23/II, 24/II, 25/II, 26/II	AAH	No
Vol. 1.		23/I	Yes			
Vol. 1.	28	23/II	Yes	<i>Collection Notes (Page 2):</i> AAH (Fresh Water) October 1941 Stratford-sub-Castle, nr. Salisbury, Wilts. River Avon. Conditions believed dull. Open river valley with clumps of tress. Slides: 16/II, 22/II, 23/II, 24/II, 25/II, 26/II	AAH	No
Vol. 1.	29	24/II	Yes	<i>Collection Notes (Page 2):</i> AAH (Fresh Water) October 1941 Stratford-sub-Castle, nr. Salisbury, Wilts. River Avon. Conditions believed dull. Open river valley with clumps of tress. Slides: 16/II, 22/II, 23/II, 24/II, 25/II, 26/II	AAH	No
Vol. 1.	30	25/II	Yes	<i>Collection Notes (Page 2):</i> AAH (Fresh Water) October 1941 Stratford-sub-Castle, nr. Salisbury, Wilts. River Avon. Conditions believed dull. Open river valley with clumps of tress. Slides: 16/II, 22/II, 23/II, 24/II, 25/II, 26/II	AAH	No
Vol. 1.	31	26/II	Yes	<i>Collection Notes (Page 2):</i> AAH (Fresh Water) October 1941 Stratford-sub-Castle, nr. Salisbury, Wilts. River Avon. Conditions believed dull. Open river valley with clumps of tress. Slides: 16/II, 22/II, 23/II, 24/II, 25/II, 26/II	AAH	No
Vol. 1.	32	27/II	Yes	<i>Collection Notes (Page 2):</i> AAI (Fresh Water) November 1943 Pond near Ipswich Sanatorium, Foxhall Heath, Suffolk. The pond lies in a hollow, part-shaded by trees. Slides: 27/II	AAI	No
Vol. 1.		29/II	Yes			
Vol. 1.	33-35	32/II	No	<i>Collection Notes (Page 2):</i>	AAJ	No

				AAJ (Fresh Water) 13 th August 1953 Llangorse Lake, Wales From deposits on piles, tyres etc. of short jetty structure at edge of lake. Fairly open environment, approx. 600ft above Sea Level. Weather calm, dull with clouds on mountains. First gathering whose collection date is known. Slides: 32/i, 33/II, 34/II, 35/II, 36/II			
Vol. 1.	36-38	33/II	No	<i>Collection Notes (Page 2):</i> AAJ (Fresh Water) 13 th August 1953 Llangorse Lake, Wales From deposits on piles, tyres etc. of short jetty structure at edge of lake. Fairly open environment, approx. 600ft above Sea Level. Weather calm, dull with clouds on mountains. First gathering whose collection date is known. Slides: 32/i, 33/II, 34/II, 35/II, 36/II		AAJ	No
Vol. 1.	39-40	34/II	No	<i>Collection Notes (Page 2):</i> AAJ (Fresh Water) 13 th August 1953 Llangorse Lake, Wales From deposits on piles, tyres etc. of short jetty structure at edge of lake. Fairly open environment, approx. 600ft above Sea Level. Weather calm, dull with clouds on mountains. First gathering whose collection date is known. Slides: 32/i, 33/II, 34/II, 35/II, 36/II		AAJ	No
Vol. 1.	41	35/II	No	<i>Collection Notes (Page 2):</i> AAJ (Fresh Water) 13 th August 1953 Llangorse Lake, Wales From deposits on piles, tyres etc. of short jetty structure at edge of lake. Fairly open environment, approx. 600ft above Sea Level. Weather calm, dull with clouds on mountains. First gathering whose collection date is known. Slides: 32/i, 33/II, 34/II, 35/II, 36/II		AAJ	No
Vol. 1.	42-43	36/II	No	<i>Collection Notes (Page 2):</i> AAJ (Fresh Water) 13 th August 1953 Llangorse Lake, Wales From deposits on piles, tyres etc. of short jetty structure at edge of lake. Fairly open environment, approx. 600ft above Sea Level. Weather calm, dull with clouds on mountains. First gathering whose collection date is known. Slides: 32/i, 33/II, 34/II, 35/II, 36/II		AAJ	No
Vol. 1.	49-61	37/II	No	<i>Collection Notes (Page 2):</i> AAK (Fresh Water) 21 st August 1966 Stagnant water by old Rifle Butts, Foxhall Heath, nr. Ipswich, Suffolk. Partly shaded by trees & building structure. Wide ditch with one side sloping, muddy, other side vertical, stone. Slides: 37/II, 38/II		AAK	No
Vol. 1.	62-63	38/II	No	<i>Collection Notes (Page 2):</i> AAK (Fresh Water) 21 st August 1966 Stagnant water by old Rifle Butts, Foxhall Heath, nr. Ipswich, Suffolk. Partly shaded by trees & building structure. Wide ditch with one side sloping, muddy, other side vertical, stone. Slides: 37/II, 38/II		AAK	No
Vol. 1.	(64-69)	39/II	No	<i>Collection Notes (Page 2):</i> AAL (Fresh Water) 21 st August 1966 Water virtually stagnant, in & around old drainage Tank filled from Water Tower by limestone bank, Kesgrave, Suffolk. Open country, scrapings from inside edge of tank. Slides: 39/II, 40/II		AAL	No
Vol. 1.	(70-71)	40/II	No	<i>Collection Notes (Page 2):</i> AAL (Fresh Water) 21 st August 1966 Water virtually stagnant, in & around old drainage Tank filled from Water Tower by limestone bank, Kesgrave, Suffolk. Open country, scrapings from inside edge of tank. Slides: 39/II, 40/II		AAL	No
Vol. 1.	(72-85)	44/II	No	<i>Collection Notes (Page 3):</i> AAO (Slightly Brackish Water) 4 th September 1966 London Rd Bridge, Ipswich, R. Gipping Deep, sluggish flow. Scrapings from stone verge under surface, scum floating at surface, brownish greenish weed an inch or two below surface on shore a few feet below bridge (latter only, others just above bridge). Dull, warm morning.		AAO	No
Vol. 1.	(86-89)	46/II	No	<i>Collection Notes (Page 3):</i>		AAO	No

				AAO (Slightly Brackish Water) 4 th September 1966 London Rd Bridge, Ipswich, R. Gipping Deep, sluggish flow. Scrapings from stone verge under surface, scum floating at surface, brownish greenish weed an inch or two below surface on shore a few feet below bridge (latter only, others just above bridge). Dull, warm morning.			
Vol. 1.	(90-106)	48/II	No	<i>Collection Notes (Page 4):</i> AAP (Fresh Water) 25 th September 1966 Stream by road from Brightwell-Martlesham Heath Rd. to Newbourn, at Newbourn. Stream passes beneath road bridge & over edge of stone slab. Current fast over stone, very shallow (1/4 inch or so). Tufts of fine dark green water weed. Warm, fairly bright day. Partly shaded.		AAP	No
Vol. 1.	(107-109)	49/II	No	<i>Collection Notes (Page 4):</i> AAP (Fresh Water) 25 th September 1966 Stream by road from Brightwell-Martlesham Heath Rd. to Newbourn, at Newbourn. Stream passes beneath road bridge & over edge of stone slab. Current fast over stone, very shallow (1/4 inch or so). Tufts of fine dark green water weed. Warm, fairly bright day. Partly shaded.		AAP	No
Vol. 2.	(1-6)	51A	No	<i>Collection Notes (Page 22):</i> AEM (Fresh Water) 2 nd January 1972 Stream by road bridge, Send, Woking, Surrey. Dead leaves etc. in current about > in. deep. Part shaded by trees and bridge. Dull, mild, midday.		AEM	No

Sample bottles and associated slides

Most of the samples are stored in pharmaceutical tablet bottles of varying sizes.



Many have dried out and need re-suspending.

Not identified by Code:


Location	Collection Date	Collector	Additional Notes
Water Twr, Tank etc.	Sunday 21 st August 1966		
Pond	Tuesday 23 rd August 1966		
London Road Bridge, Ipswich	Sunday 4 th September 1966		
London Road Bridge, Ipswich	Sunday 4 th September 1966		
London Road Bridge, Ipswich	Sunday 4 th September 1966		


Stream. Newbourn	Sunday 25 th September 1966		Fast current over stone by road.
Beccles, R. Waveney	Sunday 6 th November 1966		Plain Sample <i>Collection Notes (Page 4):</i> AAR (Fresh Water) 6 th November 1966 (Mr. C. Leonard) (Plain) Centre of Beccles, Suffolk, R. Waveney. Scraping of plant growth from rudder of boat permanently moored in river. Taken at & just below water line.
Beccles, R. Waveney	Sunday 6 th November 1966		Blue Sample <i>Collection Notes (Page 4):</i> AAQ (Fresh Water) 6 th November 1966 (Mr. C. Leonard) (Blue) Centre of Beccles, Suffolk, R. Waveney. Medium current. River highly coloured due to recent heavy rain. Sample taken about 3 inches below present water level, from top surface of Mud deposit built up on stone wall at edge of river. No locks or Weirs.
R. Avon/Winkton	Tuesday 27 th December 1966	(Mr. C. Leonard)[4]	Yellow Sample <i>Collection Notes (Page 5):</i> AAU (Fresh Water) 27 th December 1966 (Mr. C. Leonard) (Yellow) Winkton, R. Avon. Current very fast, water foaming, virtual waterfall. Sample of weed & scraping from side of culvert. At same as AAT.
R. Avon/Winkton	Tuesday 27 th December 1966	(Mr. C. Leonard)[4]	Plain Sample <i>Collection Notes (Page 4):</i> AAT (Fresh Water) 27 th December 1966 (Mr. C. Leonard) (Plain) Winkton, approx. 3 miles above Christchurch, Hants., R. Avon. Sample of weed at edge, plus scrapings from concrete post. Current very slow. Cold Clear weather, evening. Part shaded by dense trees. River wide.
Pond	Friday 30 th December 1966		<i>Collection Notes (Page 5):</i> AAV (Fresh Water) 30 th December 1966. Pond near Bucklesham Road, Ipswich, Suffolk (same as ZAAK & AAM) Marshy Area at edge, W of earlier sampling areas, and also at E. edge. Mainly mud just below surface. Cold evening. Fairly open, in shallow hollow.
Water Tank, Kegrave Heath	Sunday 8 th January 1967		<i>Collection Notes (Page 5):</i> AAX (Fresh Water) 8 th January 1967 Scraping from edge of Water Tank as AAL, Hesgrave, Suffolk. Very cold.
Rifle Butts, Foxhall Hth.	Sunday 8 th January 1967		Under ice <i>Collection Notes (Page 5):</i> AAW (Fresh Water) 8 th January 1967 Wide ditch by Rifle Butts, Foxhall Heath, nr. Ipswich, Suffolk. Location as AAK. Scraping from stone edge, just below & at surface. Very cold, ditch ice-covered, no sample taken by breaking ice. Much duckweed & odour present.
Roadside Ditch nr. Hintlesham (1)	Sunday 5 th March 1967		Scum Stag.
Roadside Ditch nr. Hintlesham (2)	Sunday 5 th March 1967		Reddish Mud, some scum
Roadside Ditch nr. Hintlesham (3)	Sunday 5 th March 1967		Shaded by hedge of trees. Scummy Spirogyra(?) 1 = miles E. of Hadleigh
Bushy Park	Monday 28 th August 1967	G. C. Croasdell[1]	<i>Collection Notes (Page 9):</i> ABM (Fresh Water) 26 th August 1967 Blue Flowing stream in Bushy Park, London. By G. C. Croasdell, Q.M.C.
Unknown	Last August. Sunday 3 rd September 1967		Soil, Moss etc.
Banff, Alberta (No.3.)	End September 1967	Miss S. Mandeville[2]	
Cache Creek, Brit. Columbia	End September 1967	Miss S. Mandeville[2]	
I. Pinehurst Creek, S. Ontario	End of 1967	Miss S. Mandeville[2]	




Identified by Code (sample photographs by Steve Edgar):

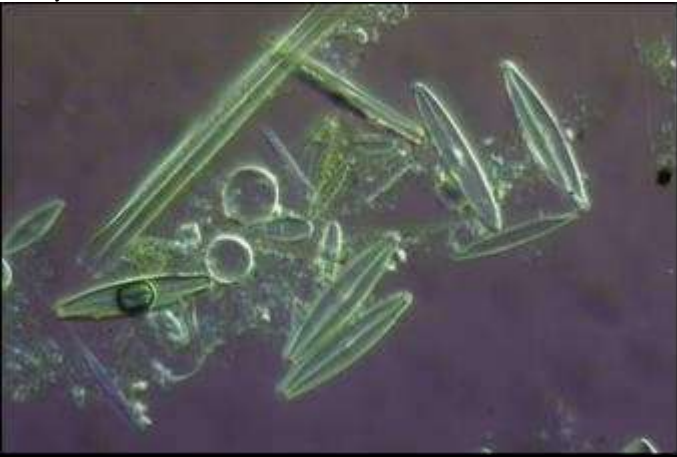
Sample Code	Location	Date	Collector	Additional Notes
ABA	No sample			
	<i>Additional Slide Information:</i> Mounted: Sunday 26 th March 1967 <i>Collection Notes (Page 6):</i> ABA (Fresh Water) 5 th March 1967 (Blue) Ditch on N. Side of Ipswich-Hadleigh road, 1 = miles East of Hadleigh. Scum tissue attached to floating stick etc. This ditch was in shade from a dense but leafless hedge on S. side. Stagnant. Taken just after AAY, AAZ			
ABB	Stream nr. R. Brett, Hadleigh, Suffolk	Sunday 5 th March 1967		
	<i>Additional Slide Information:</i> Small stream running into R. Brett Mounted: Sunday 26 th March 1967 <i>Collection Notes (Page 6):</i> ABB (Fresh Water) 5 th March 1967 (Green 4) Flowing stream a few yards from, and leading into, R. Brett at Hadleigh, Suffolk. From fine mud bottom, = inch or so from surface. Stream only 6 inches or so wide, by trees but open to South. Bright weather, mild.			
ABC	Marshy Pool by Brett, Hadleigh, Suffolk	Sunday 5 th March 1967		
	<i>Additional Slide Information:</i> Mounted: Sunday 26 th March 1967 <i>Collection Notes (Page 6):</i> ABC (Fresh Water) 5 th March 1967 (Yellow 5) Marshy pool on bank of R. Brett, Hadleigh, Suffolk. This pool was in open, & gathering was taken from scum & mud in it. It was filled with weed and grass, & stagnant. Bright mild weather.			
ABD	R. Brett S of Hadleigh, Suffolk	Sunday 5 th March 1967		
	<i>Additional Slide Information:</i> R. Brett nr. Hadleigh, Suffolk Mounted: Sunday 26 th March 1967 <i>Collection Notes (Page 7):</i> ABD (Fresh Water) 5 th March 1967 (Blue 6) R. Brett 2 miles South of Hadleigh, Suffolk. Current fairly fast, water somewhat clouded. Gathering taken from brown fronds & green slime attached to stones, two of many comprising the bed of the river. This green slime stone was in about 2-3 inches of water, a yard or so from edge, in strong current. The stone from which the brown fronds were taken was in about two inches of water, in only slow current, but only a few yards from other position. Open country, bright mild weather.			
ABE	Dew Pond, S. Downs.	Sunday 5 th March 1967	Miss S. Mandeville[2]	700ft alt.
	<i>Additional Slide Information:</i> Mounted: Sunday 26 th March 1967 <i>Collection Notes (Page 7):</i> ABE (Fresh Water) 5 th March 1967 (Miss S. Mandeville) Dew ponds approx. 700ft up on South Downs. This pond is concrete-lined, about 80ft diameter. Sample taken as weed and sediment. Much chalk in sample. Pond in open country. Weather bright with intermittent sun.			
ABF	Avon tributary, Salisbury	Sunday 23 rd April 1967		Weed on stone of bridge and bottom
	<i>Additional Slide Information:</i> Mounted: Saturday 27 th May 1967 <i>Collection Notes (Page 7):</i> ABF (Fresh Water) 27 th April 1967 (Green 1) Weed attached to stones of bridge & on bottom, R. Avon (tributary), Crane Street, Salisbury. Water clean, fast current but collecting area of bridge stone partly sheltered from it. Dull weather, early.			
ABG	Avon tributary, Crane St., Salisbury	Sunday 23 rd April 1967		Weed in current of
	<i>Additional Slide Information:</i> Mounted: Sunday 28 th May 1967 <i>Collection Notes (Page 7):</i> ABG (Fresh Water) 27 th April 1967 (Blue 1) Weed in current of tributary of R. Avon in open meadow South of bridge in Crane St., Salisbury, Wilts. River with fairly fast current on side from which sample taken, shallow & stagnant towards opposite side. Weather dull, early in day.			
ABH	Meadows, Bemerton	Sunday 23 rd April 1967		Green patches on soil
	<i>Additional Slide Information:</i> Mounted: Saturday 27 th May 1967 <i>Collection Notes (Page 8):</i> ABH (Fresh Water originally) 27 th April 1967 (Blue 2) Green patches on soil where stagnant water had been, on Bemerton Meadows, Salisbury, Wilts. Shaded by stone wall & trees. Bright weather, p.m.			
ABI	Meadows, Bemerton	Sunday 23 rd April 1967		Dead leaves in stagnant water
	<i>Additional Slide Information:</i> Stagnant water with dead leaves, Bemerton Meadows Mounted: Saturday 27 th May 1967 <i>Collection Notes (Page 8):</i> ABI (Fresh Water) 27 th April 1967 (Green 3) Dead leaves in stagnant water approx 1 inch deep in stagnant water, part-shaded by trees on Bemerton Meadows, Salisbury, Wilts. Bright weather, p.m.			

ABJ	Bemerton Meadows, Salisbury	Sunday 23 rd April 1967		Black mud = inch under water plants
<p><i>Additional Slide Information:</i> Shaded stagnant water, Bemerton Meadows, Salisbury, Wilts. Mounted: Saturday 27th May 1967 <i>Collection Notes (Page 8):</i> ABJ (Fresh Water) 27th April 1967 (Yellow 4) Black mud among round-leaved water plants, = inch deep in stagnant water in wide marshy ditch between trees, Bemerton Meadows, Salisbury, Wilts. Bright, p.m.</p>				
				
ABK	R. Nadder or Tributary of Avon, Bemerton Meadows, Wilts.	Sunday 23 rd April 1967		Mud and weed at edge of R. Nadder or tributary of Avon. Slow current.
<p><i>Additional Slide Information:</i> Mounted: Saturday 27th May 1967 <i>Collection Notes (Page 8):</i> ABK (Fresh Water) 27th April 1967 (Yellow 5) Mud & weeds at edge of Nadder or other Avon Tributary, Bemerton Meadows, Wilts. Current slow, part shaded by trees. Cloudy but bright, p.m.</p>				
ABL	R. Avon. Bemerton Meadows, Wilts.	Sunday 23 rd April 1967		Scum and weed. Part- shaded from current
<p><i>Additional Slide Information:</i> Mounted: Sunday 28th May 1967 <i>Collection Notes (Page 8):</i> ABL (Fresh Water) 27th April 1967 (Green 6) River Avon, Bemerton Meadows, Salisbury, Wilts. Scum & Weed from area partially screened from current. Open area. Cloudy & bright, p.m.</p>				
ABO	Foxhall Heath	Sunday 28 th January 1968		Tree hollow
<p><i>Additional Slide Information:</i> Mounted: Sunday 18th February 1968 <i>Collection Notes (Page 9):</i> ABO (Soil Sample) 28th January 1968 Moss & soil from hollow in tree. Part-shaded by trees & nearby high fence. By path in shallow valley South of Foxhall Rd., near Ipswich Sanatorium, Suffolk. Cold, sunny morning.</p>				
ABP	Foxhall Heath	Sunday 28 th January 1968		Bog
<p><i>Additional Slide Information:</i> Boggy ground, Foxhall Heath nr. Ipswich, Suffolk Mounted: 20th April 1969 <i>Collection Notes (Page 9):</i> ABP (Fresh Water) 28th January 1968 Mud, grass roots, dead leaves, etc. from waterlogged ground close to stream South of Foxhall Rd., near Ipswich Sanatorium, Suffolk. In shallow valley, shaded by trees. Just after ABO.</p>				
ABQ	Foxhall Heath	Sunday 28 th January 1968		Stream
<p><i>Additional Slide Information:</i> Mounted: Sunday 18th February 1968 <i>Collection Notes (Page 9):</i> ABQ (Fresh Water) 28th January 1968 From stream close to source of ABP. Water weed, mud on sticks etc. Depth 2 to 4 ins in current. Part shaded by trees.</p>				
ABR	Foxhall Heath	Sunday 28 th January 1968		Pool on

	<p><i>Additional Slide Information:</i> Pool on Foxhall Heath, nr. Ipswich, Suffolk Mounted: Sunday 18th February 1968 <i>Collection Notes (Page 9):</i> ABR (Fresh Water) 28th January 1968 From pool in hollow, in shallow valley close to Ipswich Sanatorium, Suffolk, on W. side of public footpath. Muddy sticks, water weed etc. Pool part-choked with these & part-shaded by trees. Cold, bright morning.</p>		
ABS	Newbourn	Sunday 10 th March 1968	
	<p><i>Additional Slide Information:</i> Newbourn, Suffolk. Stream F.W. Mounted: Sunday 7th April 1968 <i>Collection Notes (Page 10):</i> ABS (Fresh Water) 10th March 1968 (1) From Newbourn, Suffolk. Stone slab under fast-flowing stream, same spot as Gathering AAP. Water deeper than on previous occasion, & possibly faster current, very cold. Sample includes material from entrance (downstream side) of bridge itself, in deeper shade. Cold, cloudy, a.m.</p>		
ABT	Newbourn	Sunday 10 th March 1968	Ditch
	<p><i>Additional Slide Information:</i> Newbourn, Suffolk. Stagnant ditch Mounted: Sunday 7th April 1968 <i>Collection Notes (Page 10):</i> ABT (Fresh Water) 10th March 1968 (2) From Newbourn, Suffolk. Stagnant ditch in the open, a few yards from stream of ABS. Shallow water, with traces of oil showing. Cold, cloudy, a.m.</p>		
			
ABU	Newbourn	Sunday 10 th March 1968	
	<p><i>Additional Slide Information:</i> Newbourn, Suffolk. Stream F.W. Mounted: Sunday 7th April 1968 <i>Collection Notes (Page 10):</i> ABU (Fresh Water) 10th March 1968 (3) From Newbourn, Suffolk. Stream in the open, about 100ft downstream from Gathering ABS (i.e. same stream). Stream clear at this point, with mud, dead leaves, etc., these items constituting the Gathering. Cold, cloudy, a.m.</p>		
ABV	Foxhall Heath	Tuesday 16 th April 1968	Ditch. Scum
	<p><i>Additional Slide Information:</i> Mounted: Sunday 28th April 1968 <i>Collection Notes (Page 10):</i> ABV (Fresh Water) 16th April 1968 From Foxhall Heath, Suffolk. Scum (green) on surface of stagnant ditch, half shaded by trees. North of Foxhall Road, near Ipswich Sanatorium. Bright, warm, a.m.</p>		
ABW	Foxhall Heath	Tuesday 16 th April 1968	Ditch or pond (North of ABV)

	<p><i>Additional Slide Information:</i> Pool on Foxhall Heath nr. Ipswich, Suffolk Mounted: Sunday 28th April 1968 <i>Collection Notes (Page 10):</i> ABW (Fresh Water) 16th April 1968 From stagnant pool, North of site of Gathering ABV, Foxhall Heath, Suffolk. Scum on dead leaves, etc. In shadow of overhead trees & bush twigs. Bright, warm a.m.</p>			
ABX	Newbourn	Tuesday 16 th April 1968		Stagnant Pool
	<p><i>Additional Slide Information:</i> Mounted: Monday 3rd June 1968 <i>Collection Notes (Page 11):</i> ABX (Fresh Water) 16th April 1968 (Foxhall Hth) From stagnant pool a few yards from site of ABW, but this pool completely screened off by bushes etc. Scum on surface. In shade. Closer to footpath than ABW pool. Bright, warm, a.m.</p>			
ABY	Weir S. of Grundisburgh	Thursday 18 th April 1968		
	<p><i>Additional Slide Information:</i> Mounted: Monday 3rd June 1968 <i>Collection Notes (Page 11):</i> ABY (Fresh Water) 18th April 1968 Green blobs of weed & slime on steeply sloping mud over which water was rushing down, Fed by stream under road bridge. Collected just below surface. In hollow, part-shaded. South of Grundisburgh. Sunny, warm, a.m.</p>			
				
ABZ	Sluggish stream S. of Clopton	Thursday 18 th April 1968		
	<p><i>Additional Slide Information:</i> Mounted: Monday 3rd June 1968 <i>Collection Notes (Page 11):</i> ABZ (Fresh Water) 18th April 1968 Mud & weed from half-shaded, sluggish stream South of Clopton, Suffolk. Sunny, warm, a.m.</p>			

Sample Code	Location	Date	Collector	Additional Notes
ACA	Ditch S. of Clopton	Thursday 18 th April 1968		
	<p><i>Additional Slide Information:</i> Ditch near Clopton, Suffolk Mounted: Tuesday 4th June 1968 <i>Collection Notes (Page 11):</i> ACA (Fresh Water) 18th April 1968 Mud, dead twigs, etc. from ditch in open, South of Clopton, Suffolk. Sunny, warm, a.m.</p>			
ACB	Ditch N. of Tuddenham	Thursday 18 th April 1968		
	<p><i>Additional Slide Information:</i> Mounted: Tuesday 4th June 1968 <i>Collection Notes (Page 11):</i> ACB (Fresh Water) 18th April 1968 Weed & Scum on surface of ditch in open country by road about 1 mile North of Tuddenham, Suffolk. Sunny, warm, about noon.</p>			
ACC	Pond 8 m. S. of Debenham	Friday 26 th April 1968		
	<p><i>Additional Slide Information:</i> Pond 8 miles from Debenham, Suffolk Mounted: Tuesday 4th June 1968 <i>Collection Notes (Page 11):</i> ACC (Fresh Water) 26th April 1968 Scum & weed. Pond 8 miles S. of Debenham in open farmyard. Warm, sunny, a.m.</p>			
ACD	Stream 7 m. S. of Debenham	Friday 26 th April 1968		

	<p><i>Additional Slide Information:</i> Mounted: Saturday 15th June 1968 <i>Collection Notes (Page 12):</i> ACD (Fresh Water) 26th April 1968 Sluggish stream flowing over stone (concrete?) in open. Very shallow at point of gathering Weed & Scum. 7 miles S. of Debenham, Suffolk. Warm, sunny, a.m.</p>		
ACE	Deben, 2 m. S. of Debenham	Friday 26 th April 1968	
	<p><i>Additional Slide Information:</i> River Deben 2 miles South of Debenham, Suffolk Mounted: Saturday 8th June 1968 <i>Collection Notes (Page 12):</i> ACE (Fresh Water) 26th April 1968 R. Deben, 2 miles S. of Debenham, Suffolk. Weed on stones an inch below surface in medium current, at surface. Warm, sunny, a.m.</p>		
ACF	Deben nr. Debenham	Friday 26 th April 1968	Scum
	<p><i>Additional Slide Information:</i> R. Deben nr. Debenham, Suffolk Mounted: Saturday 8th June 1968 <i>Collection Notes (Page 12):</i> ACF (Fresh Water) 26th April 1968 Scum on stagnant surface of R. Deben in sunshine. 2 miles S. of Debenham, Suffolk. Warm, a.m.</p>		
ACG	Deben nr. Debenham (2 = m. So.)	Friday 26 th April 1968	
	<p><i>Additional Slide Information:</i> River Deben nr. Debenham, Suffolk Mounted: Saturday 8th June 1968 <i>Collection Notes (Page 12):</i> ACG (Fresh Water) 26th April 1968 Mud on weeds 1-4 in. below surface in medium current, R. Deben 2 = mi. South of Debenham, Suffolk, in sunshine. Warm, midday.</p>		
			
ACH	Deben 1 m. above Wickham Mkt	Friday 26 th April 1968	
	<p><i>Additional Slide Information:</i> River Deben 1 mile above Wickham Mkt., Suffolk Mounted: Saturday 8th June 1968 <i>Collection Notes (Page 12):</i> ACH (F) 26th April 1968 R. Deben, 1 mile above Wickham Market, Suffolk. Very slow current. Brown mud & scum from surface. Warm, sunny, midday.</p>		
ACI	Deben Bridge > m. from Wickham Mkt.	Friday 26 th April 1968	
	<p><i>Additional Slide Information:</i> River Deben > mile above Wickham Mkt., Suffolk Mounted: Saturday 15th June 1968 <i>Collection Notes (Page 12):</i> ACI () 26th April 1968 R. Deben. By roadside bridge > mile above Wickham Market, Suffolk. Scum & slime from near surface on stone etc., & on weed 3-6 ins below surface. Virtually stagnant. In full sunshine. Warm, midday.</p>		
ACJ	Neath, Glam.	Saturday 13 th April 1968	

Additional Slide Information:

Mounted: Sunday 23rd June 1968

Collection Notes (Page 13):

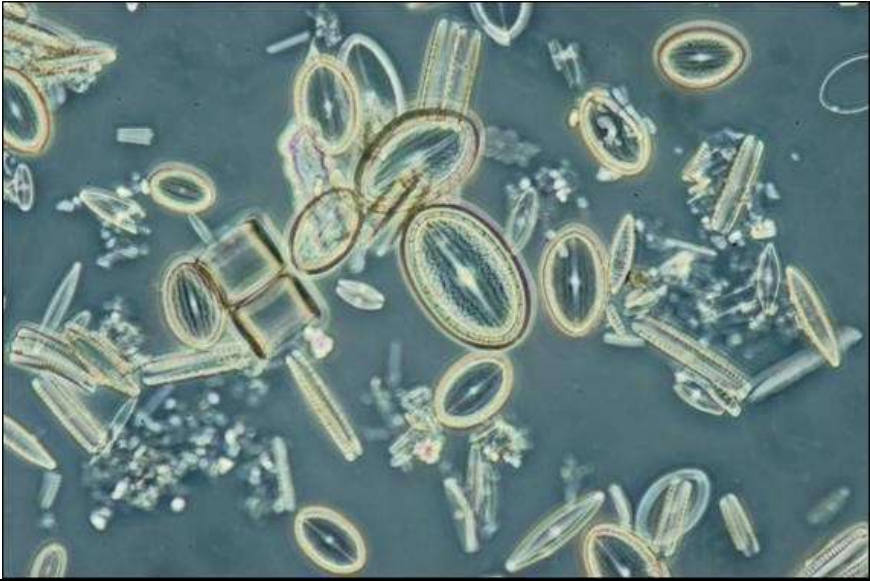
ACJ (Fresh Water) 13th April 1968

Neath, Glamorgan, S. Wales. From concrete bed of fast-flowing hill stream. Approx. depth 2 ins. Height above sea level 235ft.

Cold, windy, midday. Mr. E. Thomas.



ACK	Red Roses, Carmarthenshire	Monday 15 th April 1968		
	<i>Additional Slide Information:</i> West Wales (Mr. E. Thomas)[7] Mounted: Sunday 23 rd June 1968 <i>Collection Notes (Page 13):</i> ACK (Fresh Water) 15 th April 1968 Red Roses, Camarthenshire, W. Wales. From stones on bed of gently-running stream with source as outlet from underground spring in hillside. Approx. depth 3-4ins. Height above Sea Level 515ft. Sunny with broken cloud. Midday. Mr. E. Thomas			
ACL	Narberth, Pemb.	Thursday 18 th April 1968		
	<i>Additional Slide Information:</i> S. Wales (Mr. E. Thomas) Mounted: Sunday 23 rd June 1968 <i>Collection Notes (Page 13):</i> ACL (Fresh Water) 18 th April 1968 Narberth, Pembrokeshire, S. Wales. From mountain stream with fast current. On stones, face-up, under stone bridge. About 2-3ins beneath surface. Height above Sea Level 440ft. Cold, cloudy, showery, late a.m. Mr. E. Thomas.			
ACM			(H. Barber)[3]	
	<i>Additional Slide Information:</i> Annington, N. Res. Collected: Sunday 14 th April 1968 Mounted: Sunday 23 rd June 1968 <i>Collection Notes (Page 13):</i> ACM (Fresh Water) 14 th April 1968 Aninton. N. Res. Mr. H. Barber			
ACN	Sun Inn, Barnes	July 68	Mr. Croasdell[1]	
	<i>Additional Slide Information:</i> Pond at Barnes (Mr. G. Croasdell) Mounted: Sunday 1 st September 1968 <i>Collection Notes (Page 13):</i> ACN (Fresh Water) Mid-July 1968 Pond at the Sun Inn, Barnes. Mr. G. C. Croasdell.			
ACO	Shoeburyness Park Pond	Wednesday 4 th September 1968		
	<i>Additional Slide Information:</i> Pond at Shoebury Park, Essex Mounted: Sunday 20 th October 1968 <i>Collection Notes (Page 13):</i> ACO (Fresh Water) 4 th September 1968 Large Pond, Shoeburyness Park, Essex. Surface scum & bottom mud on twigs etc. about 1 inch deep. Part shaded among reeds. Warm calm evening.			
ACP(1)	Salisbury Cathedral	Wednesday 16 th October 1968		

	<p><i>Additional Slide Information:</i> Mounted: Saturday 19th October 1968 <i>Collection Notes (Page 14):</i> ACP (Soil Sample) 16th September 1968 (1) Moss & Soil on & around base of Salisbury Cathedral, on North side. Shaded by walls themselves. Sunny, p.m. after 1 = days heavy rain.</p>		
ACQ	R. Avon, Salisbury	Tuesday 17 th September 1968	
	<p><i>Additional Slide Information:</i> Mounted: Saturday 19th October 1968 <i>Collection Notes (Page 14):</i> ACQ (Fresh Water) 17th September 1968 (2) River Avon at Salisbury, Wilts, about 80 yards North of confluence with R. Nadder. Long waterweed strands and tufts on bottom, 2 ins. Deep in current approx. 1 m.p.h. In open. Cool, cloudy, p.m.</p>		
ACR (3)	Stream nr. Old Mill, Salisbury	Tuesday 17 th September 1968	
	<p><i>Additional Slide Information:</i> Mounted: Saturday 19th October 1968 <i>Collection Notes (Page 14):</i> ACR (Fresh Water) 17th September 1968 (3) Narrow stream beside path leading from near Hospital to the Old Mill, Salisbury, Wilts. This stream is a tributary of the Avon/Nadder. Filamentous water weed about 1 foot deep in current of approx 1m.p.h. In open. Cloudy p.m.</p>		
ACS (4)	Stagnant ditch near Old Mill, Salisbury	Wednesday 18 th September 1968	
	<p><i>Additional Slide Information:</i> Wiltshire Mounted: Saturday 19th October 1968 <i>Collection Notes (Page 14):</i> ACS (Fresh Water) 18th September 1968 (4) From a stagnant ditch on other side of path from which Gathering ACR was taken. Duckweed & other weed & fragments, 0 to 4 ins deep. Part shaded by tree. Cloudy, cool, bright, p.m.</p>		
			
ACT (5)	Old Mill Pond, Salisbury	Wednesday 18 th September 1968	

Additional Slide Information:

Pond at Old Mill, Salisbury, Wilts.


Mounted: Saturday 19th October 1968 (slide 1) & 20 October 1968 (slide 2)

Collection Notes (Page 14):

ACT (Fresh Water) 18th September 1968 (5)

From the Old Mill pond, Salisbury, Wilts. Weed & mud on chalky bed & from edge, up to 10 ins. Deep. Mostly in rather slow current. This pond is, in fact, a very broad part of a stream which is fed by a torrential weir, the gathering being taken at a point distant from this. Cool, cloudy, bright, p.m. In open.



ACU	East Mill Tor, Devon		(C. Hill)	
<i>Collection Notes (Page 15):</i> ACU (Fresh Water) 11 th September 1968 (X) East Mill Tor, Dartmoor, Devon [N.G.: SX(20)615:898] At 1350ft altitude. From drier part of acid bog alongside fast running stream. Cloudy bright weather, early afternoon. Collected by Mr. Charles Hill. In sphagnum moss.				
ACV	East Mill Tor, Dartmoor, Devon		(C. Hill)	
<i>Additional Slide Information:</i> Mounted: Saturday 2 nd November 1968 <i>Collection Notes (Page 15):</i> ACV (Fresh Water) 11 th September 1968 (Y) Green weed 6 ins. Below surface of water. Location as ACU, also time. Mr. Charles Hill. In stream.				
ACW	East Mill Tor, Dartmoor, Devon		(Mr. C. Hill)	
<i>Additional Slide Information:</i> Mounted: Saturday 2 nd November 1968 (slide 1) Sunday 3 rd November 1968 (slide 2) <i>Collection Notes (Page 15):</i> ACW (Fresh Water) 11 th September 1968 (Z) Reddish-brown weed, 2ins. Below surface of water. Location as ACU, also time. Mr. Charles Hill. In stream.				
				
ACX	West edge of Pond in Chelmsford Park	Sunday 6 th October 1968		

	<i>Additional Slide Information:</i> Mounted: Sunday 17 th November 1968 <i>Collection Notes (Page 15):</i> ACX (Fresh Water) 6 th October 1968 (B) Large pond close to Railway line south of Chelmsford Rly Station, near River. Weed & slime, 0 -12 deep, part shaded at West edge of pond. Warm, bright morning. Situation in large park.			
ACY	Pond (S. edge) in Chelmsford Park	Sunday 6 th October 1968		
	<i>Additional Slide Information:</i> Mounted: Sunday 17 th November 1968 <i>Collection Notes (Page 15):</i> ACY (Fresh Water) 6 th October 1968 (C) From same pond as ACX. Weed 0 -3 deep at South end of pond, more or less in open. Warm bright morning.			
ACZ	Outlet of pipe into River. S. of Chelmsford	Sunday 6 th October 1968		
	<i>Additional Slide Information:</i> Mounted: Sunday 17 th November 1968 <i>Collection Notes (Page 15):</i> ACZ (Fresh Water) 6 th October 1968 (D) Outlet of large pipe. Water running over concrete from pipe into River S. of Chelmsford. Weed & yellowish slime in and at edge of water, at depths 0 -1 . On North bank of river. In open. Bright, early p.m.			
Sample Code	Location	Date	Collector	Additional Notes
ADA	River at S. edge of Chelmsford	Sunday 6 th October 1968		

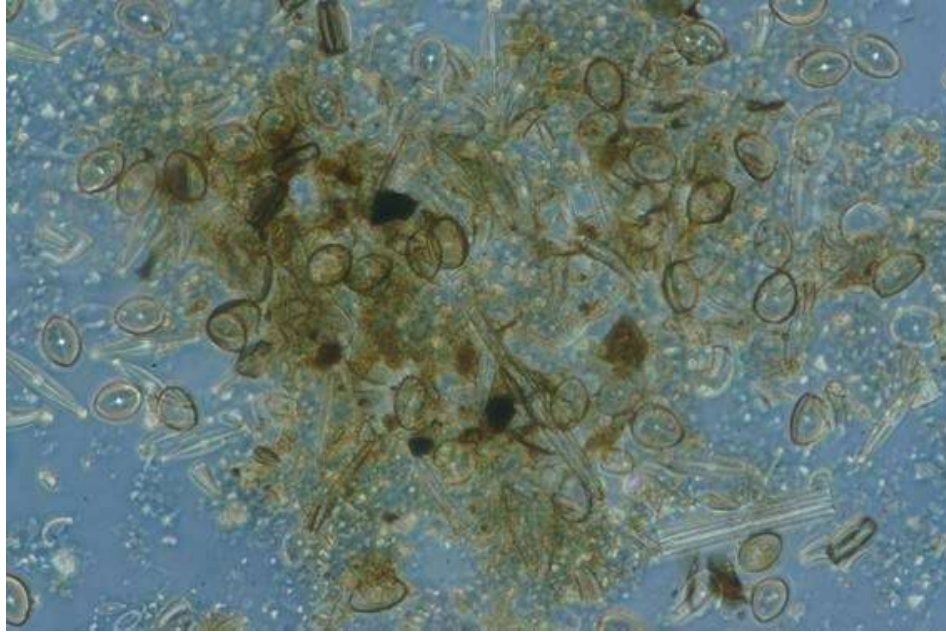
Additional Slide Information:

Mounted: Sunday 17th November 1968

Collection Notes (Page 16):

ADA (Fresh Water) 6th October 1968 (E)

From River running through South outskirts of Chelmsford. Half to three-quarters of a mile upstream (West) from the town. Stringy weed & mud in slow-medium current up to 2ins deep in cloudy water. In open, but close to steep bank. Cloudy bright p.m.



ADB	Chelmsford	Sunday 6 th October 1968		Pool near River
<i>Additional Slide Information:</i> Mounted: Saturday 23 rd November 1968 <i>Collection Notes (Page 16):</i> ADB (Fresh Water) 6 th October 1968 (G) In pool close to river near point of collection of ADA. Weed & mud from 0 to 2ins deep approx. Part shaded by trees. Cloudy p.m.				
ADC	Foxhall Heath	Sunday 27 th October 1968		Stream. Rd bridge
<i>Additional Slide Information:</i> Stream by road bridge, Foxhall Heath, Suffolk Mounted: Saturday 23 rd November 1968 <i>Collection Notes (Page 16):</i> ADC (Fresh Water) 27 th October 1968 (1) Stream by Road bridge on Foxhall Heath. Dead leaves, mud & twigs, 1/2in to 1in. deep both in and out of current. Half shaded by trees. Cool, cloudy bright a.m.				
ADD	Brightwell, Suffolk	Sunday 27 th October 1968		Stream

Additional Slide Information:

Mounted: Saturday 23rd November 1968

Collection Notes (Page 16):

ADD (Fresh Water) 27th October 1968 (2)

Stream by road at Brightwell, Suffolk. Green & brown weed in current (1 m.p.h. approx). Up to 1 foot deep. In open. Cool, bright, a.m.



ADE	Shoeburyness Beach	Friday 1 st November 1968		
<i>Additional Slide Information:</i> Shoeburyness shore (marine) /and/ Hoseas Headway, Shoeburyness (marine) [Essex] Mounted: Friday 29 th November 1968 EGD/ADE <i>Collection Notes (Page 16):</i> ADE (Marine) 1 st November 1968 Filamentous weed on sandy mud exposed by receded tide & weed on concrete blocks below high tide level, together with fragments of bladder-wrack left by tide at Shoeburyness beach, Essex. Warm, brigh midday.				
ADF	River Gipping nr Needham Market	Sunday 8 th December 1968		Weed and slime on stones slow current
<i>Additional Slide Information:</i> Suffolk Mounted: Saturday 28 th December 1968 <i>Collection Notes (Page 17):</i> ADF (Fresh Water) 8 th December 1968 (1) River Gipping near Needham Mkt, Suffolk. Weed & slime on old srtones, 1-3ins. Below surface, in sluggish current. Water clouded. Cold, dull a.m. Part shaded by tress.				
ADG	River Gipping nr Needham Market	Sunday 8 th December 1968		Fast current
<i>Additional Slide Information:</i> Suffolk Mounted: Saturday 28 th December 1968 <i>Collection Notes (Page 17):</i> ADG (Fresh Water) 8 th December 1968 (2) River Gipping, on opposite side from site of sample ADF. Green weed 1 inch deep in fast (near-cataract) current over stones. Dull, cold a.m. Part shaded.				
ADH	Anglesey, Wales		Mr. H. F. Barnes[5]	Depression in dunes
<i>Additional Slide Information:</i> Among sand dunes, S. E. Anglesey, Wales Mr. H. G. Barber[3] Mounted: Sunday 16 th February 1969 <i>Collection Notes (Page 17):</i> ADH Depression in sand dunes, S. E. Anglesey, Wales. Scraped from wet surface. Obtained by Mr. H. G. Barber (Letter, 3/1/69)				
ADI	River Gipping, London Rd Bridge, Ipswich	Sunday 23 rd February 1969		
<i>Additional Slide Information:</i> Mounted: Friday 4 th April 1969 <i>Collection Notes (Page 17):</i> ADI 23 rd February 1969 River Gipping on S. side of London Rd. Bridge, Ipswich, Suffolk, at site of Gathering AAO. Grass, weed & mud, 0 to 10 ins. Deep in and out of current. Water level high after snow thaw period. Cool, dull, misty morning.				
ADJ	Pond at Badger Hall Grounds, Thundersley, Essex	Thursday 27 th February 1969	Mr. Webber	

Additional Slide Information:

Mr. G. Webber

Mounted: Saturday 22nd February 1969 (Check this bottle as mount date before collection date)

Collection Notes (Page 17):

ADJ (Fresh Water) 27th February 1969

From spring-fed pond containing much plant-life. Collected by Mr. G. Webber. Badger Hall Grounds, Thundersley, Essex.



ADK	Badger Hall Grounds, Thundersley, Essex	Thursday 27 th February 1969	Mr. G. Webber	Overflow from well
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Additional Slide Information:

Overflow from spring fed well, Badger Hall grounds, Thundersley, Essex

Mounted: Friday 4th April 1969

Collection Notes (Page 17):

ADK (Fresh Water) 27th February 1969

Overflow from spring-fed deep well. Fast current. Origin underground. Collected by Mr. G. Webber. Badger Hall Grounds, Thundersley, Essex.

ADL	Feltham Pk. Pond	Wednesday 2 nd April 1969		
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Additional Slide Information:

Feltham Park Pond, Middx

Mounted: Friday 11th April 1969

Collection Notes (Page 18):

ADL (Fresh Water) 2nd April 1969

Pond in Feltham Park, Middlesex. Mud and stems of water weed. 0 to 2 ins. Deep. Partly shaded by trees etc. Cool, bright evening.

ADM	River Crane. E. of Feltham	Wednesday 2 nd April 1969		Mud etc.
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Additional Slide Information:

River Crane, by bridge carrying Staines Road, Feltham, Middx.

Mounted: Friday 11th April 1969




Collection Notes (Page 18):

ADM (Fresh Water) 2nd April 1969

By Staines Road bridge (East of Feltham, Middx.) River Crane.

Reddish Mud surface & muddy fronds up to 3 ins. Deep, mostly sheltered from the very sluggish current. Part shaded by trees. Cool, bright evening.



ADN	Water Butt (last August) Ipswich	Saturday 5 th April 1969		
<p><i>Collection Notes (Page 18):</i> ADN (Fresh Water) 5th April 1969 Green algae attached to water pipe exterior at waterline where pipe enters open water tank against South-facing wall at 1a. St. Augustine Rd, Ipswich, Suffolk. Cold, sunny.</p>				
ADO	Bog nr. Pond, Foxley Estate	Monday 7 th April 1969		
<p><i>Additional Slide Information:</i> Marshy pools nr pond, Foxley Estate, Ipswich, Suffolk Mounted: Friday 25th April 1969 <i>Collection Notes (Page 18):</i> ADO (Fresh Water) 7th April 1969 Green and brownish slime on surface of small pools in marshy area west of pond, Foxley Estate (pond from which were taken Gatherings ZAAK, AAM & AAV). Virtually in open, in shallow valley. Sunny, warm afternoon, after long cold spell.</p>				
ADP	Manningtree, Essex	Tuesday 8 th April 1969		Scum and mud in ditch
<p><i>Additional Slide Information:</i> Ditch at Manningtree, Essex Mounted: Saturday 10th May 1969 <i>Collection Notes (Page 18):</i> ADP (Fresh Water) 8th April 1969 Scum and Reddish mud etc. in ditch close to River Stour at Manningtree, Essex. Some fertilizer appeared to have been spilled from bags in this ditch. In open. Warm, sunny.</p>				
  				
ADQ	Nr. Ardleigh, Essex	Tuesday 8 th April 1969		Scum and weed in ditch
<p><i>Additional Slide Information:</i> Mounted: Saturday 10th May 1969 (slide 1) & Sunday 11th May 1969 (slide 2) <i>Collection Notes (Page 18):</i> ADQ (Fresh Water) 8th April 1969 Green scum & weed on surface & up to 1in. deep in stagnant narrow roadside ditch in depression running North-South, by Ardleigh-Dedham Road, Essex. Warm, sunny afternoon.</p>				
ADR	R. Stour, Dedham, Essex	Tuesday 8 th April 1969		Weed

Additional Slide Information:

Mounted: Sunday 18th May 1969

Collection Notes (Page 18):

ADR (Fresh Water) 8th April 1969

Wedd 1 to 3 ins. Deep on bank of Stour, some yards from foaming disturbance caused by a mechanism churning up the water. In open. Sunny, warm, p.m. Dedham, Essex.



ADS	Trib. of R. Stour, Dedham, Essex	Tuesday 8 th April 1969		Muddy roots
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Additional Slide Information:

Mounted: Saturday 10th May 1969

Collection Notes (Page):

ADS (Fresh Water) 8th April 1969

Muddy roots 1in. deep in bank of nearly stagnant tributary of R. Stour, Dedham, Essex. In open. Warm, sunny afternoon.



ADT	Pond, Feltham Green	Tuesday 22 nd April 1969		
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Additional Slide Information:

Pond, Feltham Green, Middx

Mounted: Monday 26th May 1969

Collection Notes (Page 19):

ADT (Fresh Water) 22nd April 1969

Green tufts of weed, depths up to 5 ins., large duckpond, Feltham Green, Middx. In open, near busy main road. Cool overcast afternoon.

ADU	Cattle trough, Martlesham, Suffolk	Thursday 24 th April 1969		
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Additional Slide Information:

Mounted: Monday 26th May 1969

Collection Notes (Page 19):

ADU (Fresh Water) 24th April 1969

Green slime on surface and from inside walls up to 6 ins. Deep, of metal cattle trough in open farmland near Martlesham, Suffolk. Warm bright afternoon.

ADV	Stream, Martlesham	Thursday 24 th April 1969		Muddy leaves and twigs
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Additional Slide Information:

Leaves and twigs, stream, Martlesham, Suffolk

Mounted: Monday 26th May 1969

Collection Notes (Page 19):

ADV (Fresh Water) 24th April 1969

Muddy dead leaves & twigs in fast current, where river narrows and rushes through gaps between clumps of debris forming natural barrier. Taken at 0 to 3ins. Deep. In open. Warm afternoon. Martlesham, Suffolk.



ADW

Pool, Martlesham

Thursday 24th April
1969

Green and brown
slime

Additional Slide Information:

Boggy pool, Martlesham, Suffolk

Mounted: Monday 26th May 1969

Collection Notes (Page 19):

ADW (Fresh Water) 24th April 1969

Green & brown slime, 0 to 2ins. Deep in boggy pool close to river from which came ADV. In open. Sunny, warm afternoon. Martlesham, Suffolk.



ADX

Pond, Foxley Estate

Saturday 26th April
1969

Additional Slide Information:

Marshy pools nr Foxley Estate, Ipswich, Suffolk

Mounted: Saturday 7th June 1969

Collection Notes (Page 19):

ADX (Fresh Water) 26th April 1969

Scum & slime from Marshy area from which came gathering ADO. Bright morning.



ADY

Pond on E. edge of Staines, Middlesex

Thursday 1st May 1969

Additional Slide Information:

Mounted: Saturday 7th June 1969 (slide 1) Sunday 8th June 1969 (slide 2)

Collection Notes (Page 19):

ADY (Fresh Water) 1st May 1969

Area of water on E. edge of Staines, Middx. This appeared to be a river with a very slow current, but is shown as an elongated pond on the relevant 1 scale O.S. Map.

Muddy fronds from just below surface to 2ins. Deep, growing on bottom, at edge. In open. Cool evening after warm, sunny day.



ADZ

Mountain lake, Trengereid, West Central Norway

June 1969

Miss S. Mandeville[2]

Additional Slide Information:

Mountain lake, Trongereid, Norway

Mounted: Monday 1st September 1969


Collection Notes (Page 20):

ADZ (Fresh Water) June 1969 (2)

Lake in mountains near Trengereid, West-central Norway, about 1000 ft. above sea level. Mud and rocky bottom. Sample taken from edge of lake, mud from bottom.

Cloudy bright afternoon. Taken by Miss. S. Mandeville.

Sample Code	Location	Date	Collector	Additional Notes
AEA	Stream, Loftus West, Central Norway	June 1969	Miss S. Mandeville[2]	

	<p><i>Additional Slide Information:</i> Mounted: Monday 1st September 1969 <i>Collection Notes (Page 20):</i> AEA (Fresh Water) (Miss S. Mandeville) June 1969 (3) Fast-flowing stream, Loftus, West-central Norway. Possibly melted snow from mountains. About 750 feet above sea level. Weed scraped off rock under overhanging bank. Sandy bottom with rock. Shaded. Hot, sunny afternoon.</p>		
AEB	Newbourn, river near bridge	Sunday 27 th July 1969	
	<p><i>Additional Slide Information:</i> Stream at Newburn, Suffolk <i>Collection Notes (Page 20):</i> AEB (Fresh Water) 27th July 1969 Newbourn, Suffolk. Stream at exit from bridge under road. Vertical side of stone step with weed about = to 1 inch deep in fast weir current. Shaded by trees etc., probably throughout day. Warm, sunny morning. Gatherings AAP & ABS also from this site, but AEB in more shade, nearer exit of tunnel & with more stringy weed possibly.</p>		
AEC	Sluggish stream near Bucklesham	Tuesday 2 nd September 1969	
	<p><i>Additional Slide Information:</i> Mounted: Friday 17th October 1969 <i>Collection Notes (Page 20):</i> AEC (Fresh Water) 2nd September 1969 Bucklesham, Suffolk. Sluggish stream in hollow. Mud and weed stems. This stream is very narrow, partially overgrown by weed, and in part-shade. Dull, warm, midday.</p>		
AED	Rushmere (N. of Waterfall)	Sunday 7 th September 1969	Weed in water
	<p><i>Additional Slide Information:</i> Rushmere, Suffolk. Weed in waterfall in stream Mounted: Saturday 18th October 1969 <i>Collection Notes (Page 20):</i> AED (Fresh Water) 7th September 1969 Stream North of Rushmere, Suffolk. Cataract in waterfall. Green weed and brown tufts. Partly in shade. Cloudy, warm morning.</p>		
AEE	Rushmere	Sunday 7 th September 1969	Brown scum, surface + bottom, stagnant part of stream (near AED)
	<p><i>Additional Slide Information:</i> Mounted: Saturday 18th October 1969 <i>Collection Notes (Page 20):</i> AEE (Fresh Water) 7th September 1969 Brown scum from surface and bottom (1-3ins.) in stagnant part of stream about 35ft downstream from AED. Rushmere, Suffolk. Cloudy, bright morning.</p>		
			
AEF	Branch of R. Avon. N. of Salisbury, Wilts.	Tuesday 16 th September 1969	In near-stagnant water

Additional Slide Information:

Mounted: Saturday 18th October 1969

Collection Notes (Page 21):

AEF (Fresh Water) 16th September 1969

Tributary of River Avon North of Salisbury (approx 3/4mile from centre). Green and Brown weed and muddy strands 1in. deep sheltered from most or all of current. Shaded on E. by trees. Dull, warm afternoon. Current flow away from R. Avon.



AEG	Branch of R. Avon. N. of Salisbury, Wilts.	Tuesday 16 th September 1969		In fast current over stone
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Additional Slide Information:

Mounted: Sunday 19th October 1969

Collection Notes (Page 21):

AEG (Fresh Water) 16th September 1969

Tributary of River Avon, a few yards close to Avon itself - and hence further upstream virtually at start of tributary. Weed on stone 0-2in. deep in very fast current where water drops over stone edge, i.e. in miniature waterfall. In tree-shade. Dull, warm afternoon.



AEH	R. Avon. N. of Salisbury, Wilts.	Tuesday 16 th September 1969		Weed in current
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Additional Slide Information:

Mounted: Sunday 19th October 1969

Collection Notes (Page 21):

AEH (Fresh Water) 16th September 1969

River Avon North of Salisbury, Wilts, and North of, but not far from, Gatherings AEG & AEF Sites.

Green and hairlike weed and strands up to 10ins. Deep in medium current, near West bank. E. bank of river only in shade. Dull, warm afternoon.



AEI	R. Orwell Shore (N. bank) nr. Orwell, Suffolk	Sunday 5 th October 1969		Weed on sand
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Additional Slide Information:

Mounted: Saturday 1st November 1969

Collection Notes (Page 21):

AEI () 5th October 1969

River Orwell, near Orwell, Suffolk. Lettuce-like weed, and strands of wiry weed on shore (sand) of river (North side) and sand surface itself. This river is tidal and the Gathering was taken below high tide mark, about 7 miles from the coast. Sunny morning. In open.



AEJ	Pool near verge of Orwell shore, Orwell, Suffolk	Sunday 5 th October 1969		
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Additional Slide Information:

Pool near edge of River Orwell at Orwell, Suffolk

Mounted: Saturday 1st November 1969

Collection Notes (Page 21):

AEJ () 5th October 1969

Very small pool in clay hollow, about 20 feet from (i.e. above) verge of River Orwell shore. Muddy twigs etc. in pool. In open. Sunny morning. Near Orwell, Suffolk.

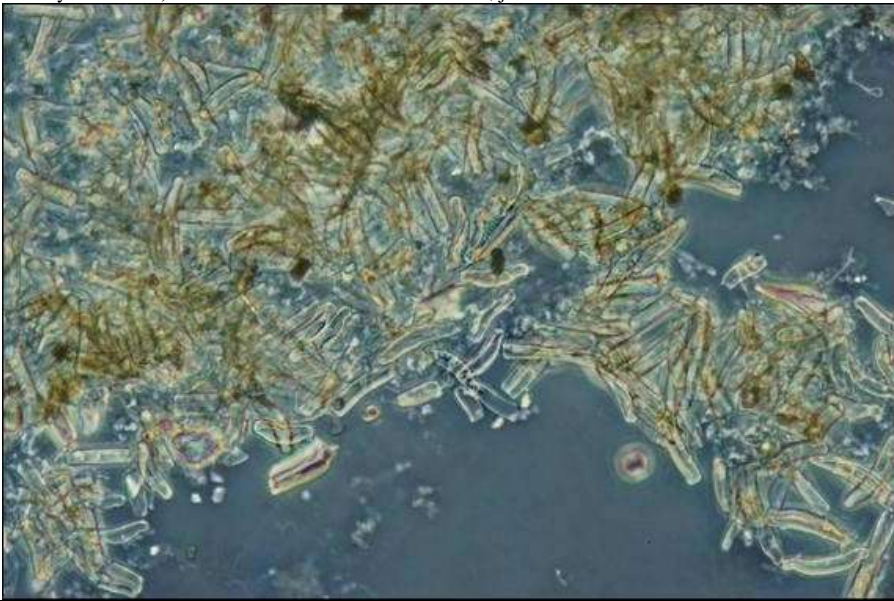
AEK	Holywell, Cornwall	Tuesday 5 th August 1969	(Mr. ELGT)[7]	Stream
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Collection Notes (Page 21):

AEK (Fresh Water) 5th August 1969

Holywell, near Newquay, Cornwall. Stream with gentle current, 9-12ins deep with sandy soil bed, between sandy and stone strewn hills about 30ft above Sea Level. Temp.=640F, time 7.30p.m. By Mr. E. L. G. Thomas.

AEL	Stream, Llanteg, Pemb., Wales	Thursday 14 th August 1969	(Mr. ELGT)[7]	
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	<p><i>Collection Notes (Page 22):</i> AEL (Fresh Water) 14th August 1969 Llanteg, near Narberth, Pembrokeshire, Wales. Swiftly flowing stream 6ins. Deep between cultivated hills, approx. 530ft. above Sea Level. Sample taken two after two days of rain. Temp. 560F, time 11.20a.m. By Mr. E. L. G. Thomas.</p>		
AEM	Stream, Send	Sunday 2 nd January 1972	Dead leaves etc. in current
	<p><i>Additional Slide Information:</i> Stream at Send, Woking, Surrey Mounted: Thursday 10th February 1972 <i>Collection Notes (Page 22):</i> AEM (Fresh Water) 2nd January 1972 Stream by road bridge, Send, Woking, Surrey. Dead leaves etc. in current about > in. deep. Part shaded by trees and bridge. Dull, mild, midday.</p>		
AEN	Roadside streamlet, Fell Hill Rd, Send	Sunday 2 nd January 1972	Mud, twigs, etc.
	<p><i>Additional Slide Information:</i> Roadside streamlet, Woodhill, Send, Woking Mounted: Thursday 10th February 1972 <i>Collection Notes (Page 22):</i> AEN (Fresh Water) 2nd January 1972 Very small stream by side of Wood Hill Road, Send, Woking, Surrey. Mud, twigs, etc. in gentle current, about = in/ deep. In open. Dull, mild, a little after noon.</p>		
AEO	Marshy pool by Hotel lake	Friday 11 th February 1972	
	<p><i>Additional Slide Information:</i> Marshy Pool near Bolder Mere, Ockham Common, Surrey Mounted: Monday 28th February 1972 <i>Collection Notes (Page 22):</i> AEO (Fresh Water) 11th February 1972 Marshy pool by North edge of large lake close to London-Guildford road, close to Ockham Common. The lake is shown on O.S. map as Bolder Mere. Exposed on lake side with wooded area creating shade to N. etc. (these trees forming the bordering scenery to the lake). Mild afternoon. Grass with mud etc., just below surface.</p>		
			
AEP	Stream (as AFM), Send, Surrey	Saturday 23 rd September 1972	

Additional Slide Information:

Stream, Send, Surrey
Mounted: Saturday 7th October 1972

Collection Notes (Page 22):


AEP (Fresh Water) 23rd September 1972

Stream, Send, Woking Surrey. From a site only two or three feet from that of AEM. Delicate, dark brown frond-like material growing on muddy bed up to an inch or less below the surface in virtually stagnant or very slow current. Part shaded as AEM. Warm, sunny midday.



AEQ	Lake at Send, Surrey	Tuesday 3 rd October 1972		
<i>Additional Slide Information:</i> Mounted: Sunday 15 th October 1972 <i>Collection Notes (Page 22):</i> AEQ (Fresh Water) 3 rd October 1972 Fronds growing on stones etc., neat surface (about 1 deep), and weed from a foot deep or more in rather cloudy water, all on NE side of lake on W. edge of Send, Surrey. Site open towards lake area, with trees shading shore side. Warm, sunny afternoon.				
AER	Woodphil Stream	Sunday 18 th February 1973		
<i>Additional Slide Information:</i> Stream, Woodhill, Send, Surrey Mounted: Sunday 25 th March 1973 <i>Collection Notes (Page 23):</i> AER (Fresh Water) 18 th February 1973 Woodhill, Send, Surre. Small stream by road. Weed, 1/2 deep. Cold, sunny a.m. In open. This is the same site as that from which came Gathering AEN.				
AES	Pond, Mitcham Common	Saturday 22 nd December 1973		
<i>Collection Notes (Page 23):</i> AES (Fresh Water) 22 nd December 1973 Pond on Mitcham Common. Gathered by Mr. Croasdell.				
AET	Tom s Pond[6]	Saturday 19 th January 1974		
<i>Additional Slide Information:</i> Small pond in garden (Mr. T. Jepson) Feltham, Middlesex Mounted: Sunday 10 th February 1974 <i>Collection Notes (Page 23):</i> AET (Fresh Water) 19 th January 1974 Small pond in garden at 2 Elthorn Court, Feltham, Middx. Belonging to Mr. T. Jepson. Comprising pieces of twig & mud-covered leaf 0-3inches below surface. The pond is a hard plastic container but has been in existence some years and is filled with weed etc., & contains goldfish.				
AEU	Hadleigh. R. Brett No.1.	Friday 29 th March 1974		Fast current over weir
<i>Additional Slide Information:</i> Hadleigh, Suffolk, R. Brett Fast Current (Weir) Mounted: Monday 27 th May 1974 <i>Collection Notes (Page 23):</i> AEU (Fresh Water) 29 th March 1974 Hadleigh, Suffolk, River Brett. Fast curret over weir. On stone. Green & Brown weed at edge & in water up to 1 inch deep. In open. Warm, sunny p.m.				
AEV	Hadleigh. R. Brett No.2.	Friday 29 th March 1974		Surface masses and rafts

	<p><i>Additional Slide Information:</i> Hadleigh, Suffolk, R. Brett. Floating rafts etc. Mounted: Tuesday 28th May 1974 <i>Collection Notes (Page 23):</i> AEV (Fresh Water) 29th March 1974 Hadleigh, Suffolk, Rover Brett. rafts of brownish material among twigs at surface and on tree branch about 1 inch below surface. In stagnat edge of sluggish river current some yards upstream from site of AEU. Part shaded by leafless trees (East bank). Sunny p.m.</p>			
AEW	Hadleigh. R. Brett No.3.	Friday 29 th March 1974		Pond at edge. Leaves and twigs
	<p><i>Additional Slide Information:</i> Hadleigh, Suffolk, R. Brett, Inlet Mounted: Tuesday 28th May 1974 <i>Collection Notes (Page 23):</i> AEW (Fresh Water) 29th March 1974 Hadleigh, Suffolk, River Brett. From inlet forming a virtual pond. Dead leaves & twigs at & near surface. Part shaded by trees. Sunny p.m.</p>			
AEX	Weed, R. Wey, Send, Surrey	Wednesday 12 th June 1974		
	<p><i>Additional Slide Information:</i> Weed etc., River Wey, Send, Surrey Mounted: Saturday 29th June 1974 <i>Collection Notes (Page 24):</i> AEX (Fresh Water) 12th June 1974 Tufts of fine weed on bottom (4-5ins. Deep) up to surface at edge of Rover Wey at Send, Surrey. Almost no current. Warm, dull afternoon. Slight shading by trees along banks.</p>			
AEY	R. Wey, Send, Surrey	Wednesday 12 th June 1974		Raft, weed, etc.
	<p><i>Additional Slide Information:</i> Raft weed etc., River Wey, Send, Surrey Mounted: Saturday 29th June 1974 <i>Collection Notes (Page 24):</i> AEY (Fresh Water) 12th June 1974 Small fragments from floating raft and submerged weed etc. up to 6 ins. Deep at edge of River Wey, Send, Surrey, a little way south of AEX gathering site. In open. Warm, cloudy-bright afternoon.</p>			
AEZ	Pond, Mr. T. Jepson s[6] Garden	Friday 19 th July 1974		
	<p><i>Additional Slide Information:</i> Garden Pond 2, Elthorne Court, Feltham (Mr. T. Jepson) Mounted: Saturday 10th August 1974 <i>Collection Notes (Page 24):</i> AEZ (Fresh Water) 19th July 1974 Small garden pond of Mr. T. Jepson (as gathering AET). Weed growing on sides of plastic container, just below surface.</p>			

Sample Code	Location	Collection Date	Collector	Additional Notes
AFA	Fox. Hth, Ipswich	Friday 18 th April 1975		Stag. Water
	<p><i>Additional Slide Information:</i> Stagnant pool, Foxhall Heath, Suffolk Mounted: Saturday 31st May 1975 <i>Collection Notes (Page 24):</i> AFA (Fresh Water) 18th April 1975 Stagnant pool Foxhall Heath, Suffolk, North of Foxhall Road. Weed and reddish scum on and just under surface. Part-shaded by tree. Dull afternoon.</p>			
AFB	R. Deben. Wood, Suff.	Sunday 20 th April 1975		
	<p><i>Additional Slide Information:</i> Pool, edge of R. Deben, Woodbridge, Suffolk Mounted: Saturday 31st May 1975 <i>Collection Notes (Page 24):</i> AFB 20th April 1975 Shallow pool left by receding tide near edge of River Deben, about = mile down-river from Woodbridge, Suffolk. Depth about < inch. On S.W. bank of river. Weed & sand. In open. Warm, sunny, midday.</p>			
				

AFC	Pond, Plaistow	Thursday 5 th June 1975		
	<i>Additional Slide Information:</i> Pond, Plaistow, W. Sussex Mounted: Sunday 29 th June 1975 <i>Collection Notes (Page 24):</i> AFC (Fresh Water) 5 th June 1975 Weed & damp mud at edge of pond in Plaistow, W. Sussex, also from bricks at edge. Surface to 1 inch below surface. In open. Dull morning.			
AFD	Ditch near Kindford, Sussex	Thursday 5 th June 1975		
	<i>Additional Slide Information:</i> Ditch near Kirdford, Wst Sussex Mounted: Sunday 29 th June 1975 <i>Collection Notes (Page 24):</i> AFD (Fresh Water) 5 th June 1975 Ditch approx. = mile north of Kidford, W. Sussex. Water cloudy. Dead leaves on bottom, i.e. 0-1 inch deep. No weed or growth present, merely dark deposits. Part shaded (trees, nettles, etc.) Dull, a.m.			
AFE	Small pond, "Restways", Alfold, Surrey/Sussex	Saturday 17 th January 1976		
	<i>Additional Slide Information:</i> Small pool, "Restways", Alfold, Surrey Mounted: Sunday 8 th February 1976 <i>Collection Notes (Page 25):</i> AFE (Fresh Water) 17 th January 1976 Small (little more than 12in. diam.) plastic ornamental pool in garden of restways, alfold, Surrey. Slime & dead leaves down to > in. from surface (below). Shaded by trees on S.E. Cold, fine morning.			
AFF	Small pond, "Restways", Alfold, Surrey/Sussex	Saturday 17 th January 1976	(Mr. T. Jepson)[6]	
	<i>Additional Slide Information:</i> Pond, "Restways", Alfold, Surrey Mounted: Sunday 8 th February 1976 <i>Collection Notes (Page 25):</i> AFF (Fresh Water) 17 th January 1976 From plastic ornamental pool a yard or so away from that from which came AFE. This pool is larger, however. Mud on leaves & debris (edge and bottom). Up to 3 = ins deep. Some minutes later than AFE.			
AFG	Concrete pond, "Restways", Alfold, Surrey/Sussex	Saturday 17 th January 1976	(Mr. T. Jepson) [6]	
	<i>Additional Slide Information:</i> Pond "Restways", Alfold, Surrey Mounted: Sunday 8 th February 1976 <i>Collection Notes (Page 25):</i> AFG (Fresh Water) 17 th January 1976 Concrete or stone pond some few yards from those from which came AFE and AFF, and still in back garden of "Restways", Alfold. Fine weed and slime at edge. Dead leaves etc., 1 to 4 ins deep. In open. Just after AFF.			
AFH	Ditch near Alfold, Surrey	Friday 16 th April 1976		
	<i>Additional Slide Information:</i> Mounted: Tuesday 31 st August 1976 <i>Collection Notes (Page 25):</i> AFH (Fresh Water) 16 th April 1976 Green Algae on damp soil at edge, and dead leaves etc. in = inch deep small ditch by path near Horsham Rd., south of Alfold, Crossways, Surrey. In evening sunshine. In open to W. Shaded on E. by hedge.			
AFI	Sudbury, Suff.	Friday 7 th May 1976		Rafts, etc. N. bank

Additional Slide Information:

Sudbury, Suffolk, R. Stour
Mounted: Tuesday 31st August 1976

Collection Notes (Page 25):
AFI (Fresh Water) 7th May 1976

North bank of R. Stour at Sudbury, Suffolk. "Rafts" of "weed" on surface. Very slow current, virtually none at site of gathering. In open. Warm, sunny afternoon.



AFJ	R. Stour, Dedham, Flatford	Monday 10 th May 1976		
<p><i>Additional Slide Information:</i> R. Stour, between Dedham and Flatford Mounted: Tuesday 31st August 1976 <i>Collection Notes (Page 25):</i> AFJ () 10th May 1976 East bank of R. Stour between Dedham and Flatford, Suffolk. Green weed and slime mixed with grass and other debris. Surface down to 1 inch deep. Virtually stagnant at gathering site. In open. Warm, hazy sunshine. Afternoon.</p>				
AFK	Haslemere	Friday 4 th June 1976		Brick wall.
<p><i>Additional Slide Information:</i> Haslemere, Surrey Mounted: Tuesday 31st August 1976 <i>Collection Notes (Page 26):</i> AFK 4th June 1976 Blobs of green slime on wet vertical brick wall, under dripping overflow pipe, Haslemere car park. In open, close to actual parking positions. Warm, dull afternoon.</p>				
AFL	Twin Oak	Saturday 5 th March 1977		Guttering
<p><i>Additional Slide Information:</i> Roof Guttering Twin Oaks The Drive, Ifold, Sussex Mounted: Sunday 27th March 1977 <i>Collection Notes (Page 26):</i> AFL 5th March 1977 Green slime in roof guttering of bungalow "Twin Oaks", The Drive, Ifold, West Sussex. From West-facing guttering, in open. This guttering had contained water for some time, both because of much rain and because water had entered from the overflow pipe of a roof tank with a faulty valve. Weather warm for March.</p>				
AFM	No sample			
<p><i>Additional Slide Information:</i> Ditch by Great Eau, River near Theddlethorpe, Lincolnshire Collected Sunday 17th February 1980 Mounted: Sunday 9th March 1980 <i>Collection Notes (Page 26):</i> AFM (Fresh Water) 17th February 1980 Mud, twigs, etc. from stagnant ditch beside the Great Eau River at road bridge near Theddlethorpe, Lincs. The ditch, at right angles to the road, was part shaded by leafless trees and the sample came from just below the surface, the ditch being shallow. Bright, cool morning.</p>				
AFN	No sample			
<p><i>Additional Slide Information:</i> Roadside ditch by Long Eau, River nr. Theddlethorpe Lincolnshire Collected Sunday 17th February 1980 Mounted: Wednesday 19th March 1980 <i>Collection Notes (Page 26):</i> AFN (Fresh Water) 17th February 1980 Small ditch running alongside embankment of Long Eau River, in open and parallel to and on same level as small road leading from Theddlethorpe All Saints to junction with Three Bridges Road, Lincs. Dead reed leaves from surface to 1 inch deep. Ditch stagnant. Bright, cool morning.</p>				
AFO	No sample			

Additional Slide Information:
 Dyke, Churchill Lane, Theddlethorpe, Lincolnshire
 Collected Thursday 12th May 1983
 Mounted: Monday 23rd May 1983
Collection Notes (Page 26):
 AFO 12th May 1983
 Dyke parallel to Churchill Lane, Theddlethorpe, Lincs. About 200 yards from junction with Grimsby-Mablethorpe road. This dyke leads towards the sea. Weed from surface and about 1 ft below it. The dyke is in open, and has steep sides about 8 feet high or more.
 Mid, raining, midday.



AFP	No sample			
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Additional Slide Information:
 Small Pool, Churchill Lane, Theddlethorpe, Lincolnshire
 Collected Thursday 26th May 1983
 Mounted: Monday 6th June 1983
Collection Notes (Page 27):
 AFP (Fresh Water) 26th May 1983
 Small pool in bottom of ditch in shade of hedge, adjoining the NE side of The Lilacs, Churchill Lane, Theddlethorpe, Lincs. Green slime on surface, damp slime-coated sticks at edge. The pool is about 1 inch deep, possibly contains seepage from Soakaway leading from septic tank in adjoining garden. Cool, a.m.

AFQ	No sample			
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Additional Slide Information:
 Great Eau, near Theddlethorpe, Lincolnshire. Weed in current.
 Collected Friday 18th November 1983
 Mounted: Sunday 20th December 1983
Collection Notes (Page 27):
 AFQ 18th November 1983
 Great Eau, on South side of bridge carrying road from Theddlethorpe All Saints to Carlton, Lincs. Sample taken from E. side. Weed in sluggish current about 2in. deep. In open. Cold, dull afternoon. Water low after dry spell.



AFR	No sample			
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Additional Slide Information:

Great Eau, nr. Theddlethorpe, Lincolnshire.

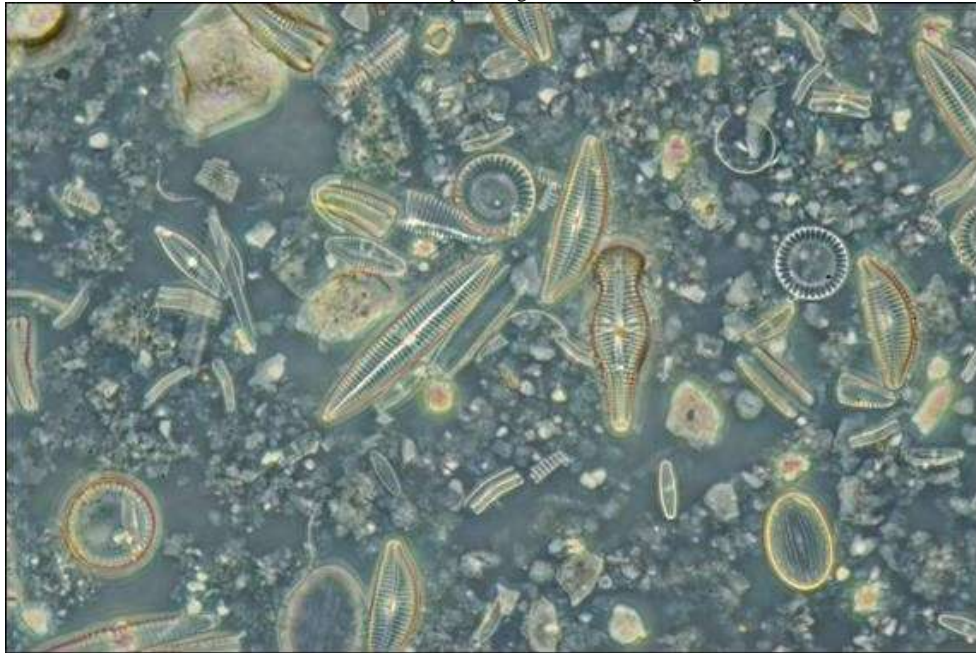
Collected Friday 18th November 1983

Mounted: Sunday 20th December 1983 + EDTA

Collection Notes (Page 27):

AFR 18th November 1983

Great Eau, on North side of road bridge, a few yards from site of Gathering AFQ, and a few minutes later. Green and brown dense weed and mud, surface level to about 1in. deep, in stagnant water on E. edge.



The following Collection notes exist for samples that are not present in the collection:

Collection Notes (Page 3):

AAM (Fresh Water) 28th August 1966

From pond as ZAAK. Bright warm weather.

Collection Notes (Page 4):

AAS (Fresh Water) 26th November 1966

Kilmardinny Loch, Bearsden, Nr. Glasgow, Scotland.

From edge of loch, just below surface. Very clean water, virtually no chalk or limestone content. Part shaded by trees on bank. Taken from mud & dead leaves below surface.

Cold weather, mild.

Collection Notes (Page 6):

AAY (Fresh Water) 5th March 1967 (Green)

Scum from roadside ditch nr. Hintlesham, Suffolk.

This ditch was in shade from trees, stagnat. Bright, mild weather, late morning. N. side of Ipswich-Hadleigh road.



Collection Notes (Page 6):

AAZ (Fresh Water) 5th March 1967 (yellow)

Ditch on other side of road from AAY.

This ditch was on South Side of Ipswich-Hadleigh road, & half shaded by trees, with flowing water, clear. Sample taken from reddish mud at bottom, with also some scum.

Taken at time of AAY.

Collection Notes (Page 9):

ABN (Soil Sample) 3rd September 1967

Moss and soil surface by back door, area often damp from rain overflow etc. Shaded by fence and house. Also green-coated twigs & bricks by base of water butt, part-shaded.

All at 1a St. Augustine Rd., Ipswich, Suffolk.

Cool, windy, dull, late a.m.

The notes contain analyses of both selected mounts and strew slides. The latter is perhaps the most interesting and unfortunately only one example of a strew slide associated with such an analysis is present in the collection. This is slide 4/II.

Slide 4/II

The slide is a standard 3x1 inch microscope slide, 1.2-1.3mm thick, with polished edges. The ringing is rather crudely applied but appears to be intact.

The co-ordinates recorded range for the X-axis from 6.95 to 16.3 and for the Y-axis from 10.9 to 22.5. Steps are generally 0.05 precision (though what this represents is unclear at present). The measurements appear to relate to the micrometer markings of a mechanical stage and indeed a note at the beginning of the analysis of slide 4/II states

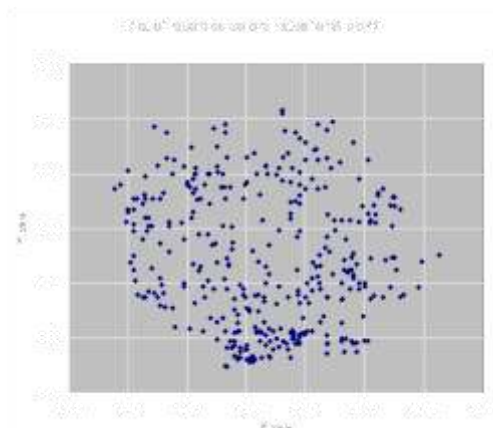
X setting = 15.0 . The difference between the X-axis minimum and the X-axis maximum, if the same as the difference between the Y-axis minimum and the Y-axis maximum will indicate whether the entire viewable area had been analysed (this being the case if they are the same, as the strew is under a circular coverslip with a circular ring 16mm coverslip, 11 mm clear within the ring).

$$X = 16.3 - 6.95 = 9.35$$

$$Y = 22.5 - 10.9 = 11.6$$

These results would tend to suggest that the strew is somewhat elliptical in shape or perhaps that nothing of note was found in the remainder of the circle of view.

By plotting all the co-ordinates we would ideally expect see a circle of plot points, corresponding to the circular viewable area under the coverslip inside the rung perimeter. The plot scatter below confirms the elliptical nature of the strew and also a degree of uneven concentration.



The Sample is “Fresh Water from The Meadows, Bemerton, Salisbury, Wilts” collected on 3rd September 1941. Coded as sample AAD.

The Collection notes record:

AAD (Fresh Water) Early 1941

Bemerton Water-Meadows, Salisbury, Wilts.

Probably a Mixed gathering, possibly this & AAB are one & the same.

Slides: 6/I, 10/I, 11/I, 2/II, 4/II, 5/II, 7/II, 8/II

The X Y co-ordinates appear to be references to the micrometer scale on a mechanical stage. The base X setting is given as 15.0.

A total of 364 separate observations of “scarcer forms” were recorded on this single slide. Other slides for which notes are present (though the slides are not) record many more observations. The table below is a transcript of the original pages pertaining to Slide 4/II.

Notebook Page	X	Y	Species	Positive ID	Notes	
Page 14			<i>Melosira varians</i> Ag.	Y	Dominant form (everywhere)	
	20.00	9.90	<i>Navicula lanceolata</i> Kütz.	Y	Dominant form	
	19.60	10.20	<i>Fragilaria capucina</i> Desmazihres	Y	Dominant form (but with black central area)	
	19.20	10.00	<i>Meridion circulare</i> Ag.	Y	Dominant forms (large specimen)	
	Scarcer forms					
	19.60	10.30	<i>Achnanthes lanceolata</i> Brhb.	Y	Rapheless valve	
	20.00	10.00	<i>Gomphonema montanum</i> (Schuman) V.H.	Y		
	19.40	10.40	<i>Eunotia praerupta</i> Ehr.	Y		
	19.50	10.50	<i>Cyclotella</i>	N	Probably <i>C. Meneghiniana</i> Kütz.	
	15.35	6.95	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y		
	15.30	7.00	<i>Achnanthes lapidosa</i> Kraske.	N		
	16.10	7.15	<i>Gomphonema constrictum</i> Ehr.	Y	Large beautiful specimen	
	16.20	7.15	<i>Synedra</i>	N	Very long form, blunt rounded apices, margins slightly undulate, striae well spaced, no clear central area	
	15.70	7.30	<i>Diatoma elongatum</i> Ag.	Y		
	16.30	7.25	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	Rhomboidal form	
	16.00	7.25	<i>Cyclotella</i>	N	Probably <i>C. Meneghiniana</i> Kütz.	
	15.70	7.25	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	Elliptical Form	
	15.60	7.35	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Rapheless valve uppermost. Beautiful form.	

	15.80	7.30	<i>Cocconeis</i> sp. ?	N	Rapheless valve. Beautiful radiating striae
	16.15	7.30	<i>Encyonema caespitosum</i> Kütz. var <i>Auerswaldii</i>	Y	
	16.20	7.35	<i>Navicula peregrina</i> (Ehr?) Kütz. var <i>meniscus</i>	Y	
	16.20	7.35	<i>Diatoma elongatum</i> Ag.	Y	
	17.50	7.30	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	Irregularly rhomboidal form
Page 15	16.50	7.30	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	
	16.80	7.30	<i>Diatoma elongatum</i> Ag.	Y	
	16.75	7.35		N	Minute lanceolate form with obtuse apices & suggestion of c.n. & radiating striae (c.n. = Central nodule)
	15.80	7.50	<i>Nitzschia linearis</i> (Ag.) W.Sm.	Y	
	19.70	7.50	<i>Nitzschia linearis</i> (Ag.) W.Sm.	Y	
	19.30	7.50	<i>Navicula peregrina</i> (Ehr?) Kütz. var <i>meniscus</i>	Y	
	18.70	7.45	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	Rhomboidal. One end missing
	17.40	7.60	<i>Gomphonema</i>	N	Not included in Carter article. Linear-lanceolate
	16.90	7.60	<i>Nitzschia</i>	N	Rostrate-capitate ends. Cardinal dots centrally interrupted, striae fine
	16.00	7.60	<i>Fragilaria mutabilis</i> (W.Sm.) Grun	Y	Small, rhomboidal
	15.95	7.60	<i>Meridion circulare</i> Ag.	Y	Fine specimen
	15.80	7.65	<i>Achnanthes lanceolata</i> Brhb.	Y	Raphe valve
	15.50	7.65	<i>Gomphonema</i>	N	Linear-lanceolate sp.
	15.35	7.65	<i>Cocconeis placentula</i> Ehr.	Y	? Raphe valve, well displayed
	15.60	7.75	<i>Cyclotella</i>	N	All the <i>Cyclotella</i> sp. are the same
	16.00	7.75	<i>Diatoma elongatum</i> Ag.	Y	
	16.65	7.75	<i>Meridion circulare</i> Ag.	Y	
	16.65	7.75	<i>Navicula</i>	N	Elliptical sp. markings as <i>N. pseudo-bacillum</i> Grun.
	17.10	7.70	<i>Diatoma elongatum</i> Ag.	Y	
	17.35	7.80	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	Cluster of forms, mostly girdle view.
	17.65	7.80	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Central space rhomboidal. Well displayed
	17.70	7.80	<i>Cyclotella</i>	N	
	17.70	7.80	<i>Eumotia linearis</i> (Ehr.) Grun. var <i>subarcuata</i>	Y	
	17.80	7.80	<i>Nitzschia</i>	N	Delicate striae, rostrate capitate ends
	17.80	7.80	<i>Fragilaria mutabilis</i> (W.Sm.) Grun	Y	
	17.80	7.80	<i>Cyclotella</i>	N	
	17.80	7.80	<i>Cocconeis placentula</i> Ehr.	Y	Raphe valve. Beautifully displayed
	18.70	7.80	<i>Nitzschia linearis</i> (Ag.) W.Sm. var <i>tenuis</i> Grun.	Y	Large fine specimen
	18.75	7.80	<i>Achnanthes lanceolata</i> Brhb. forma <i>rostrata</i> Ostrup.	Y	Rapheless valve. Fine
	19.60	7.80	<i>Navicula peregrina</i> (Ehr.) Kütz. var <i>meniscus</i> Grun.	Y	Large, fine
	19.60	7.80	<i>Meridion circulare</i> Ag.	Y	
	19.60	7.80	<i>Fragilaria capucina</i> Desmazihres.	Y	
	19.70	7.85	<i>Nitzschia palea</i> (Kütz.) W.Sm.	Y	Two forms
	20.00	7.90	<i>Navicula</i> sp. ?	N	Minute, with obscure structure
	20.10	7.90	<i>Fragilaria capucina</i> Desmazihres.	Y	Irregular, well marked striae
	19.55	7.90	<i>Fragilaria capucina</i> Desmazihres.	Y	Delicate form
	19.20	7.90	<i>Achnanthes</i> sp.?	N	Two forms
	17.75	7.90	<i>Navicula peregrina</i> (Ehr.) Kütz. var <i>meniscus</i> Grun.	Y	Large
	17.60	8.00	<i>Eumotia lunaris</i> (Ehr.) Grun. var <i>subarcuata</i>	Y	Large sp.
	17.25	7.90	<i>Cyclotella</i>	N	
	16.80	7.90	<i>Achnanthes hungarica</i> Grun.	Y	Raphe valve
Page 16	16.45	7.90	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	Rhomboidal

	15.60	7.90	<i>Gomphonema acuminatum</i> Ehr.	Y	
	15.45	7.90	<i>Amphora ovalis</i> Kütz.	Y	
	15.00	7.95	<i>Nitzschia dissipata</i> (Jutz.) Grun. var <i>media</i>	Y	
	17.00	8.00	<i>Amphora</i>	N	Two valves of frustule apparently disconnected
	17.55	8.00	<i>Eunotia lunaris</i> (Ehr.) Grun. var <i>subarcuata</i>	Y	Large
	19.20	8.00	<i>Gomphonema constrictum</i> Ehr.	Y	Constriction slight. Central striae unusual
	19.35	8.00	<i>Gomphonema</i> sp.	N	
	18.70	8.10	<i>Cyclotella</i>	N	
	17.95	8.15	<i>Gomphonema angustatum</i> Ehr.	Y	Small form
	17.90	8.20	<i>Navicula cincta</i> (Ehr?) Kütz. var <i>Heufleri</i> Grun.	Y	Part missing
	17.80	8.15	<i>Nitzschia palea</i> (Kütz.) W.Sm.	Y	
	17.80	8.05	<i>Stauroneis Smithii</i> Grun.	Y	Striking form
	17.60	8.10	<i>Diatoma elongatum</i> Ag.	Y	
	16.65	8.10	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Frustule rapheless, valve uppermost
	16.50	8.20	<i>Fragilaria</i> sp.?	N	Striae well spaced, central blank space to one side. Lower valve with fewer striae, blank space on opposite side
	16.35	8.20	<i>Navicula</i> sp.?	N	Minute, lanceolate. Structure obscure
	15.60	8.20	<i>Amphora ovalis</i> Kütz.	Y	Large form
	14.55	8.25	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Raphe valve uppermost
	15.30	8.25	<i>Cymbella cistula</i> Hempr.	Y	Two specimens
	15.70	8.25	<i>Cymbella cistula</i> Hempr.	Y	
	15.75	8.25	<i>Nitzschia linearis</i> (Ag.) W.Sm.	Y	
	16.35	8.25	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	
	16.45	8.25	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	Irregular margins
	16.90	8.25	<i>Navicula</i> sp.	N	Resembles <i>N. cincta</i> (Ehr.) Kütz. var <i>Heufleri</i> Grun. but with larger blank central area. Damaged.
	17.50	8.20	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt.	Y	Rapheless valve uppermost. Large, perfect form
	17.60	8.20	<i>Diatoma elongatum</i> Ag.	Y	
	18.05	8.25	<i>Navicula</i> sp.?	N	Minute form, structure obscure
	18.20	8.25	<i>Eunotia pectinalis</i> Kütz.	Y	
	17.55	8.30	<i>Meridion circulare</i> Ag.	Y	Curious short var.
	17.15	8.35	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Raphe valve uppermost
	16.75	8.35	<i>Navicula Reinhardtii</i> Grun.	Y	
	14.10	8.35	<i>Navicula ventricosa</i> (Ehr.?) Donkin	Y	
	13.60	8.40	<i>Diatoma elongatum</i> Ag.	Y	Perfect
	16.30	8.40	<i>Fragilaria</i> sp.	N	Produced broad rostrate apices, fine striae not extending very far in from margins
	16.30	8.40	<i>Cyclotella</i>	N	Large
	18.50	8.60	<i>Eunotia linearis</i> (Ehr.) Grun. var <i>subarcuata</i>	Y	
Page 17	19.20	8.55	<i>Gomphonema</i>	N	Small sp. well-spaced striae
	16.60	8.60	<i>Synedra ulna</i> (Nitzsch.) Ehr. var <i>vitrea</i>	Y	
	15.70	8.55	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Apices very tapered
	15.00	8.60	<i>Nitzschia</i>	N	Probably <i>N. linearis</i> (Ag.) W.Sm. Very long, fine form. var <i>tenuis</i> ?
	14.80	8.75	<i>Gomphonema constrictum</i> Ehr.	Y	Typical form
	17.90	8.75	<i>Navicula gracilis</i> Kütz.	Y	
	19.95	8.80	<i>Navicula radiosa</i> Kütz. var <i>acuta</i>	Y	
	18.60	8.80	<i>Cymatopleura solea</i> (Brhb.) W.Sm.	Y	
	15.20	8.75	<i>Navicula</i> sp.	N	Median line and margins reminiscent of <i>N. ambigua</i> Ehr. But striae slightly radiant at centre, convergent at apices.
	15.70	8.85	<i>Navicula cuspidata</i> Kütz.	Y	
	16.10	9.00	<i>Diatoma elongatum</i> Ag.	Y	Perfect specimen

	16.40	9.00	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt.	Y	Raphe valve
	16.10	9.05	<i>Nitzschia palea</i> (Kütz.) W.Sm.	Y	Very small form
	16.00	9.10	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	
	15.60	9.05	<i>Navicula</i> sp.	N	Resembles <i>N. ambigua</i> Ehr. Except for striae arrangement, convergent at ends, radiant at centre
	13.50	9.10	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Fine specimen
	13.25	9.15	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	
	13.10	9.20	<i>Synedra</i> sp.?	N	Two forms, margins linear with suddenly tapering acute apices, striae transverse, interrupted along centre, not well-formed, suddenly longitudinal and haphazard at apices.
	14.25	9.30	<i>Navicula cincta</i> (Ehr.) Kütz. var <i>Heufleri</i> Grun.	Y	
	16.60	9.35	<i>Eunotia lunaris</i> (Ehr.) Grun. var <i>subarcuata</i>	Y	Large form
	17.00	9.25	<i>Synedra ulna</i> (Nitzsch.) Ehr. var <i>obtusa</i>	Y	Large, perfect
	17.00	9.25	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Rapheless valve uppermost
	17.80	9.30	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Broad, short form. Striae interrupted. Central space
	18.10	9.30	<i>Encyonema caespitosum</i> Kütz.	Y	
	19.20	9.40	<i>Gomphonema acuminatum</i> Ehr.	Y	
	19.25	9.45	<i>Navicula</i> sp.	N	Similar to <i>N. lata</i> Brhb. as in V.H., but striae near apices convergent
	20.20	9.45	<i>Achnanthes lanceolata</i> Brhb.	Y	Raphless valve
	20.60	9.50	<i>Gomphonema acuminatum</i> Ehr.	Y	Fine example
	21.20	9.50	<i>Cymbella cistula</i> Hempr.	Y	Fine example
	20.30	9.55	<i>Navicula ambigua</i> Ehr.	Y	Valve tilted slightly
	18.75	9.50	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Both valves present, swing apart at one end like a fan
	18.70	9.50		N	Small obscure naviculoid sp. Lanceolate with obtuse ends
	18.00	9.50	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Fine large specimen
	17.40	9.50	<i>Gomphonema</i> sp.	N	Small, widely spaced striae
	16.60	9.50	<i>Cyclotella</i>	N	Large, well shown
	16.60	9.50	<i>Diatoma elongatum</i> Ag.	Y	
	16.60	9.50	<i>Nitzschia palea</i> (Kütz.) W.Sm.	Y	
Page 18	16.30	9.55	<i>Navicula pupula</i> Kütz.	Y	Fine
	15.95	9.50	<i>Gomphonema</i> sp.	N	Well displayed
	15.60	9.45	<i>Eunotia praerupta</i> Ehr.	Y	
	14.60	9.50	<i>Navicula pupula</i> Kütz.	Y	Delicate form
	14.60	9.50	<i>Eunotia lunaris</i> (Ehr.) Grun.	Y	Fine example
	13.00	9.50	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Strong, large var. Striae intense, interrupted along axis of valve. Apices obtuse
	12.60	9.50	<i>Cocconeis placentula</i> Ehr.	Y	Beautiful rapheless valve
	12.35	9.60	<i>Navicula Brhbissonii</i> Kütz. var <i>subproducta</i>	Y	
	13.20	9.65	<i>Navicula Brhbissonii</i> Kütz.	Y	
	12.50	9.50	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	
	15.90	9.60	<i>Fragilaria mutabilis</i> (W.Sm.) Grun.	Y	var. with produced ends
	16.40	9.60	<i>Encyonema caespitosum</i> Kütz. var <i>Auerswaldii</i>	Y	Beautifully shown
	17.75	9.60	<i>Gomphonema</i> sp.	N	Not figured by J. Carter. Narrow, lanceolate with striae progressively shortened towards c.n., becoming merely submarginal there. Striae well spaced, distinct. Single punctum in blank central area.
	21.30	9.60	<i>Gomphonema constrictum</i> Ehr.	Y	Small specimen
	12.90	9.65	<i>Navicula</i> sp.	N	Minute, with obtuse ends, lanceolate margins, obscure structure. Two valves present.
	12.70	9.70	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Very tapered. No central blank space.
	14.90	9.80	<i>Navicula viridula</i> Kütz.	Y	Well displayed
	15.35	9.80	<i>Diatoma elongatum</i> Ag.	Y	
	15.90	9.80	<i>Navicula</i> sp.	N	Vaguely like <i>N. lata</i> Brhb. Both valves present

	17.75	9.75	<i>Gomphonema constrictum</i> Ehr.	Y	Small, with constriction slight
	18.20	9.75	<i>Amphora ovalis</i> Kütz.	Y	Small, complete frustule, well shown
	18.50	9.80	<i>Navicula pupula</i> Kütz.	Y	Small
	19.50	9.80	<i>Cymatopleura solea</i> (Brhb.) W.Sm.	N	Probably. Near-girdle view
	19.80	9.80	<i>Synedra ulna</i> (Nitzsch.) Ehr. var <i>vitrea</i>	Y	
	21.80	9.85	<i>Nitzschia</i> sp.	N	Possibly <i>N. subtilis</i> Grun. var <i>paleacea</i>
	20.85	9.85	<i>Fragilaria</i> sp.	N	Lanceolate, slightly undulate margins, apices produced, rostrate. Striae well-marked shortened so as to leave lanceolate blank area
	17.10	9.90	<i>Cymbella cuspidata</i> Kütz.	Y	
	14.55	9.90	<i>Amphora ovalis</i> Kütz.	Y	Single valve, nicely displayed
	13.90	9.90	<i>Navicula</i> sp.	N	Striae punctate, shortened around c.n., radiate, then suddenly convergent towards apices. Outline of valve like <i>N. viridula</i> Kütz.
	13.15	9.95	<i>Epithemia gibberula</i> Kütz. var <i>producta</i> Grun.	Y	As in V.H. Fine
	13.90	10.00	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Beautiful, large specimen
	15.80	9.95	<i>Eumotia praerupta</i> Ehr.	Y	Small
	16.65	10.00	<i>Achnanthes lanceolata</i> Brhb.	Y	Elliptical-lanceolate form. Raphe valve uppermost. Horseshoe mark on rapheless valve well displayed.
Page 19	18.05	10.00	<i>Gomphonema acuminatum</i> Ehr.	Y	Almost wedge-shaped
	18.45	10.00	<i>Gomphonema acuminatum</i> Ehr.	Y	Large typical form
	20.00	10.00	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	Fine
	19.80	10.00		N	Possibly auxospore or very large punctate valve of <i>Melosira varians</i> Ag.
	15.25	10.15	<i>Navicula humilis</i> Donkin	Y	
	14.70	10.10	<i>Achnanthes lanceolata</i> Brhb.	Y	Rapheless valve
	12.25	10.10	<i>Encyonema caespitosum</i> Kütz. var <i>Auerswaldii</i>	Y	
	13.10	10.20		N	Apical portion of valve, probably <i>Hantzschia amphioxys</i> (Ehr.) Grun.
	18.20	10.20	<i>Navicula cincta</i> (Ehr.) Kütz. var <i>Heufleri</i> Grun	Y	
	18.40	10.25	<i>Amphora</i> sp.	N	Single valve
	18.90	10.35	<i>Achnanthes lanceolata</i> Brhb. forma <i>elliptica</i> Cleve	Y	
	16.75	10.35	<i>Fragilaria</i> sp.	N	Valve linear-lanceolate with produced rostrate apices. Striae well-marked, shortened so as to leave median pseudo-raphe, & interrupted at centre to form one-sided stauros .
	12.20	10.50	<i>Navicula radiosa</i> Kütz. var <i>acuta</i>	Y	
	14.40	10.45	<i>Amphora Normanii</i> Rabenh.	Y	One end missing
	17.70	10.50	<i>Rhoicosphenia curvata</i> (Kütz.) Grun.	Y	Raphe valve uppermost
	19.30	10.50		N	Unidentified form. Large asymmetrical valve with large punctae
	19.55	10.50	<i>Amphora Normanii</i> Rabenh.	Y	
	21.05	10.50	<i>Navicula digito-radiata</i> Greg.	Y	
	18.50	10.65	<i>Navicula pseudo-bacillum</i> Grun.	Y	A beautiful specimen
	18.35	10.60	<i>Navicula</i> sp.	N	Similar to <i>N. borealis</i> Ehr.
	16.65	10.60	<i>Epithemia gibberula</i> Kütz. var <i>producta</i> Grun.	Y	Fine example
	15.40	10.65	<i>Navicula</i> sp.?	N	Small, linear with slightly triundulate margins & rostrate-capitate apices. Striae well separated, curved, radiating, shortened opposite c.n. to leave circular blank space.
	14.45	10.60	<i>Eumotia praerupta</i> var Ehr.	N	Large form, with central inflation
	12.80	10.55	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Large, perfect, symmetrical
	12.10	10.75	<i>Navicula</i> sp.	N	Resembles <i>N. lata</i> Brhb.
	14.20	10.70	<i>Nitzschia</i> sp.	N	Very narrow. Rostrate-capitate apices, cardinal dots interrupted at centre. Stiae fine.
	15.00	10.75	<i>Navicula fontinalis</i> Grun.	Y	Fine, large form.
	15.40	10.70	<i>Surirella ovalis</i> Brhb.	Y	
	18.25	10.75	<i>Cyclotella</i> sp.	N	Large, perfect valve
	19.70	10.70	<i>Stauroneis anceps</i> Ehr.	Y	
	21.90	10.80	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	Striae widely spread

	20.90	10.95	<i>Navicula radiosa</i> Kütz. var <i>acuta</i>	Y	
	20.70	10.85	<i>Gomphonema parvulum</i> (Kütz.) V.H.	Y	
	20.20	10.90	<i>Gomphonema</i> sp.	N	Margins as <i>G. parvulum</i> V.H. but striae widely spaced, very intense as is central punctum. Wide blank border to raphe.
	19.30	10.85		N	Possibly <i>Amphora</i> sp. Single valve
	16.40	10.80	<i>Synedra</i> sp.	N	Very long, broad rounded apices, margins slightly undulate near ends, pseudo-raphé central but no blank central space.
Page 44 (continued from page 19)	12.20	11.00	<i>Fragilaria</i> sp.	N	Linear with produced apices and well-marked striae shortened so as to leave pseudo-raphé
	15.35	10.90	<i>Navicula cincta</i> (Ehr.) Kütz. var <i>Heufleri</i> Grun	Y	
	19.55	10.95	<i>Surirella ovalis</i> Brhb.	Y	Small, with linear outline
	21.00	10.95	<i>Navicula Brhbissonii</i> Kütz.	Y	
	22.50	11.05	<i>Pleurosigma acuminatum</i> (Kütz.) Grun.	Y	
	19.60	11.10	<i>Hantzschia amphioxys</i> (Ehr.) Grun.	Y	Small, perfect
	18.45	11.05	<i>Navicula viridula</i> Kütz.	Y	
	13.40	11.15	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Fine
	15.50	11.25	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Upper valve with crooked striae
	16.20	11.20	<i>Navicula humilis</i> Donkin	Y	Fine, perfect
	18.80	11.15	<i>Navicula sphaerophora</i> Kütz. (as V.H.)	Y	Tilted about transverse axis
	18.65	11.30	<i>Navicula dirhynchus</i> Ehr.	Y	One end missing
	14.85	11.40	<i>Encyonema caespitosum</i> Kütz. var <i>Auerswaldii</i>	Y	
	16.75	11.40	<i>Amphora</i> sp.	N	Complete frustule, beautifully displayed
	15.55	11.50	<i>Navicula cryptocephala</i> Kütz. var <i>veneta</i>	Y	
	14.95	11.45	<i>Navicula dirhynchus</i> Ehr.	Y	Slightly damaged
	13.10	11.45	<i>Navicula</i> sp.	N	Small, elliptical with rostrate-capitate apices. Striae radiate, interrupted asymmetrically at centre
	12.50	11.60	<i>Fragilaria mutabilis</i> (W. Sm.) Grun.	Y	Curious asymmetrical valve
	13.90	11.60	<i>Navicula</i> sp.	N	Resembles <i>N. dicephala</i> (W.Sm.) but striae not radiate at ends. Striae very obvious, bluish, well spaced, oddly contrasting with otherwise delicate valve
	19.35	11.60	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Large, typical
	18.70	11.70	<i>Melosira varians</i> Ag.	Y	Fine, large, well displayed valve
	17.70	11.70	<i>Navicula cryptocephala</i> Kütz.	Y	
	14.40	11.80	<i>Navicula</i> sp.	N	Resembles the marine <i>N. digito-radiata</i> Greg. var <i>Cyprinus</i>
	14.70	11.80	<i>Navicula radiosa</i> Kütz. var <i>acuta</i>	Y	
	19.00	11.95	<i>Navicula</i> sp.	N	Small, elliptic, with rostrate-capitate ends. Striae well separated, dark, intense, curved, radiating and shortened opposite c.n.
	17.80	11.90	<i>Cymbella cuspidata</i> Kütz.	Y	
	12.65	11.90	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	Small form
	12.20	11.90	<i>Cyclotella</i> sp.	N	Fine
	17.10	11.95	<i>Cyclotella</i> sp.	N	Fine
	20.90	12.10	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Fine
	15.50	12.05	<i>Navicula radiosa</i> Kütz. var <i>acuta</i>	Y	
	15.20	12.10	<i>Navicula pupula</i> Kütz.	Y	Fine, perfect
13.40	12.10	<i>Synedra</i> sp.	N	Linear with acute ends. Striae transverse, with central pseudo raphe, but haphazardly longitudinal at one end.	
Page 45	12.80	12.10	<i>Navicula pseudo-bacillum</i> Grun	Y	Small, elliptical, like <i>N. elliptica</i> Kütz.
	12.70	12.10		N	Small lanceolate <i>Navicula</i> . Obtuse, rounded ends. Pseudo-stauros, obscure
	12.20	12.15	<i>Navicula peregrina</i> (Ehr.) Kütz. var <i>Menisculus</i> (Schum.)	Y	
	13.40	12.25	<i>Navicula ambigua</i> Ehr.	Y	Tilted
	13.80	12.20	<i>Synedra ulna</i> (Nitzsch) Ehr. var <i>vitrea</i>	Y	
	16.55	12.30	<i>Synedra</i> sp.	N	Delicate striae, pseudo raphe wide. Probably a var of <i>S. ulna</i> (Nitzsch.) Ehr.

19.50	12.30	<i>Achnanthes divergens</i> A.Cleve-Euler	Y		
19.80	12.25	<i>Achnanthes</i> sp.	N	Probably <i>A. lanceolata</i> Brhb.	
20.15	12.20	<i>Navicula pupula</i> Kütz.	Y	Fine	
20.35	12.20	<i>Amphora</i> or <i>Cymbella</i> sp.	N	Resembles <i>A. salina</i> W.Sm.	
20.20	12.30	<i>Navicula cincta</i> (Ehr.) Kütz. var <i>Heufleri</i> Grun	Y		
19.20	12.30	<i>Achnanthes hungarica</i> Grun.	Y	Beautiful diatom	
18.95	12.30	<i>Navicula peregrina</i> (Ehr.) Kütz. var <i>Meniscus</i> (Schuman.)	Y		
?	?		N	Probably <i>Cymatopleura solea</i> (Brhb.) W.Sm. Frustule girdle view	
17.50	12.35	<i>Navicula</i> sp.	N	As <i>N. Brhbissonii</i> Kütz. but striae not as radiate	
11.95	12.25	<i>Navicula</i> or <i>Achnanthes</i> sp.	N	Linear with round, obtuse ends. Striae opposite c.n. very short to form stauroneiform space. One end lost.	
12.60	12.40	<i>Achnanthes lanceolata</i> Brhb.	Y	Raphe valve. Small, elliptical	
12.70	12.40	<i>Navicula</i> sp.	N	Small, lanceolate, possibly stauros. Good example	
14.15	12.40	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Remarkable outline, apices curved laterally in opposite directions, & margins of valve undulate. Raphe valve uppermost.	
20.35	12.50	<i>Stauroneis phoenicentron</i> Ehr.	Y		
18.75	12.50	<i>Navicula peregrina</i> (Ehr.) Kütz. var <i>Menisculus</i> (Schuman.)	Y		
17.50	12.55	<i>Navicula</i> sp.	N	Elliptical with rostrate-capitate ends. Striae widely spaced, curved, punctate, radiate shortened opposite c.n. to form stauroneiform blank space	
12.00	12.60	<i>Navicula gracilis</i> Kütz.	Y		
14.20	12.60	<i>Achnanthes</i> sp.	N	Rapheless valve broken. As <i>A. Peragalli</i> Brun. & Heribaud.	
20.10	12.55	<i>Encyonema caespitosum</i> Kütz. var <i>Auerswaldii</i>	Y		
21.20	12.70		N	Probably <i>Cymatopleura solea</i> (Brhb.) W.Sm. Frustule, girdle view	
12.20	12.70	<i>Navicula</i> sp.	N	Linear margins, rostrate-capitate ends. Striae widely spaced, radiate, shortened opposite c.n. to leave round space	
12.00	12.70	<i>Synedra</i> sp.	N	Short valve. Central blank area to one side only of pseudo-raphe	
12.50	12.90	<i>Achnanthes</i> sp.	N	As <i>A. lanceolata</i> Brhb. forma <i>rostrata</i> Ostrup, but striae wider-spaced in proportion to length of valve than as described by Carter. Rapheless valve uppermost	
19.90	12.80	<i>Gomphonema angustatum</i> (Kütz.) Grun.	Y		
20.30	12.85		N	<i>Navicula peregrina</i> -like. Dominant form. Fine example	
20.85	12.85		N	Rhomboidal form. Very robust striae. Small	
Page 46	21.00	12.80	<i>Navicula elliptica</i> Kütz.	Y	
	17.80	12.90	<i>Amphora</i> sp.	N	Single valve. Very large
	17.65	13.00	<i>Navicula limosa</i> Kütz.	Y	
	17.50	12.95	<i>Navicula viridula</i> Kütz.	Y	
	14.75	12.90	<i>Achnanthes lanceolata</i> Brhb. forma <i>elliptica</i> Cleve	Y	Rapheless valve
	12.20	13.10	<i>Gomphonema constrictum</i> Ehr.	Y	Fine
	12.30	13.10	<i>Gomphonema</i> sp.	N	Maybe <i>G. angustatum</i> (Kütz.) Grun. Small
	12.60	13.10	<i>Gomphonema acuminatum</i> Ehr.	Y	Fine
	12.85	13.10	<i>Encyonema caespitosum</i> Kütz.	Y	
	13.10	13.10		N	Probably <i>Navicula dicephala</i> W.Sm. broken
	14.35	13.05	<i>Navicula</i> sp.	N	Like <i>N. viridis</i> Kütz. but with no median space
	14.45	13.10		N	Fragment of valve with raphe, transverse striae. Margins & apices like <i>Navicula firma</i> Kütz., but unlike this otherwise
	15.30	13.10	<i>Synedra vaucheriae</i> Kütz.	Y	Fine. Odd malformed striae.
	15.90	13.10	<i>Navicula</i> sp.	N	Small, elliptical. Striae slightly radiate centrally, convergent at apices. Both valve parts superposed
	20.95	13.15	<i>Cymatopleura solea</i> (Brhb.) W.Sm.	Y	Beautifully displayed
	21.00	13.15	<i>Cyclotella</i> sp.	N	Large, fine
	20.45	13.20	<i>Ephemia gibberula</i> Kütz. var <i>producta</i> Grun.	Y	Beautiful
	17.80	13.20	<i>Pleurosigma acuminatum</i> (Kütz.) Grun.	Y	
	?	?	<i>Synedra vaucheriae</i> Kütz.	Y	Frustule. Lower valve with odd longitudinal striae at one end. Margins slightly asymmetric.

	16.45	13.25	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Fine, large
	12.55	13.25		N	Possibly <i>Nitzschia denticula</i> Grun. var <i>Delognei</i> Grun or <i>Nitzschia dissipata</i> (Kütz.) Grun.
	13.20	13.30	<i>Encyonema caespitosum</i> (ventricosum) Kütz.	Y	
	14.20	13.30	<i>Encyonema caespitosum</i> (ventricosum) Kütz.	Y	
	20.45	13.30	<i>Synedra</i> sp.	N	As <i>S. ulna</i> (Nitzsch.) Ehr. But central space circular, small, biased to one side of centre laterally. Some malformed striae.
	20.60	13.45	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	
	18.65	13.50	<i>Navicula humilis</i> Donk.	Y	As in V.H., not as <i>Navicula</i> (Donk.)
	18.40	13.45	<i>Synedra</i> sp.	N	Very large, fine sp. Rounded, broad apices
	18.00	13.45	<i>Nitzschia</i> sp.	N	Dots interrupted at centre. Valve linear-lanceolate. Apices produced.
	15.45	13.50	<i>Gomphonema constrictum</i> Ehr.	Y	Fine example
	15.25	13.50	<i>Navicula gracilis</i> Kütz.	Y	
	15.15	13.50	<i>Nitzschia palea</i> (Kütz.) W.Sm.	Y	Frustule
	14.30	13.45	<i>Gomphonema montanum</i> (Schuman.) V.H.	Y	Fine, small
	14.10	13.50	<i>Navicula cincta</i> (Ehr.) Kütz.	Y	Slightly damaged one end
	11.55	13.45	<i>Synedra</i> sp.	N	Small, linear-lanceolate. Central space elongate by striae progressively shortened.
Page 47	11.75	13.60	<i>Surirella ovalis</i> Brhb. var <i>pinnata</i>	Y	
	14.00	13.60	<i>Navicula pupula</i> Kütz.	Y	Fine
	14.00	13.70	<i>Navicula cincta</i> (Ehr.) Kütz. var <i>Heufleri</i>	Y	
	14.60	13.60	<i>Pleurosigma attenuatum</i> W.Sm.	Y	
	15.95	13.60	<i>Navicula Brhbissonii</i> Kütz.	Y	
	17.50	13.70	<i>Navicula</i> sp.	N	Probably <i>N. pupula</i> Kütz. but central space circular
	17.80	13.60	<i>Navicula Reinhardtii</i> Grun	Y	A beautiful specimen
	18.20	13.80	<i>Gomphonema</i> sp.	N	Small with striae radiating, very robust & widely spaced.
	17.20	13.75	<i>Navicula viridis</i> Kütz.	N	var with blank median space wide
	16.00	13.70	<i>Navicula Brhbissonii</i> Kütz.	Y	Large valve. Half missing
	14.20	13.80	<i>Cymbella</i> (<i>Encyonema</i>) sp.	N	Minute, with ventral margin straight, dorsal edge arcuate. Raphe centrally straight, very slightly curved as it approaches apices but displaced dorsally as <i>Encyonema</i> .
	19.80	13.80	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Fine form. Raphe valve uppermost
	17.00	13.95	<i>Gomphonema angustatum</i> (Kütz.) Grun.	Y	Very small, fine
	16.70	14.00	<i>Navicula viridula</i> Kütz.	Y	
	15.20	14.00	<i>Gomphonema</i> sp.	N	Probably <i>G. montanum</i> (Schuman) V.H. Small
	14.75	14.00	<i>Navicula</i> sp.	N	Small form with broad, rounded ends and central inflation. Raphe fine, terminal nodules extended laterally. Striae fine, radiating. No pseudo-stauros
	14.30	14.00	<i>Navicula</i> sp.	N	Minute, with produced apices. Valve lanceolate. Striae robust, radiating centrally, convergent at apices, shortened opposite c.n.
	14.25	14.00	<i>Amphora</i> sp.	N	Beautiful minute frustule. Perhaps <i>A. perpusilla</i> Grun.
	13.50	14.00	<i>Cymbella cuspidata</i> Kütz.	Y	Fine diatom
	12.60	13.90	<i>Navicula Brhbissonii</i> Kütz. var <i>subproducta</i>	Y	
	12.00	14.10	<i>Navicula dirhynchus</i> Ehr.	Y	
	14.70	14.00	<i>Navicula pupula</i> Kütz.	Y	Perfect
	15.05	14.05	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Large form. Raphe valve
	16.35	14.00	<i>Navicula stauroptera</i> Grun. var <i>parva</i>	Y	
	17.80	14.05	<i>Nitzschia Hungarica</i> Grun	Y	
	18.85	14.20	<i>Navicula cincta</i> (Ehr.) Kütz. var <i>Heufleri</i> Grun	Y	
	17.55	14.20	<i>Navicula peregrina</i> (Ehr.) Kütz. var <i>menisculus</i> (Schuman)	Y	
	17.10	14.20	<i>Gomphonema</i> sp.	N	Small, outlines like <i>G. angustatum</i> (Kütz.) Grun. Striae wide-spaced, robust.
	16.65	14.25	<i>Synedra vaucheriae</i> Kütz.	Y	Fine frustule
	16.65	14.30	<i>Achnanthes lanceolata</i> Brhb.	Y	Raphe valve upwards

	15.00	14.25	<i>Cymatopleura solea</i> (Brhb.) W.Sm.	Y	Beautifully displayed
Page 48	14.30	14.20	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Raphe valve
	13.90	14.25	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Fine. Some striae malformed
	13.00	14.30	<i>Fragilaria</i> sp.	N	Small with fine striae and perhaps asymmetric central blank space
	19.15	14.40	<i>Eumotia lunaris</i> (Ehr.) Grun var <i>bilunaris</i>	Y	
	20.10	14.50	<i>Nitzschia linearis</i> (Ag.) W.Sm.	Y	Nice example
	18.70	14.55	<i>Navicula mesolepta</i> Ehr.	Y	
	18.40	14.50	<i>Navicula pupula</i> Kütz.	Y	
	18.00	14.50	<i>Cymbella</i> (<i>Encyonema</i>) <i>caespitosum</i> Kütz.	Y	Fine
	13.55	14.50	<i>Stauroneis Smithii</i> Grun.	Y	Beautiful, perfect form
	13.30	14.55	<i>Diatoma elongatum</i> Ag.	Y	
	15.35	14.60	<i>Navicula</i> sp.	N	Possibly small var of <i>N. cincta</i> (Ehr.) Kütz.
	16.00	14.60	<i>Cymbella</i> (<i>Encyonema</i>) <i>caespitosum</i> Kütz.	Y	
	17.25	14.60	<i>Fragilaria</i> sp.	N	Minute, elliptic-lanceolate with ends produced. Striae with asymmetric central blank space.
	17.40	14.75	<i>Amphora</i> sp.	N	Fine valve
	16.25	14.75	<i>Navicula pupula</i> Kütz.	Y	Large
	18.30	14.85		N	Possibly <i>Gomphonema</i> sp. Lanceolate, symmetric margins. Striae dark, very curved radiating, widely separated
	18.35	14.90	<i>Achnanthes lanceolata</i> Brhb. forma <i>rostrata</i> Ostrup	Y	Small rapheless valve
	15.00	15.00	<i>Navicula cincta</i> (Ehr.) Kütz. var. <i>Heufleri</i> Grun	Y	
	14.15	14.95	<i>Synedra ulna</i> (Nitzsch.) Ehr.	Y	Large, fine variety
	19.60	15.15	<i>Amphora</i> sp.	N	
	18.00	15.15	<i>Gomphonema montanum</i> (Schuman) V.H.	Y	Fine form
	17.80	15.30	<i>Navicula</i> sp.	N	Elliptic with rostrate-capitate ends. Striae widely spread, radiating, curved, dark and obvious, shortened opposite c.n.
	13.30	15.50	<i>Synedra</i> sp.	N	Possibly <i>S. vaucheriae</i> Kütz. Frustule
	17.30	15.55	<i>Navicula viridula</i> Kütz. var <i>slesviscensis</i>	Y	
	17.65	15.50	<i>Achnanthes lanceolata</i> Brhb. forma <i>ventricosa</i> Hustedt	Y	Very large with concave margins. Rapheless valve. Fine diatom.
	18.70	15.60	<i>Nitzschia palea</i> (Kütz.) W.Sm.	Y	Very minute
	14.90	15.65	<i>Nitzschia Hungarica</i> Grun	Y	Fine frustule
	12.90	15.70	<i>Meridion circulare</i> Ag.	Y	Four connected frustules, girdle view
	18.40	15.80	<i>Surirella ovalis</i> Brhb. var <i>pinnata</i>	Y	
	15.30	15.80	<i>Cymbella</i> sp.	N	Like <i>C. cistula</i> Hempr. But ventral edge straighter, apices more acute. No isolated puncta.
	18.90	15.90	<i>Fragilaria Harrisonii</i> (W.Sm.) Grun.	Y	Large, perfect
	17.20	16.20	<i>Navicula cryptocephala</i> Kütz.	Y	
17.20	16.30	<i>Navicula pupula</i> Kütz.	Y		
15.30	15.50	<i>Gomphonema constrictum</i>	Y		

On this single sample strew slide the following 82 species, varieties and forms had been identified:

1. *Achnanthes divergens* A.Cleve-Euler
2. *Achnanthes hungarica* Grun.
3. *Achnanthes lanceolata* Breb.
4. *Achnanthes lanceolata* Breb. forma *elliptica* Cleve
5. *Achnanthes lanceolata* Breb. forma *rostrata* Ostrup
6. *Achnanthes lanceolata* Breb. forma *ventricosa* Hustedt
7. *Amphora Normanii* Rabenh.
8. *Amphora ovalis* Kütz.
9. *Cocconeis placentula* Ehr.
10. *Cymatopleura solea* (Brhb.) W.Sm.
11. *Cymbella* (*Encyonema*) *caespitosum* Kütz.
12. *Cymbella cistula* Hempr.
13. *Cymbella cuspidata* Kütz.

14. *Diatoma elongatum* Ag.
15. *Encyonema caespitosum (ventricosum)* Kütz.
16. *Encyonema caespitosum* Kütz.
17. *Encyonema caespitosum* Kütz. var *Auerswaldii*
18. *Epithemia gibberula* Kütz. var *producta* Grun.
19. *Eunotia linearis* (Ehr.) Grun. var *subarcuata*
20. *Eunotia lunaris* (Ehr.) Grun.
21. *Eunotia lunaris* (Ehr.) Grun. var *bilunaris*
22. *Eunotia lunaris* (Ehr.) Grun. var *subarcuata*
23. *Eunotia pectinalis* Kütz.
24. *Eunotia praerupta* Ehr.
25. *Fragilaria capucina* Desmazihres
26. *Fragilaria Harrisonii* (W.Sm.) Grun.
27. *Fragilaria mutabilis* (W.Sm.) Grun.
28. *Gomphonema acuminatum* Ehr.
29. *Gomphonema angustatum* (Kütz.) Grun.
30. *Gomphonema angustatum* Ehr.
31. *Gomphonema constrictum* Ehr.
32. *Gomphonema montanum* (Schuman) V.H.
33. *Gomphonema parvulum* (Kütz.) V.H.
34. *Gomphonema acuminatum* Ehr.
35. *Hantzschia amphioxys* (Ehr.) Grun.
36. *Melosira varians* Ag.
37. *Meridion circulare* Ag.
38. *Navicula ambigua* Ehr.
39. *Navicula Brhbissonii* Kütz.
40. *Navicula Brhbissonii* Kütz. var *subproducta*
41. *Navicula cincta* (Ehr.) Kütz.
42. *Navicula cincta* (Ehr.) Kütz. var *Heufleri*
43. *Navicula cryptocephala* Kütz.
44. *Navicula cryptocephala* Kütz. var *veneta*
45. *Navicula cuspidata* Kütz.
46. *Navicula digito-radiata* Greg.
47. *Navicula dirhynchus* Ehr.
48. *Navicula elliptica* Kütz.
49. *Navicula fontinalis* Grun.
50. *Navicula gracilis* Kütz.
51. *Navicula humilis* Donkin
52. *Navicula lanceolata* Kütz.
53. *Navicula limosa* Kütz.
54. *Navicula mesolepta* Ehr.
55. *Navicula peregrina* (Ehr.) Kütz. var *menisculus* (Schuman)
56. *Navicula peregrina* (Ehr.) Kütz. var *Meniscus* (Schuman.)
57. *Navicula pseudo-bacillum* Grun
58. *Navicula pupula* Kütz.
59. *Navicula radiosa* Kütz. var *acuta*
60. *Navicula Reinhardtii* Grun
61. *Navicula sphaerophora* Kütz. (as V.H.)
62. *Navicula stauoptera* Grun. var *parva*
63. *Navicula ventricosa* (Ehr.?) Donkin
64. *Navicula viridula* Kütz.
65. *Navicula viridula* Kütz. var *slesviscensis*
66. *Nitzschia dissipata* (Kütz.) Grun. var *media*
67. *Nitzschia Hungarica* Grun
68. *Nitzschia linearis* (Ag.) W.Sm.
69. *Nitzschia linearis* (Ag.) W.Sm. var *tenuis* Grun.
70. *Nitzschia palea* (Kütz.) W.Sm.
71. *Pleurosigma acuminatum* (Kütz.) Grun.

72. *Pleurosigma attenuatum* W.Sm.
73. *Rhoicosphenia curvata* (Kütz.) Grun.
74. *Stauroneis anceps* Ehr.
75. *Stauroneis phoenicentron* Ehr.
76. *Stauroneis Smithii* Grun.
77. *Surirella ovalis* Breb.
78. *Surirella ovalis* Breb. var *pinnata*
79. *Synedra ulna* (Nitzsch.) Ehr.
80. *Synedra ulna* (Nitzsch.) Ehr. var *obtusa*
81. *Synedra ulna* (Nitzsch.) Ehr. var *vitrea*
82. *Synedra vaucheriae* Kütz.

We think that the reference used was van Heurck's Treatise on the Diatomaceae, though this still needs to be checked. References made to J. Carter suggest another paper.

The collection is accompanied, not only with the notebooks, but also a card index. This card index contains index guides for the following Genera:

- Achnanthes
- Amphipleura
- Amphiprora
- Amphora
- Bacillaria
- Caloneis
- Cocconeis
- Coscinodiscus
- Cyclotella
- Cymatopleura
- Cymbella
- Denticula
- Diatoma
- Diploneis
- Epithemia
- Eunotia
- Fragilaria
- Gomphonema
- Hantzschia
- Melosira
- Meridion
- Navicula
- Nitzschia
- Peronia
- Pinnularia
- Pleurosigma
- Rhoicosphenia
- Rhopalodia
- Stauroneis
- Stephanodiscus
- Surirella
- Synedra

Within these sections is a card (or cards) dedicated to each species within the genera for which an identification record exists.

The authors have never before encountered an analysis of this nature and the only reason that we are able to come up with for such a "tour de force" is to determine relative abundance, much as is done with a transect.

NOTES

[1]Note:

G. C. Croasdell was a member of the Quekett Microscopical Club. Elected 9th April 1957. In the 1962 Membership list was recorded at 6 Blenheim Close, Blenheim Road, London, S.W.20. In the 1969 Membership list recorded at the same address (Croasdell, G. C., M.A.) (01-540-1226) (Stated Interests YY [Pond Life], G [Brass and Glass])

Ernest Bright Croasdell b. circa 1884 Cockermonth

A barrister.

In 1918 he was appointed Town Clerk of Whitehaven and left there in 1924 to become Town Clerk of Hornsey

The family lived in London thereafter

d. 3rd January 1936 @ Charing Cross Hospital, Westminster

BMD Death, aged 50, March Quarter 1936 Westminster Vol.1a. pg.682.

Ernest Bright Croasdell died in London but is buried in Keswick parish church

Probate: Croasdell, Ernest Bright, of 38 Wood Lane, Highgate, Middlesex, died 3rd January 1936

at Charing Cross Hospital, Westminster. Probate London 14th February 1936 to Florence

Mary Croasdell, widow. Effects #11925 14s. 6d.

m. Florence Mary Gibson

BMD Marriage December Quarter 1911 Cockermonth Vol.10b. pg.1091.

—Geoffrey Carlyle Croasdell b. 24th March 1913

BMD Birth June Quarter 1913 Whitehaven, Vol.10b. pg.1387.

(mother's maiden name Gibson)

BMD Death, aged 63, March Quarter 1976 Merton Vol.14. pg.1335.

m. Florence Matilda Maeers b. Wednesday 13th May 1914

BMD Marriage March Quarter 1955 Vol.3a. pg.343.

BMD Death, aged 83, July 1997 Wandsworth D103A/2561D/34

—Jon Derwent Croasdell

—Mary Jane Croasdell

m. Mohammad V. Nowrozian

BMD Marriage September Quarter 1977 Kensington Vol.13. pg.1798

—Gerald Bright Croasdell b. 12th July 1916

BMD Birth September Quarter 1916 Whitehaven Vol.10b. pg.1245.

(mother's maiden name - Gibson)

A solicitor and one of the more famous family members since as General Secretary of Equity, the Actors Union, he appeared several times on TV, particularly during an actors strike in the 1960s. Gerald did not marry.

BMD Death, aged 82, July 1998 Southwark A10A/2511A/229



Geoffrey Carlyle Croasdell
(1913 - 1976)

GEORGEY CROASDELL came from Whitehaven, Cumberland. His father was a barrister and he, too, entered the profession, becoming a solicitor after taking a good law degree at Exeter College, Oxford. He decided on a Local Government career and started at Hornsey but on the outbreak of war volunteered for the Air Force and trained in Canada. On return to this country he became a lecturer in the Army Educational Corps, a role he really enjoyed, but the Hornsey authorities secured his demobilization and he resumed his civil post. He later transferred to Brentford and Chiswick and in 1948 went to Merton and Morden as Deputy Town Clerk. With the reorganization of the Boroughs, this became the greatly expanded London Borough of Merton, in which he secured the post of Assistant Town Clerk in which he served till his retirement in 1974. He was a member of the Law Society and the Haldane Society.

Apart from a mildly diabetic condition which was under control, he enjoyed good health, but he had to enter hospital for a minor operation which he survived successfully, but an unsuspected heart condition supervened which might have occurred anytime, and he died the next day, 19 February.

He was a man of gentle disposition and broad interests, well read in both English and French literature, and with a good understanding of the industrial steam engine for, as a member of the Society of Model and Experimental Engineers, he had studied the work of the great engineers and had several model steam and hot air engines operating in his workshop, with others in various stages of construction.

Rocks interested him too and he made a collection from various localities, and over the last year or so, had cut, ground and polished some very nice specimens from the Lake District and Dartmoor.

Microscopy, however, was his main and constant hobby. He concentrated on Freshwater Diatoms and the Tardigrades or Water-Bears, in the collection of which he became expert, knowing when and where to look for the genera in each locality.

He was elected to the Club in April, 1957, had served on the Committee and, but for his untimely death, would have taken over the Secretaryship in March. He was a familiar and friendly figure to the membership and he will be missed, in a broader field as well, for his strong social sense led him to give generous support, financial backing and professional services to a number of progressive organizations, in particular the Peace Movement, both locally and nationally.

E.P.H.

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Quekett Journal Series 4, Volume X, 1976-1979 Page 53

[2]Note:

In the 1969 Quekett Microscopical Club Membership list is one D. E. Mandeville (elected Tuesday 13th December 1966), of 87 Green Lane, New Malden, Surrey. Whether this individual is associated with Miss. S. Mandeville is, as yet, unknown.

[3]Note:

Horace George Barber, diatomist.

Barber, H. G. - (slide date 1952) (Horace)

b. Tuesday 1st September 1908

BMD Birth December Quarter 1908 Nantwich Vol.8a. pg.288.

1908-1982

Lived in Nuneaton, Warwickshire.

Entry in *The Microscope* Vol. VI No. 1 of 1945 states

"Mr. H. G. Barber, Bletchley, Bucks, writes to say that he is very interested in the study of Diatoms and wishes to correspond with someone of similar tastes who would also be willing and able to assist him in the identification of species."

Employed by London, Midland and Scottish Railway (subsequently merged into British Rail) until 1966. His retirement was spent mainly drawing diatoms.

BMD Death, Horace George Barber, aged 74, December Quarter 1982 North Warwickshire Vol.31. pg.0048.

Articles in *Quekett Journals*

1961a - A note on unusual Diatom deformities Vol. 28, page 365

1961b - The Fossil Freshwater diatoms of the Ongarato Valley deposit, North Island, New Zealand Vol. 28, pages 387-391

1962a - Freshwater Diatoms from Cass, South Island, New Zealand Vol. 29, pages 17-20
1962b - The Collection and Preparation of Recent Diatoms Vol. 29, pages 21-25
1963a - A note on the Genus Mastogloia occurring in Southern Anglesey Vol. 29, pages 144-146
1963b - Fossil Freshwater diatoms from a Deposit on the Harper River, South Island, New Zealand Vol. 29, pages 193-195
1964 - A Note on Nitzschia sigmoidea Vol. 29, page 238
1972 Hantzschia marina (Donkin (this will be A. S. Donkin)) Grunow Vol. 32, pages 156-157
1976a - Observations on the Marine Taxon Known as Pinnularia ambigua, Cleve Vol. 33, pages 44-46
1976b - Observations of Pinnularia nodosa, Ehrenberg Vol. 33, pages 68-69
1977 - A Note on the Taxon Pinnularia microstauron var. Brhbissonii (Kütz.) Hustedt Vol. 33, pages 242-243
1979 - A Note on Epiphytic Formation of a Littoral Marine Diatom Vol. 33, pages 542-543
1982 - A Gathering of Diatoms from Malham Tarn Vol. 34, pages 374-380
1983- An Account of the Diatom Flora on a Cooling Tower, Central Electricity Generating Board Vol. 34, pages 500-503

The following articles in The Microscope were in conjunction with J. R. Carter.

1970 - An Account of Fossil Freshwater Diatomaceous Earth from Gordon Road site, Auckland, New Zealand Vol. 31, pages 271-277
1971a - An Account of Fossil Freshwater Diatomaceous Earth from Gordon Road site, Auckland, New Zealand Part II Vol. 32, pages 24-28
1971b - An Account of Fossil Freshwater Diatomaceous Earth from Gordon Road site, Auckland, New Zealand Part III Vol. 32, pages 82-89
1972 - An Account of Fossil Freshwater Diatomaceous Earth from Gordon Road site, Auckland, New Zealand Conclusion Vol. 32, pages 141-147

1978 - Pinnularia carminata n.sp. Vol. 33, pages 305-307

1981 - Observations on some Deformities found in British Diatoms Vol. 34, pages 214-226

In conjunction with Elizabeth Y. Haworth of the Freshwater Biological Association wrote - A Guide to the Morphology of the Diatom Frustule (Scientific Publication No. 44). This was published in 1981. In the preface Horace Barber is described (probably by himself) as an enthusiastic amateur. The Cover illustration of the booklet is from a drawing by Horace Barber.

The illustrations and work on British diatomaceae eventually was included in the publication of An atlas of British Diatomaceae (published by BioPress in 1996), which also included the work of Bernard Hartley, J. R. Carter and P. A. Sims

Other papers and publications-

1956 - A record of Diatoms from the River Leam, Leamington, Warwickshire (Limited Private Edition)

1976 - The Diatom Flora of the County of Leicestershire (Limited Private Edition)

1976 - Observations on the marine taxon known as Pinnularia ambigua. Microscopy Vol. 33 Pages 44-46.

1978 - The illustrated Diatom Flora of Great Britain (Limited Edition)

1979 - An illustrated Account of the Diatom Flora in a sediment Core from Windermere, Cumbria. (limited Private Edition)

1981 - Some Freshwater Diatoms from Malham Tarn (Limited Private Edition)

In conjunction with J. R. Carter.

1978 - Pinnularia carminata Microscopy Vol 33 Pages 305-307

In conjunction with E. Y. Haworth

1981 - A guide to the morphology of the diatom frustule (Scientific Publications, Freshwater Biological Association, No. 44)

Elected to QMC Tuesday 14th May 1946. Living, according to December 1948 Members list at Hafan , 91 Mancetter Road, Nuneaton, Warwickshire.

In the 1969 membership list @ Hafan , 91 Mancetter Road, Nuneaton, Warwickshire

OBITUARY



Horace G. Barber

(1908-1982)

THE UNTIMELY death of Horace Barber has left a gap in the ranks of microscopists which will be difficult, if not impossible, to fill. Particularly amongst the diatomists will his loss be felt for he represented the type of amateur worker, who, with unremitting zeal, studied his subject in great depth and produced work of an excellence seldom exceeded.

Born in Crewe, he joined the staff of the old London and Midland Railway in 1922 and remained with them until his retirement in 1966 having held various positions in their Control Office. In his younger days he was a keen long-distance cyclist and mountaineer and he retained his interest and activity in cycling until the day of his death when he was out riding in the morning. In 1930 he became a microscopist largely because of his interest in the local natural history society. Very quickly his work crystalized round the study of diatoms and he joined the Club in 1946.

After his retirement this study deepened and culminated in one of the most comprehensive Diatom Atlas's extant in the preparation of which he used his very considerable talents as an artist. The Atlas comprises at least 200 plates and several thousand individual drawings of British diatoms and, fortunately, this work will be available to all serious students at the British Museum (Natural History). Besides his many papers published in the Club Journal his latest contribution in association with Dr E. Y. Haworth and issued by the

Freshwater Biological Association as Scientific Publication No. 44, *A Guide to the Morphology of the Diatom Frustule with a Key to the British Freshwater Genera*, produced to help the non-specialist find his way in the diatomists world.

His interests were catholic and included membership of the Nuneaton Photographic Society of which he became President. He was a magnificent artist specialising in line drawing. He produced pottery of superlative beauty and in any spare time he had he cultivated a garden which was the admiration of his many friends.

He will be remembered as a diatomist, as an artist and, above all, as a generous friend. To his widow we extend our deepest sympathy.

H.H.G.

CONTRIBUTIONS TO THE JOURNAL

Series 4, Vol. 5, p. 365	A note on unusual diatom deformities.
Series 4, Vol. 5, p. 387	The fossil freshwater diatoms from Ongarto Valley, New Zealand.
Vol. 29, p. 17	Freshwater diatoms from Cass, South Island, New Zealand.
Vol. 29, p. 21	The collection and preparation of recent freshwater diatoms.
Vol. 29, p. 144	A note on the genus <i>Mastogloia</i> in Anglesey.
Vol. 29, p. 193	Fossil freshwater diatoms from the Harper River, South Island, New Zealand.
Vol. 29, p. 238	A note on <i>Nitzschia sigmoides</i> .
Vol. 31, p. 271	An account of fossil freshwater diatomaceous earth from New Zealand (in conjunction with J. R. Carter).
Vol. 32, p. 24	
Vol. 32, p. 82	
Vol. 32, p. 141	
Vol. 32, p. 156	
Vol. 33, p. 44	<i>Hantzschia marina</i> (Donkin), Grunow.
	Observations on the marine taxon known as <i>Pinnularia ambigua</i> (Cleave).
Vol. 33, p. 68	Observations of <i>Pinnularia nodosa</i> , Ehr.
Vol. 33, p. 242	A note on the taxon <i>Pinnularia microstauron</i> var. <i>brebissonii</i> (Kurtz) Hustedt.
Vol. 33, p. 305	<i>Pinnularia cornutus</i> N Sp (in conjunction with J. R. Carter).
Vol. 33, p. 542	A note on epiphytic formation of a littoral marine diatom.
Vol. 34, p. 374	A gathering of diatoms from Malham Tarn.
Vol. 34, p. 214	Observations on some deformities found in British diatoms (in conjunction with J. R. Carter).
Vol. 34, p. 500	An account of the diatom flora on a cooling tower, Central Electricity Generating Board.

THROUGH THE MICROSCOPE

'Looking at' is not a passive recording of an image like a photograph being produced by a camera, but is an active process in which the observer is checking his perceptions against his expectations.

Many teachers will be familiar with the experience of helping pupils see what they 'ought' to see through a microscope. Children viewing a biological cell through a microscope for the first time produce drawings which show not only that some have difficulty identifying what are the significant features, but they painstakingly record irrelevant ones, such as air bubbles.

Driver (1983).

Quekett Journal Series 4, Volume XI, 1980-1983 Page 558

[4]Note:

Mr. C. Leonard might actually refer to E. Leonard who was a noted diatomist.

[5]Note:

The only reference I currently have relating to H. F. Barnes is a slide label.



[6]Note:

Thomas Henry Jepson

Thomas Jepson b. circa 1847 Islington, London

probably BMD Birth March Quarter 1848 St. James Vol.1. pg.109.

In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire

Thomas Jepson, aged 43, a Commercial Traveller, b. Islington, London

In the 1901 Census @ 155 Herbert Road, Bullwell, Nottingham, Nottinghamshire:

Thomas Jespon, aged 49, a Commercial Traveller, b. London

In the 1911 Census @ Herbert Road, Nottingham, Nottinghamshire

Thomas Jepson, aged 62, a Commercial Traveller (in Lace), b. London

m. Sarah Elizabeth Russell b. circa 1851 Islington, London

BMD Birth March Quarter 1851 Islington Vol.3. pg.311.

BMD Marriage March Quarter 1873 Hendon Vol.3a. pg.111.

In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire

Sarah Elizabeth Jepson, aged 39, b. Islington, London

BMD Death, aged 42, June Quarter 1893 Basford Vol.7b. pg.91.

Thomas Jepson b. circa 1873 Nottingham, Nottinghamshire

probably BMD Birth December Quarter 1873 Nottingham Vol.7b. pg.250.

In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire

Thomas Jespon, aged 17, a Student in Chemistry, b. Nottingham, Nottinghamshire

In the 1901 Census @ 155 Herbert Road, Bullwell, Nottingham, Nottinghamshire:

Thomas Jepson, aged 26, a Chemists Assistant, b. Nottingham, Nottinghamshire

In the 1911 Census @ 9 Leonard Avenue, Sherwood, Nottingham:

Thomas Jepson, aged 37, a Drug Store Proprietor, on his own account, b. Nottingham

m. Mary Louis(e)(a) Sanders b. circa 1874 Worcester, Worcestershire

probably BMD Birth March Quarter 1875 Droitwich Vol.6c. pg.387.

BMD Marriage September Quarter 1904 Worcester Vol.6c. pg.488.

In the 1911 Census @ 9 Leonard Avenue, Sherwood, Nottingham:

Mary Louisa Jepson, aged 36, b. Worcester

Thomas Henry Jepson b. Thursday 22nd November 1906 Bowness near Windermere, Westmoreland.

Parents - Thomas Jepson and Mary Louise (Louisa) Sanders

BMD Birth Thomas Henry Jepson, December Quarter 1906 Kendal Vol.10b. pg.750.

In the 1911 Census @ 9 Leonard Avenue, Sherwood, Nottingham:

Thomas Henry Jepson, aged 4, b. Bowness, near Windermere

In the 1970 Telephone Directory for Hillingdon:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1970 and 1971 Telephone Directory for Outer London Middlesex:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1971 Telephone Directory for Richmond upon Thames:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1971 Telephone Directory for Hillingdon:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1972 Telephone Directory for Richmond upon Thames:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1972 Telephone Directory for Hounslow:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1972 Telephone Directory for Hillingdon:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1972 Telephone Directory for West Thames:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1973 Telephone Directory for Outer London West Middlesex:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1973 Telephone Directory for Richmond upon Thames:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1973 Telephone Directory for Hounslow:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1973 Telephone Directory for Hillingdon:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1973 Telephone Directory for West Thames:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1974 Telephone Directory for West Thames:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1975 Telephone Directory for West Thames:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1975 Telephone Directory for Hounslow:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1975 Telephone Directory for Hillingdon:

Jepson, T. H., 2 Elthorne Ct., Boundaries Rd, Feltham 01-890-1930

In the 1976 Telephone Directory for Brighton Area:

Jepson, T. H., Restways, Loxwood Rd, Alfold Crossways, Cranleigh Loxwood 752802

In the 1978 Telephone Directory for Brighton Area:

Jepson, T. H., Restways, Loxwood Rd, Alfold Crossways, Cranleigh Loxwood 752802

In the 1980 Telephone Directory for Brighton Area:

Jepson, T. H., Restways, Loxwood Rd, Alfold Crossways, Cranleigh Loxwood 752802

In the 1983 Telephone Directory for Brighton Area:

Jepson, T. H., Restways, Loxwood Rd, Alfold Crossways, Cranleigh Loxwood 753064

In the 1984 Telephone Directory for Brighton:

Jepson, T. H., Restways, Loxwood Rd, Alfold Crossways, Cranleigh Loxwood 753064
d. Sunday 20th January 1985, Restways, Loxwood Road, Alfold Crossways, Cranleigh, Surrey.
BMD Death, aged 78, January 1985 Surrey South-western Vol.17. pg.1594.

— Frank Russell Jepson b. circa 1874 Nottingham, Nottinghamshire
BMD Birth December Quarter 1874 Nottingham Vol.7b. pg.246.
In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire
Frank Russell Jepson, aged 16, a Draper's Apprentice, b. Nottingham, Nottinghamshire
BMD Death, aged 27, June Quarter 1902 Nottingham Vol.7b. pg.186.

— Stanley Jepson b. circa 1877 Ackbrook, Derbyshire
BMD Birth December Quarter 1877 Shardlow Vol.7b. pg.457.
In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire
Stanley Jepson, aged 13, a Scholar, b. Ackbrook, Derbyshire

— (C)(K)atherine Ann(i)e Jepson b. circa 1882 Derby
BMD Birth September Quarter 1882 Derby Vol.7b. pg.493.
In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire
Katherine Annie Jepson, aged 8, a Scholar, b. Derby, Derbyshire
In the 1911 Census @ Herbert Road, Nottingham, Nottinghamshire
Catherine Anne Jepson, aged 27, a Principle of a School, on her own account, b. Derby

— Nora(h) Denham Jepson b. circa 1884 Derby, Derbyshire
BMD Birth June Quarter 1884 Derby Vol.7b. pg.580.
In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire
Norah Denham Jepson, aged 7, a Scholar, b. Derby, Derbyshire
In the 1901 Census @ 155 Herbert Road, Bullwell, Nottingham, Nottinghamshire:
Nora D. Jespon, aged 16, b. Derby, Derbyshire
In the 1911 Census @ Herbert Road, Nottingham, Nottinghamshire
Norah Denham Jepson, aged 26, b. Derby
BMD Death, aged 64, September Quarter 1948 Honiton Vol.7a. pg.356.

— Dorothy Hirons Jepson b. circa 1886 Nottingham, Nottinghamshire
BMD Birth December Quarter 1885 Basford Vol.7b. pg.168.
In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire
Dorothy Hirons Jepson, aged 5, a Scholar, b. Nottingham, Nottinghamshire
In the 1901 Census @ 155 Herbert Road, Bullwell, Nottingham, Nottinghamshire:
Dorothy H. Jepson, aged 14, b. Nottingham, Nottinghamshire
In the 1911 Census @ Herbert Road, Nottingham, Nottinghamshire
Dorothy Hirons Jepson, aged 25, a Principal of a School, on her own account, b. Nottingham

— Harry Braunston Jepson b. circa 1889 Nottingham, Nottinghamshire
BMD Birth March Quarter 1889 Basford Vol.7b. pg.185.
In the 1891 Census @ 62 Ebury Road, Basford, Nottinghamshire
Harry Jepson, aged 2, b. Nottingham, Nottinghamshire
In the 1901 Census @ 155 Herbert Road, Bullwell, Nottingham, Nottinghamshire:
Harry B. Jepson, aged 11, b. Nottingham, Nottinghamshire

m. Kate Fawn b. circa 1867 Boston, Lincolnshire
BMD Birth December Quarter 1868 Bourn Vol.7a. pg.306.
BMD Marriage June Quarter 1897 Holbeach Vol.7a. pg.897.
In the 1901 Census @ 155 Herbert Road, Bullwell, Nottingham, Nottinghamshire:
Kate Jepson, aged 33, b. Boston, Lincolnshire
In the 1911 Census @ Herbert Road, Nottingham, Nottinghamshire
Kate Jepson, aged 43, b. Boston, Lincolnshire

Reference to "Tom's Pond" (Sample AET) also refers to this individual.
Also resided at some juncture at 2 Elthorne Court, Feltham, Middlesex TW13 5DX

[7]Note: Is Mr. E. Thomas (Sample ACK) and Mr. E.L.G.T. (Samples AEK and AEL) one and the same?

Diatom Gallery

Vaughan Dodge's Diatom Gallery

The following photographs formed Vaughan Dodge's display at many a Quekett Microscopical Club Meeting.

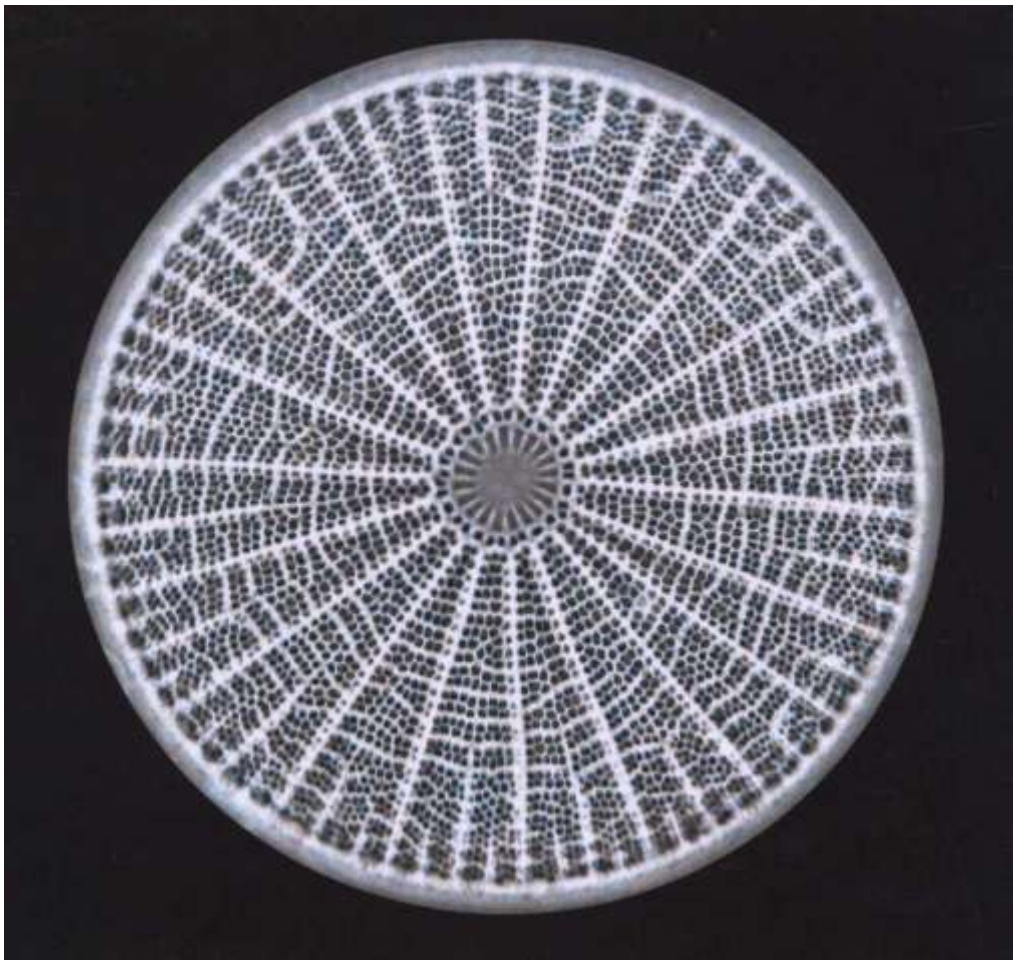
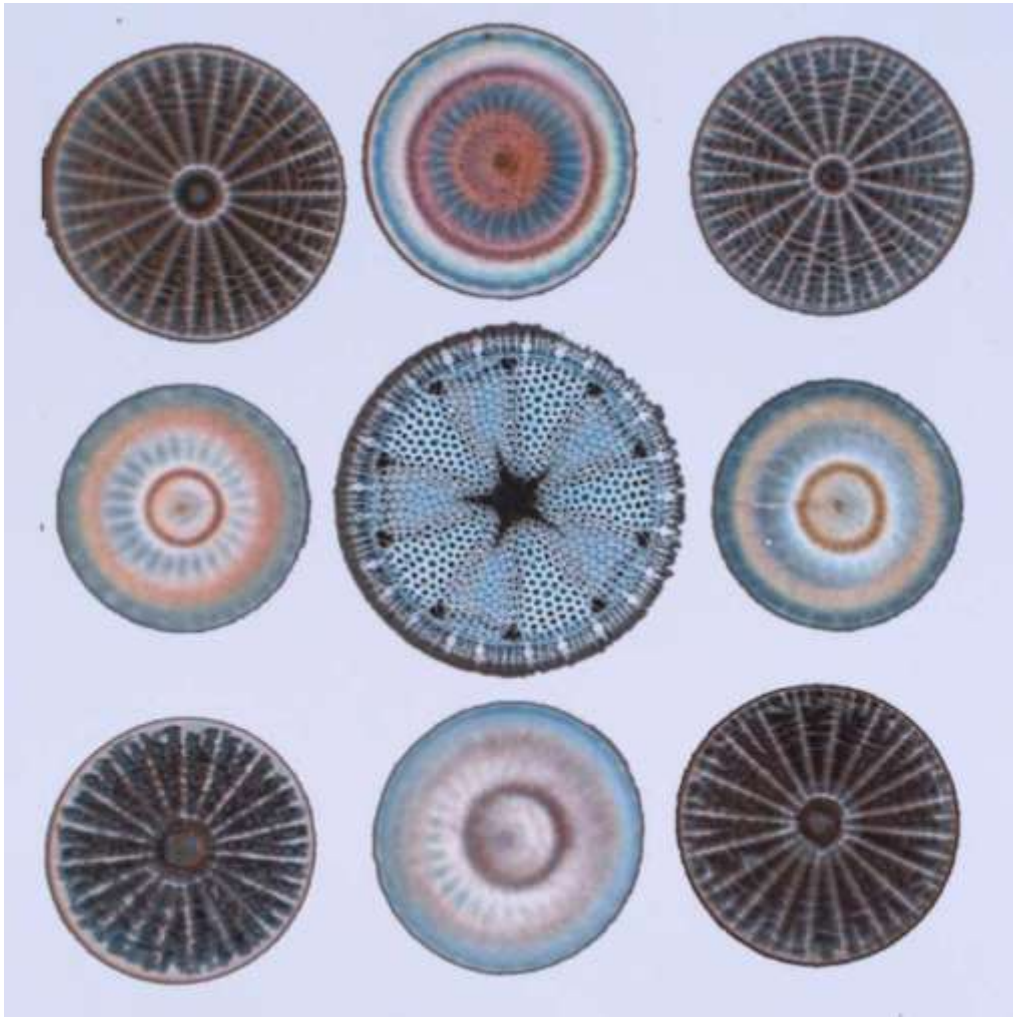
On his demise these and some of his samples were passed on to The Amateur Diatomist where they might get a wider audience. The photographs, mounted on card, have been digitised by Mike Samworth.

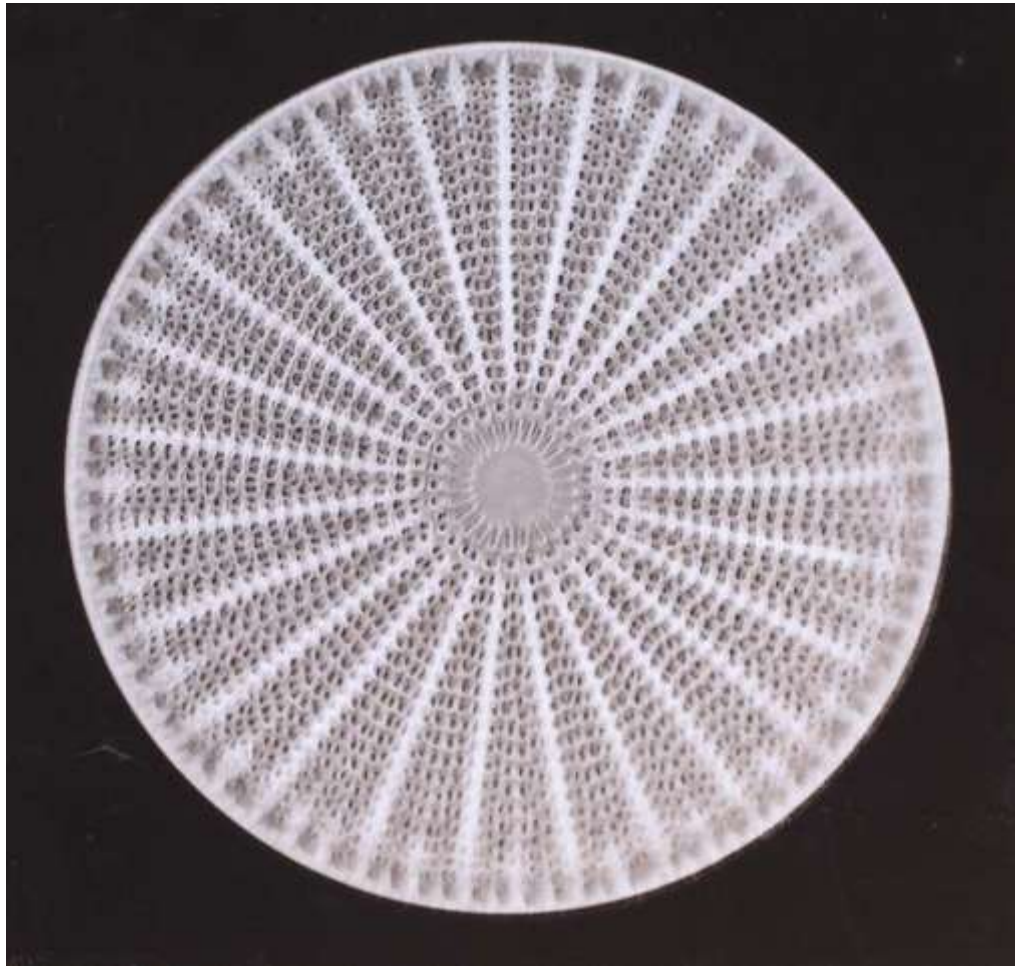
Pictures of Diatoms

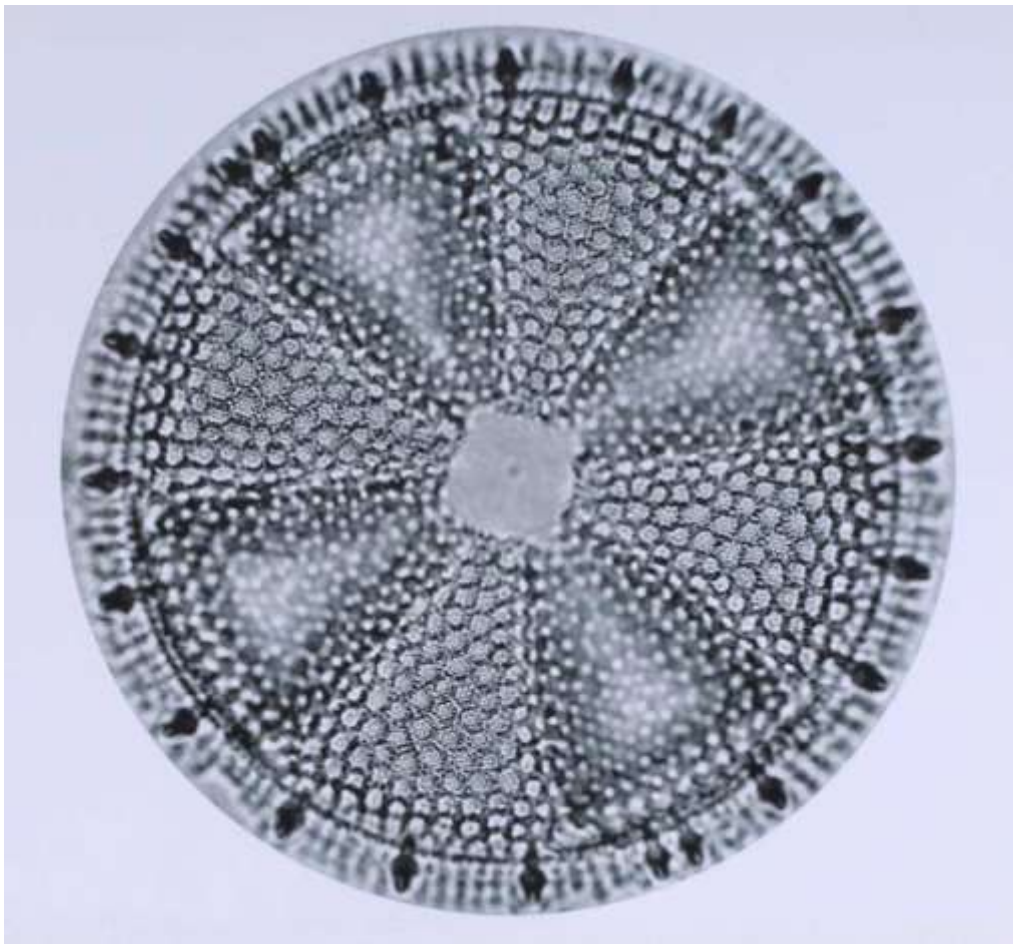
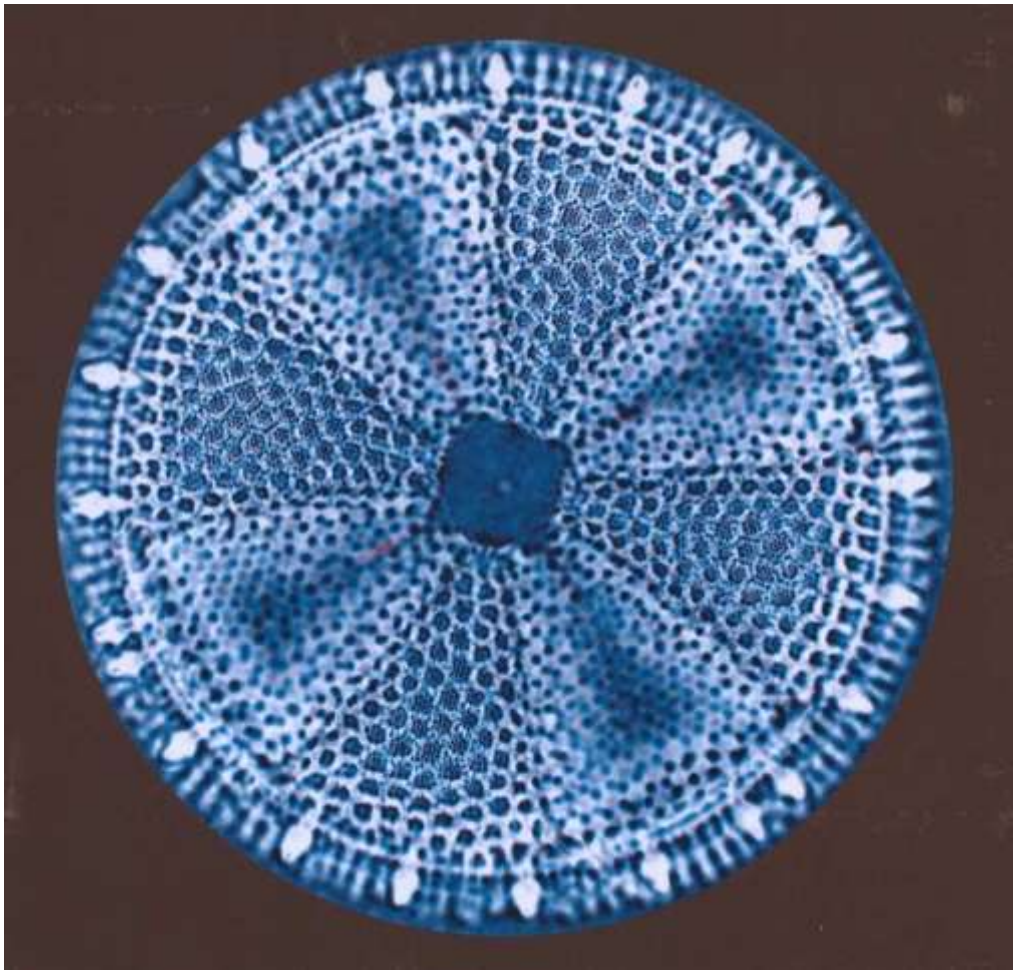
These images are of no scientific value.
Their names have been omitted and colours
changed to try and give some idea of the beauty of
their structure.

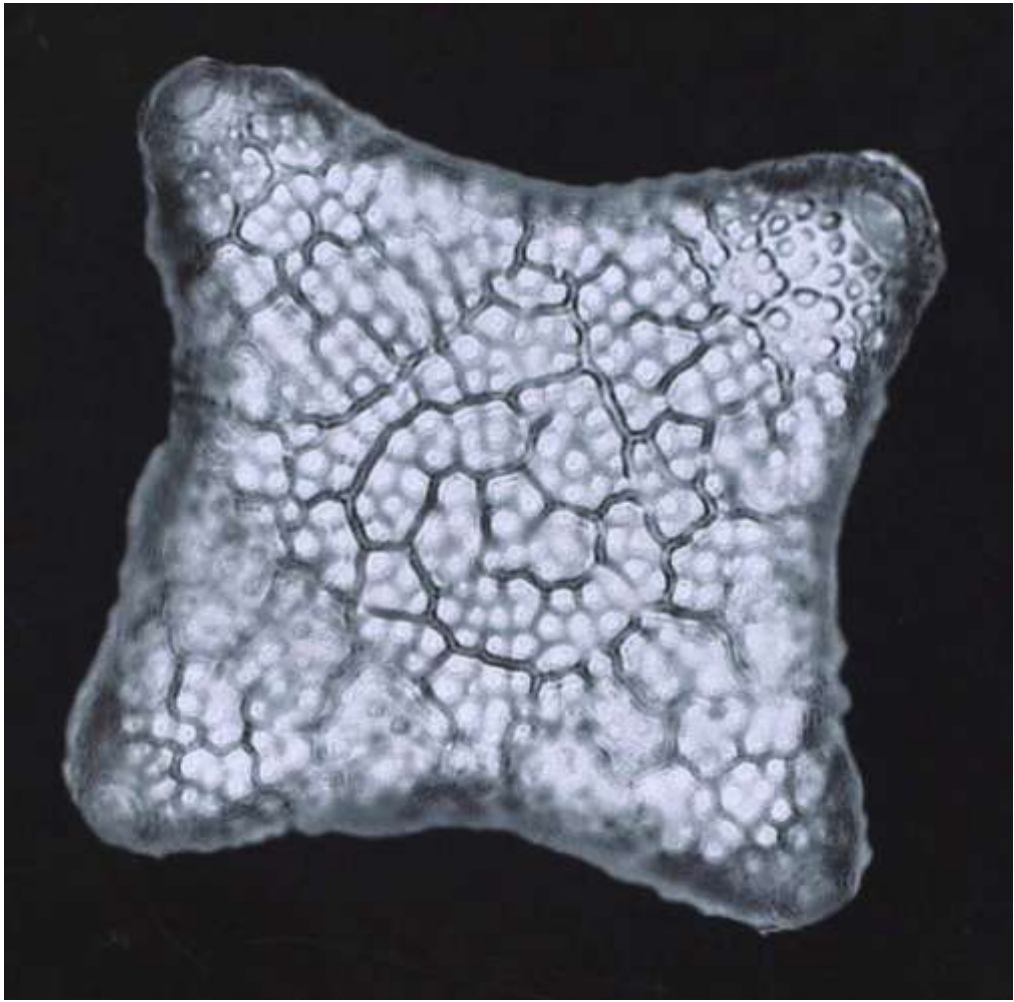
Vaughan Dodge

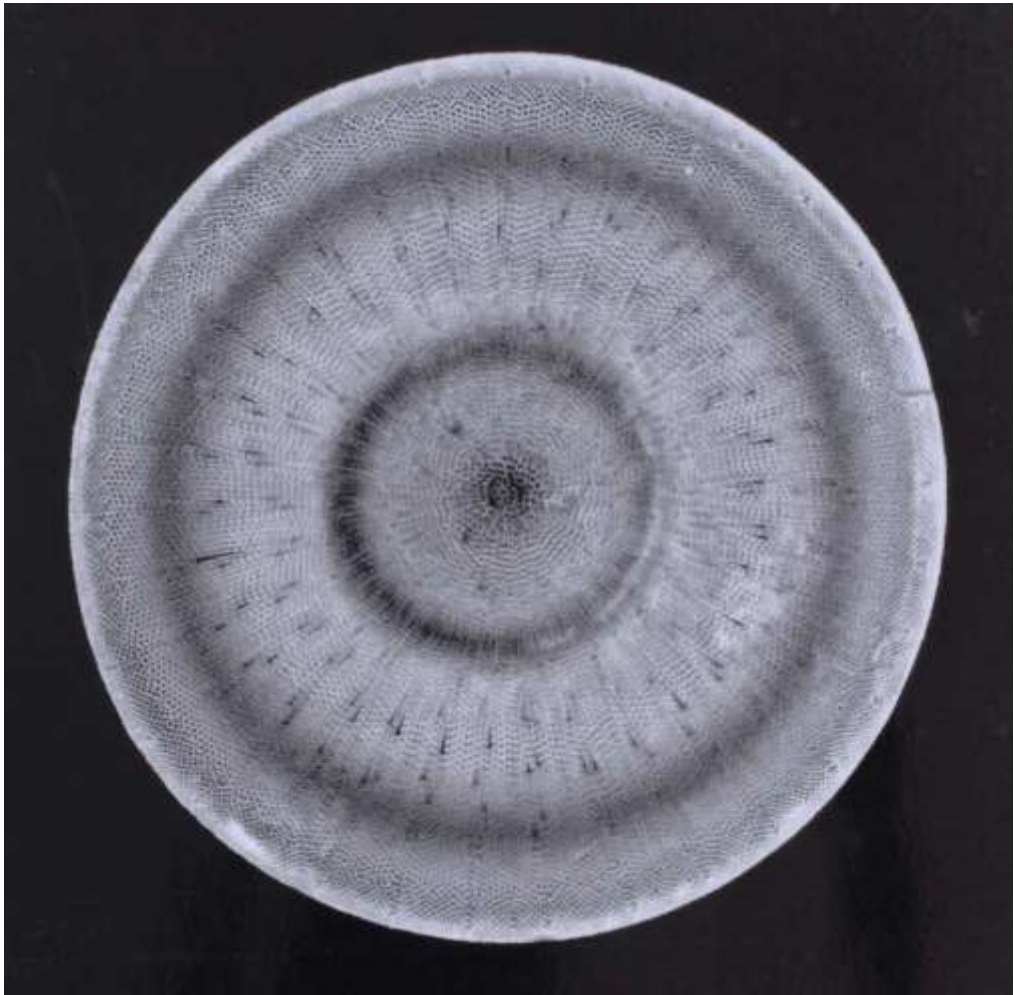


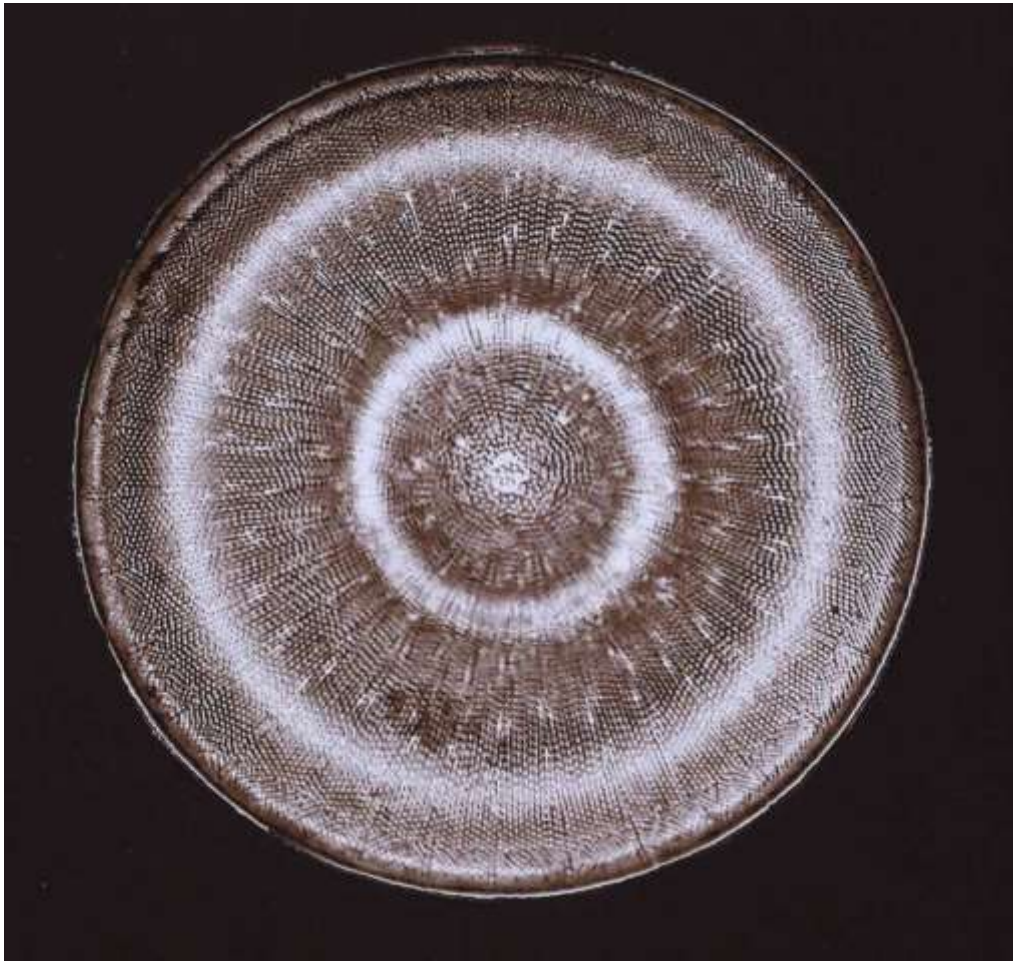


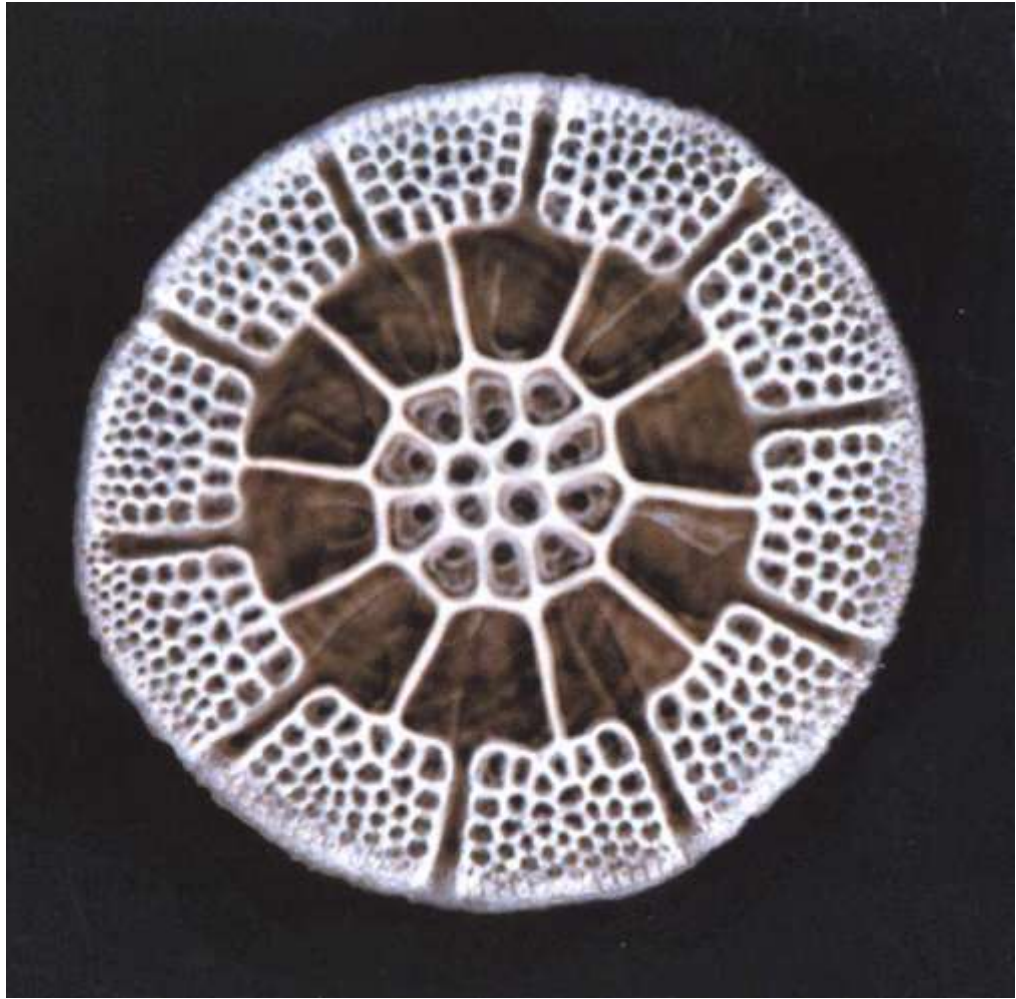


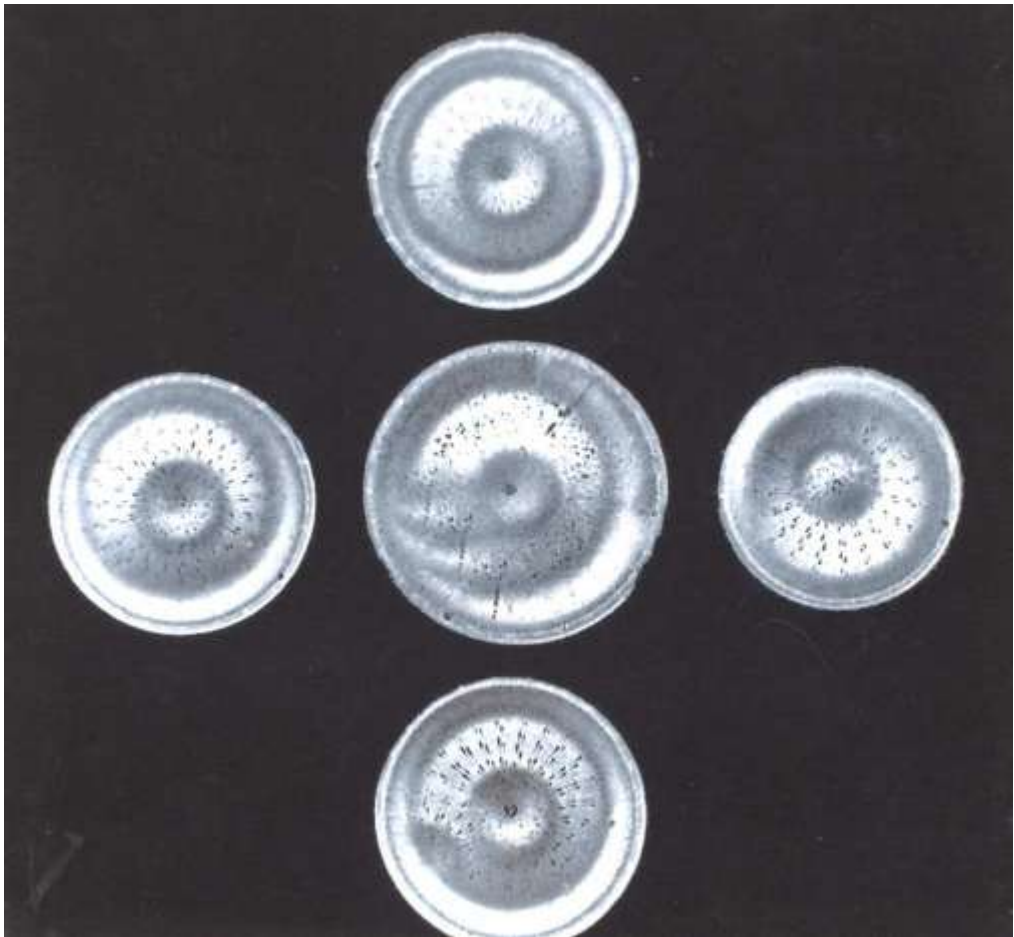
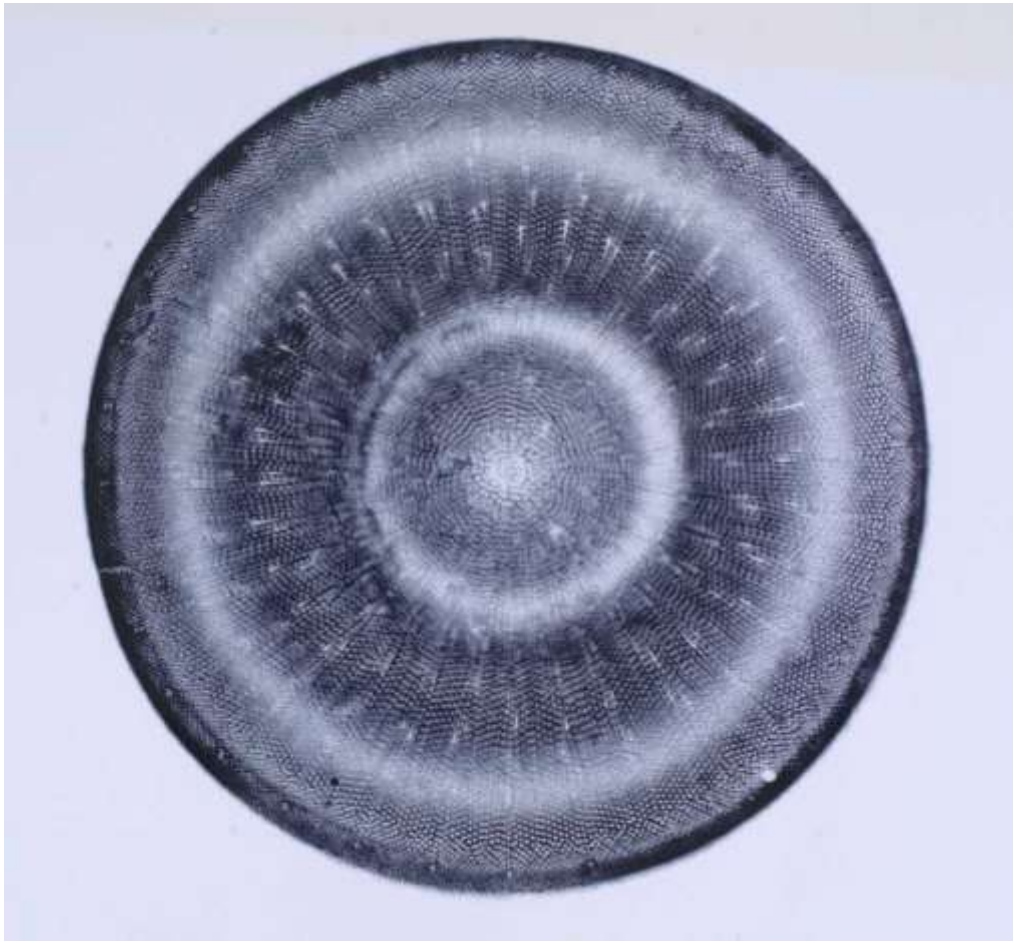


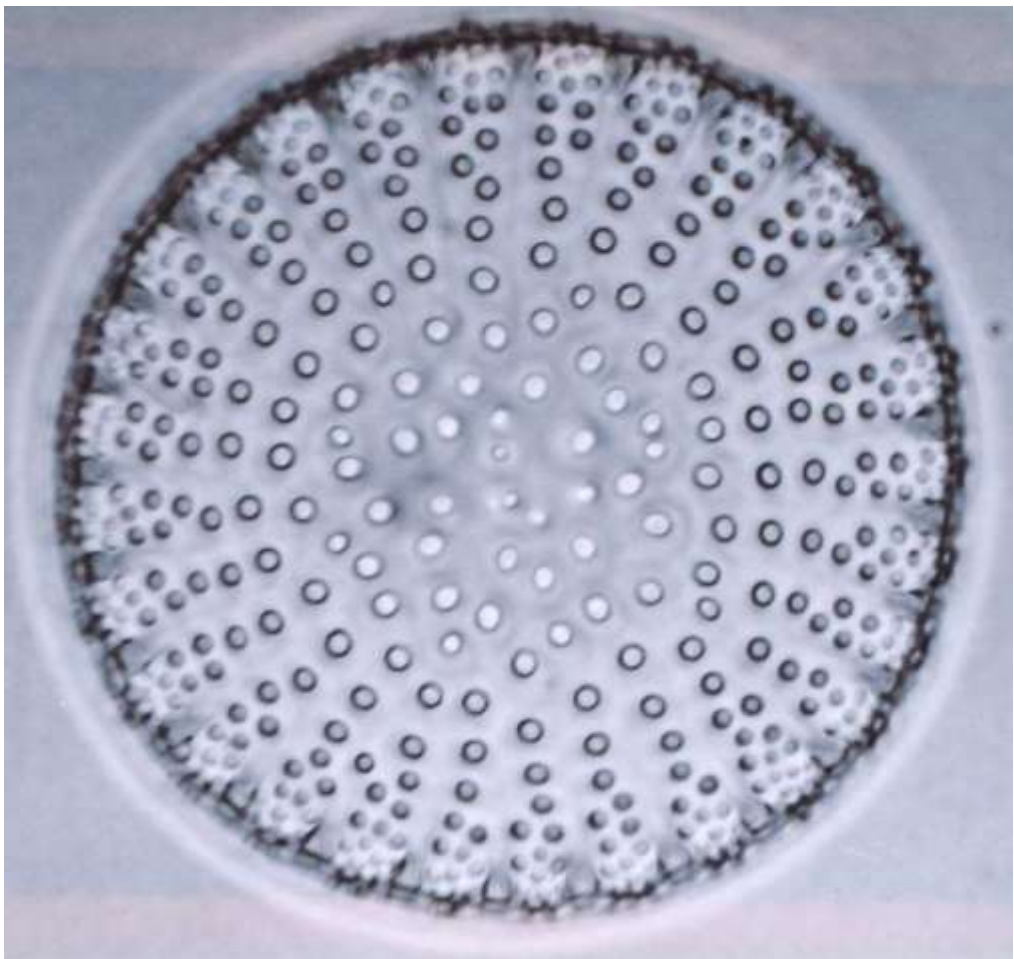
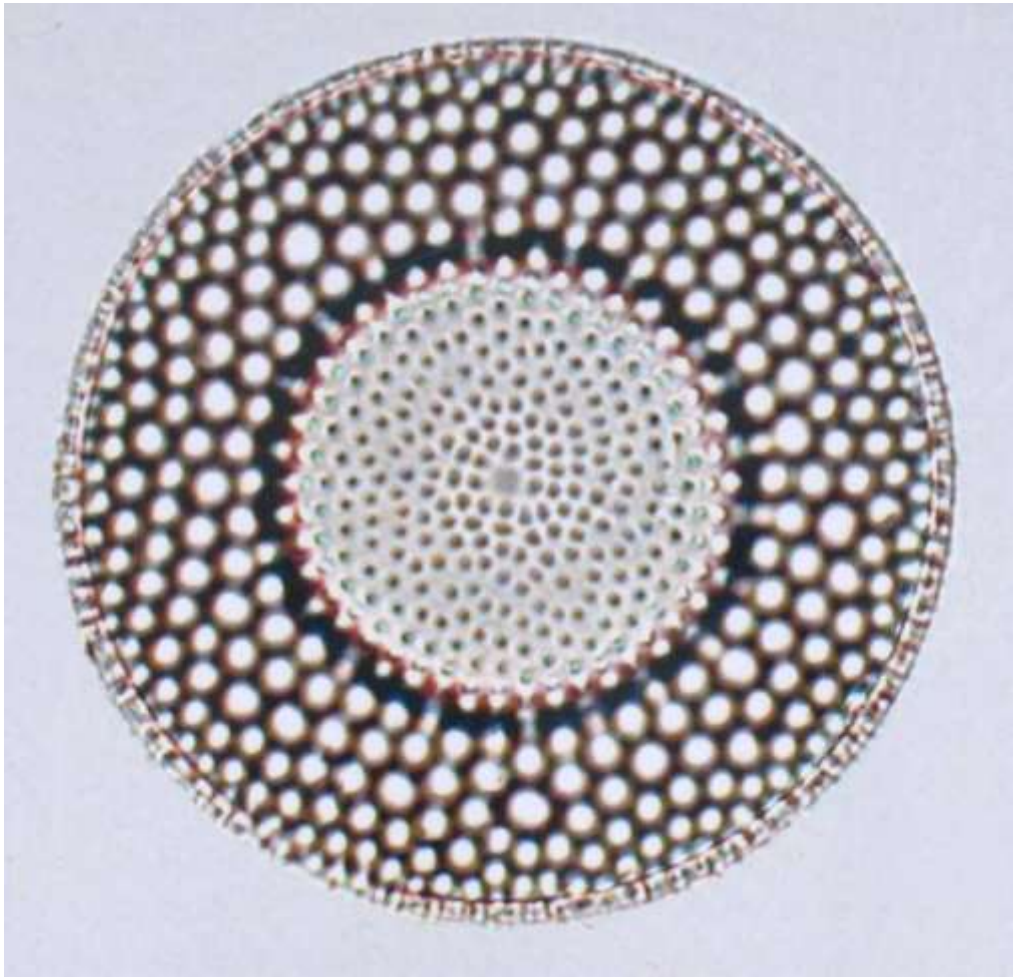


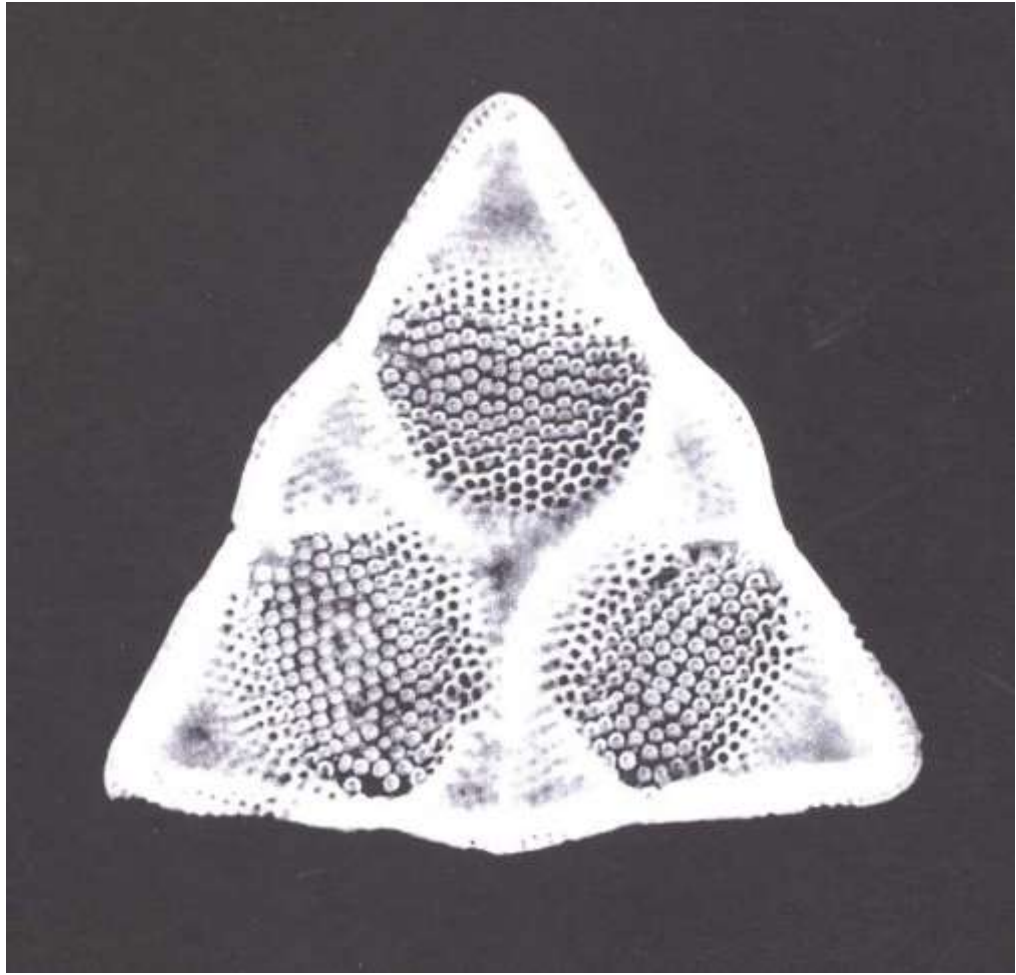


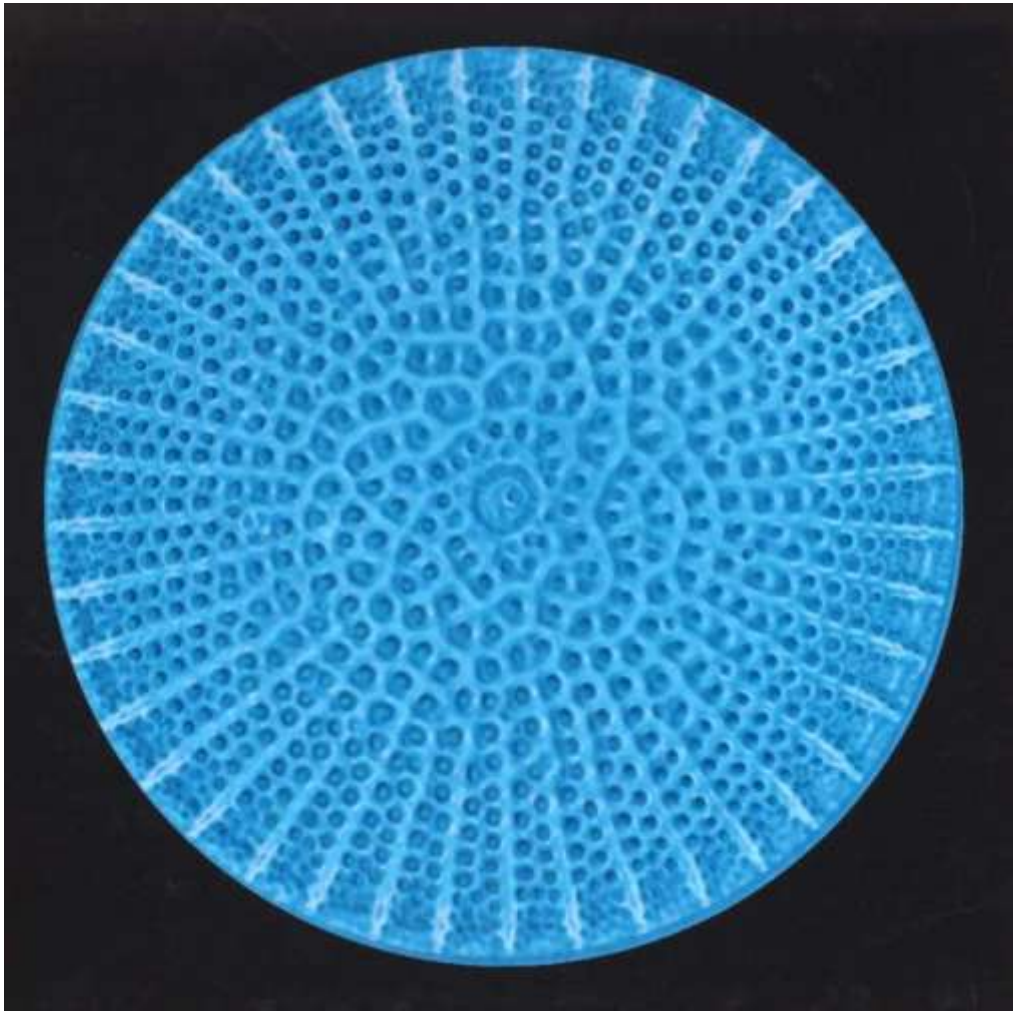


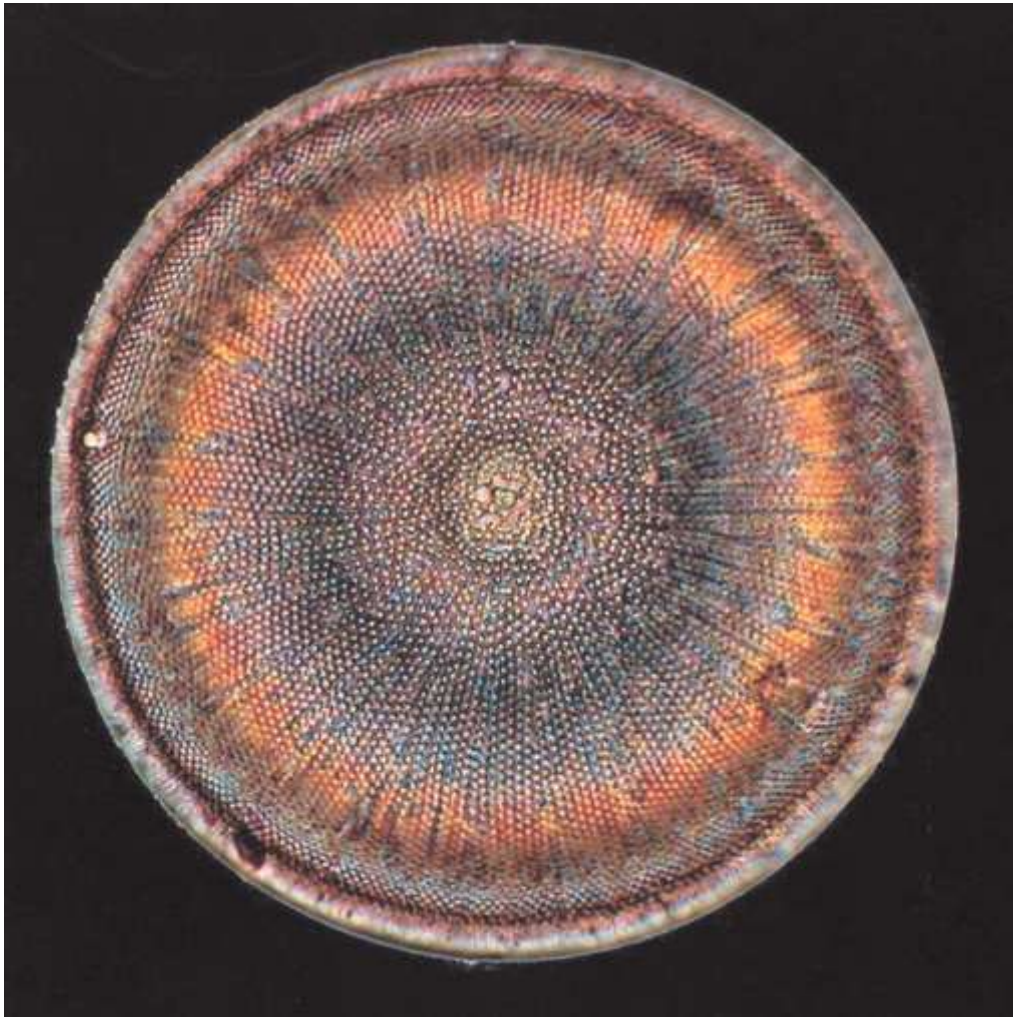


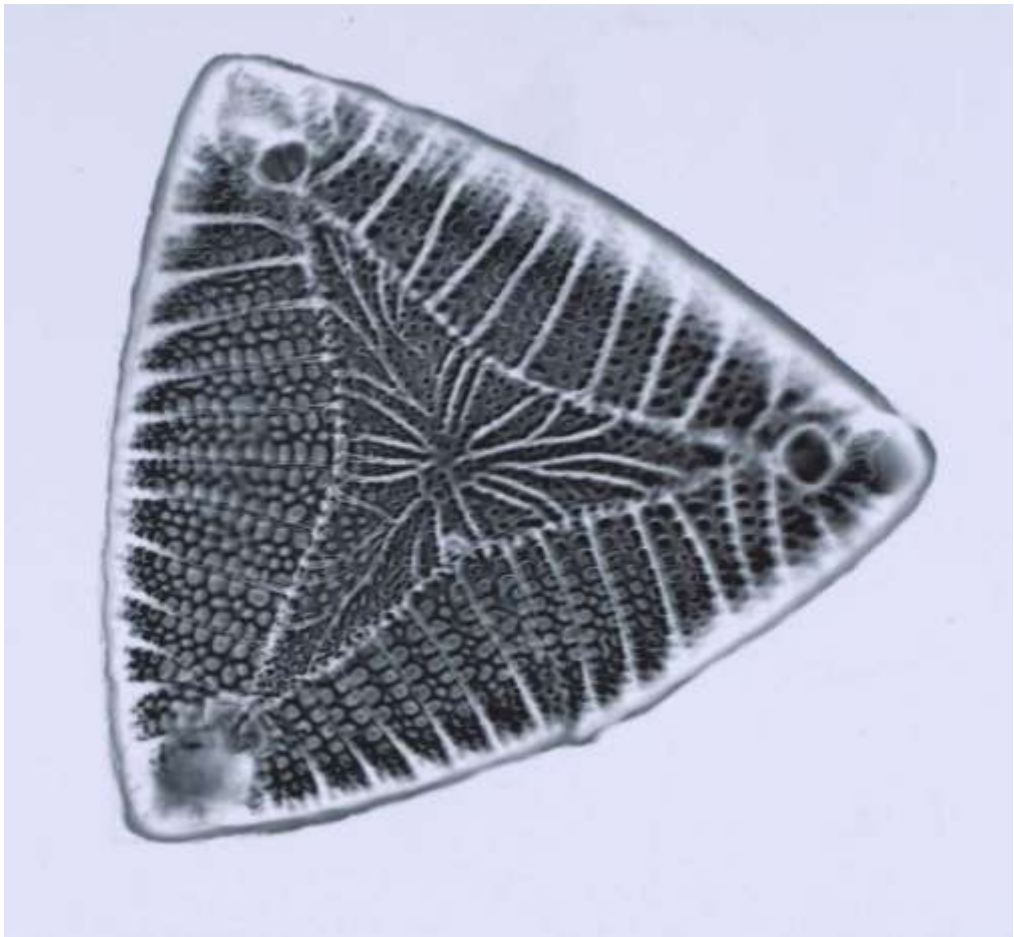
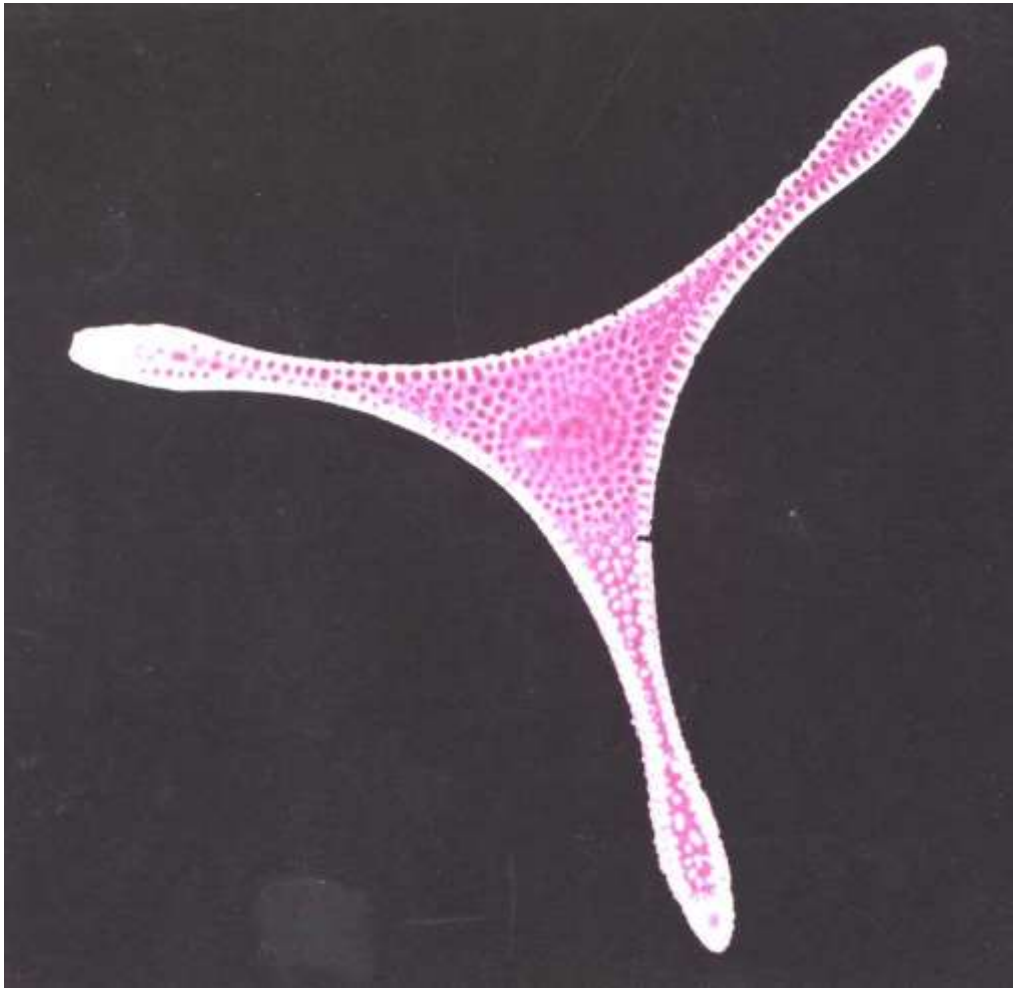


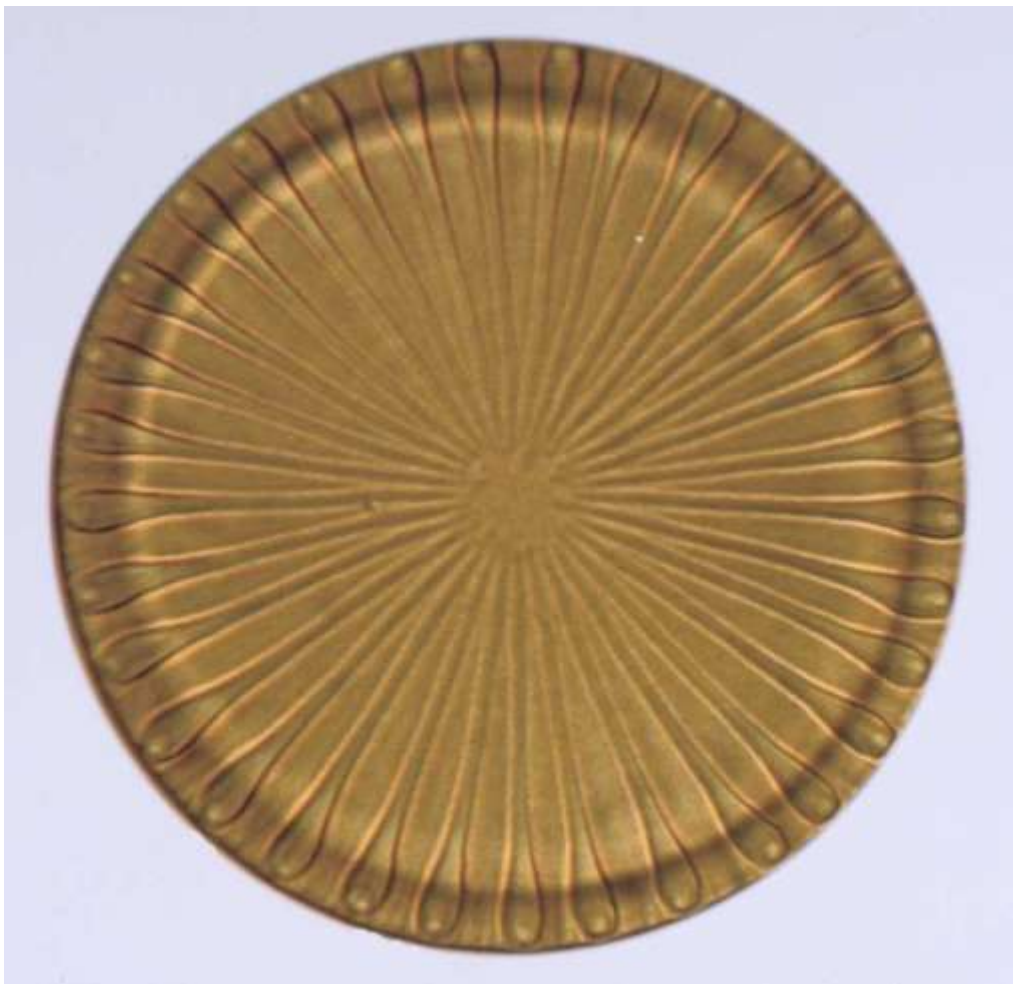
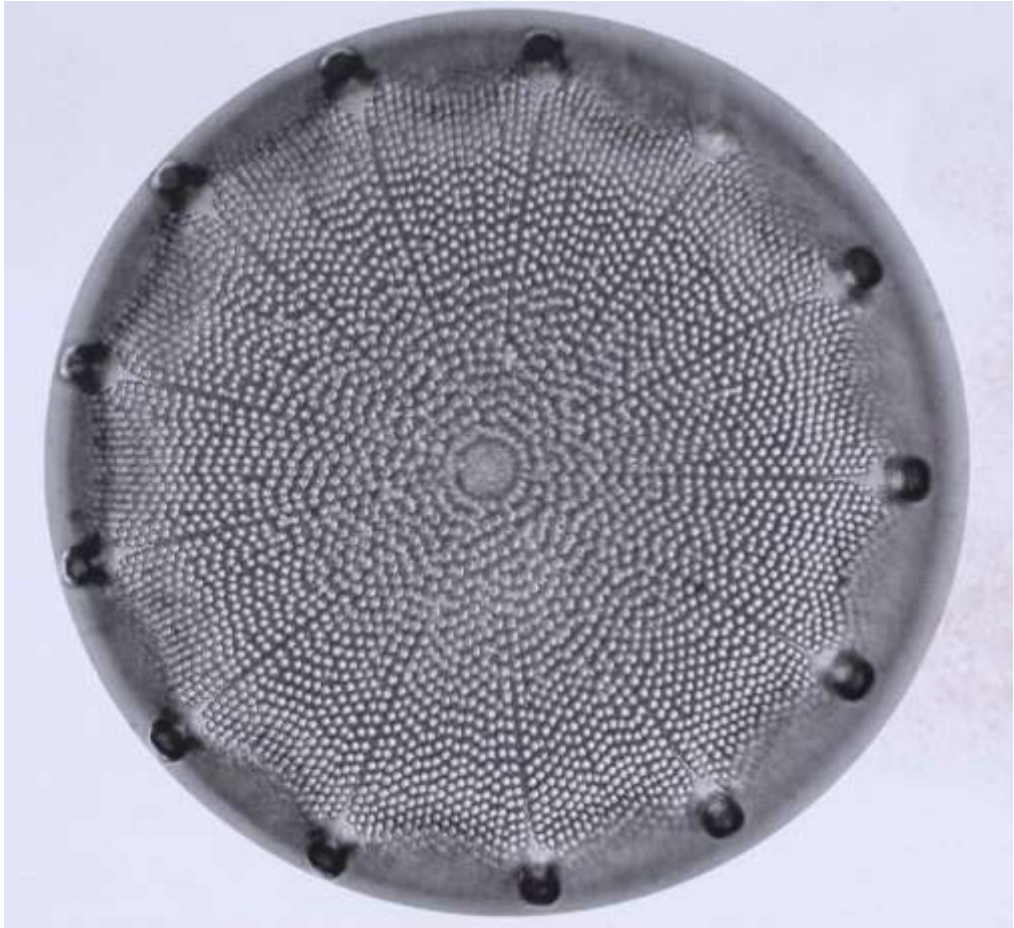


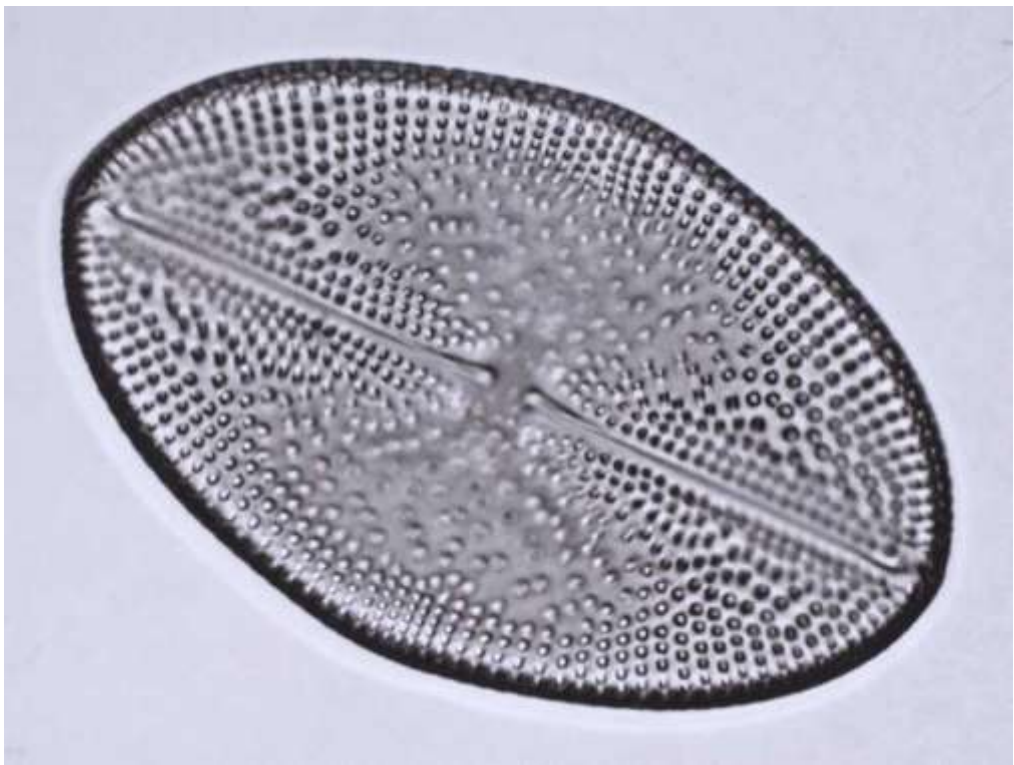
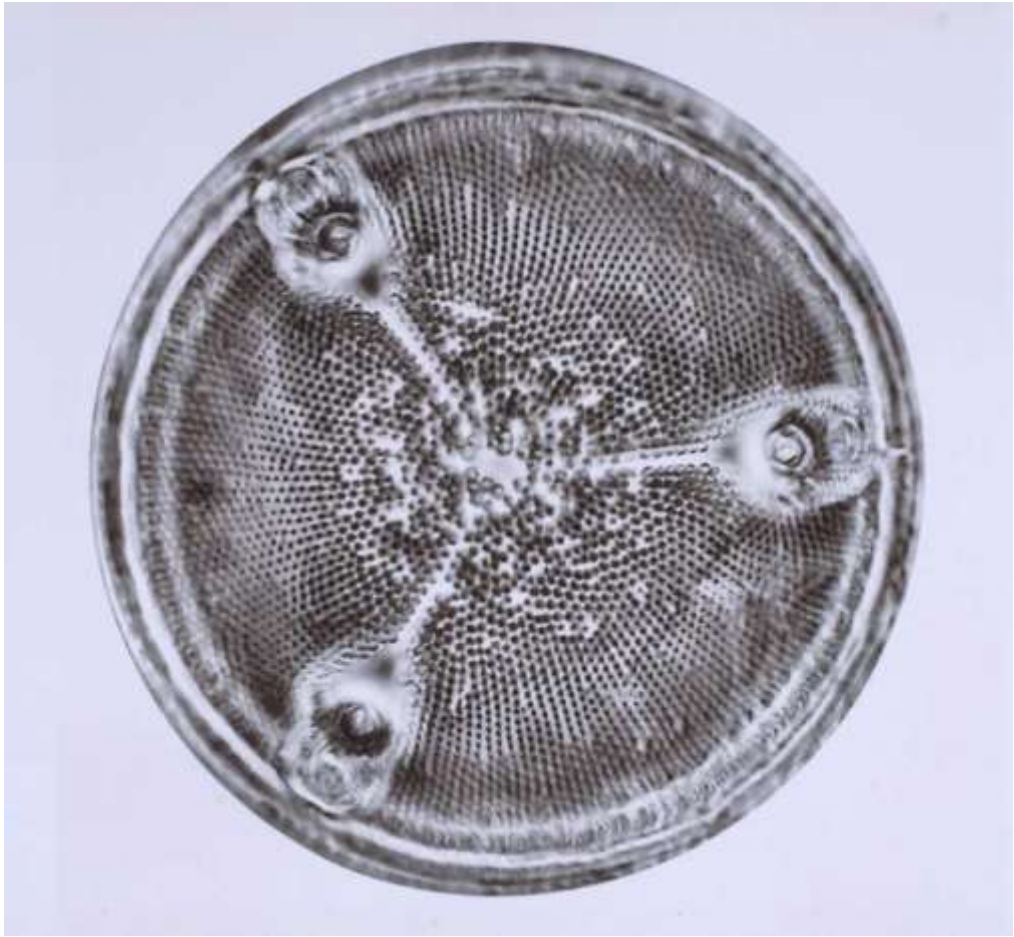


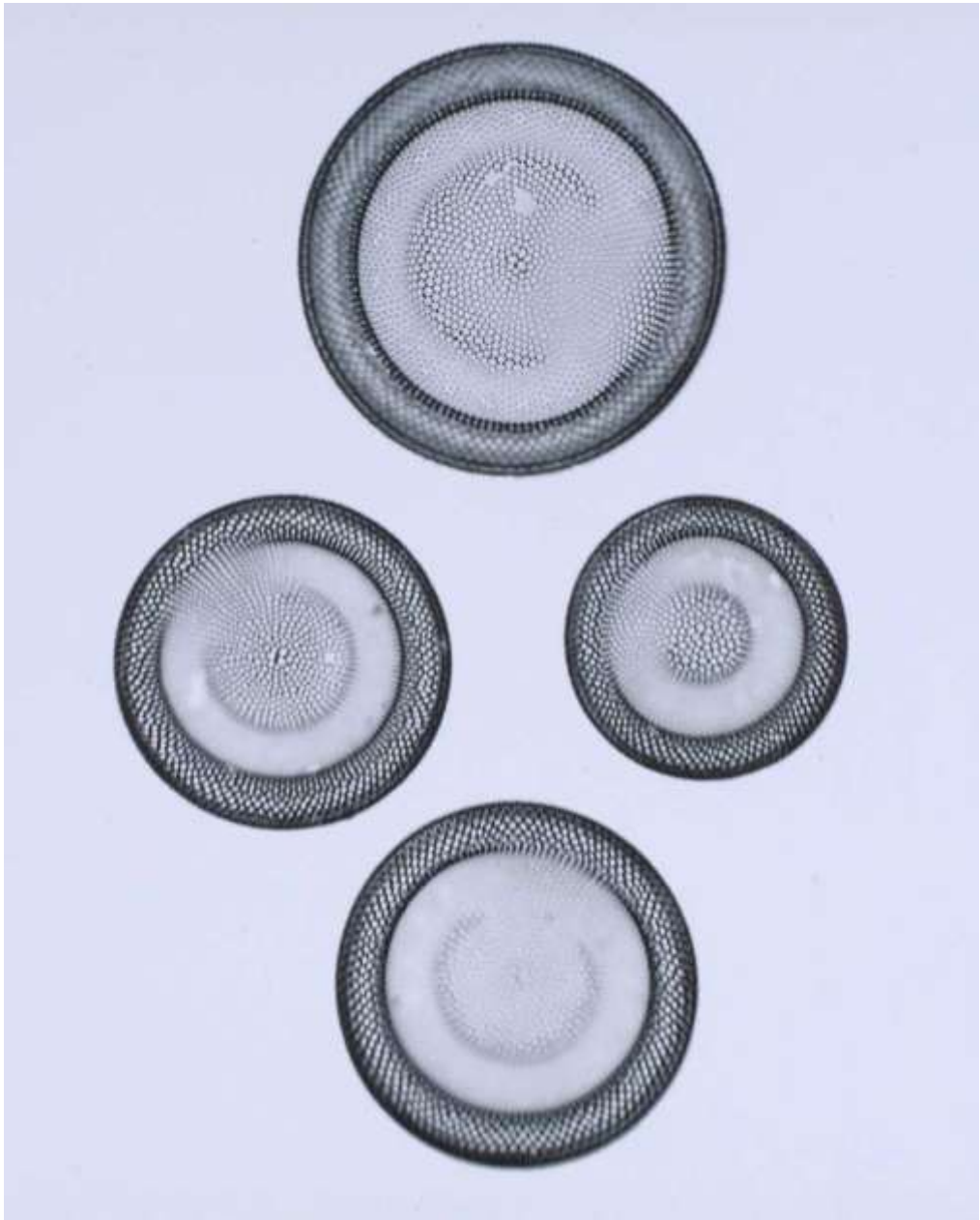


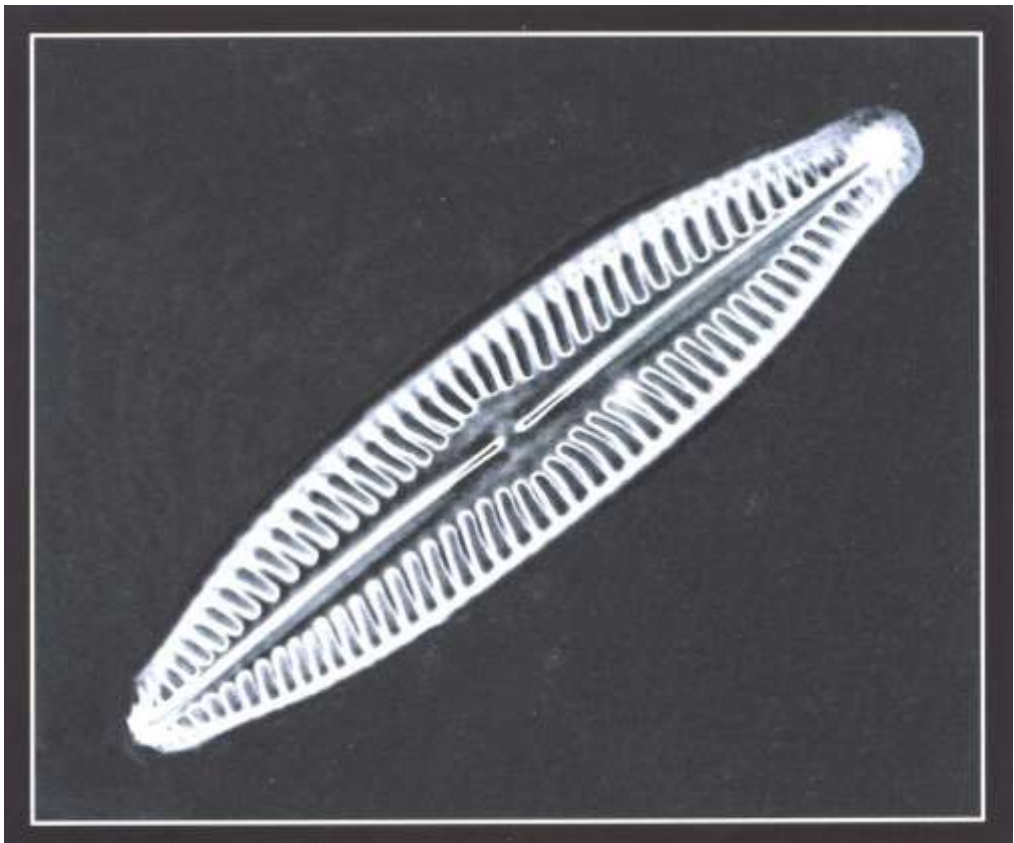
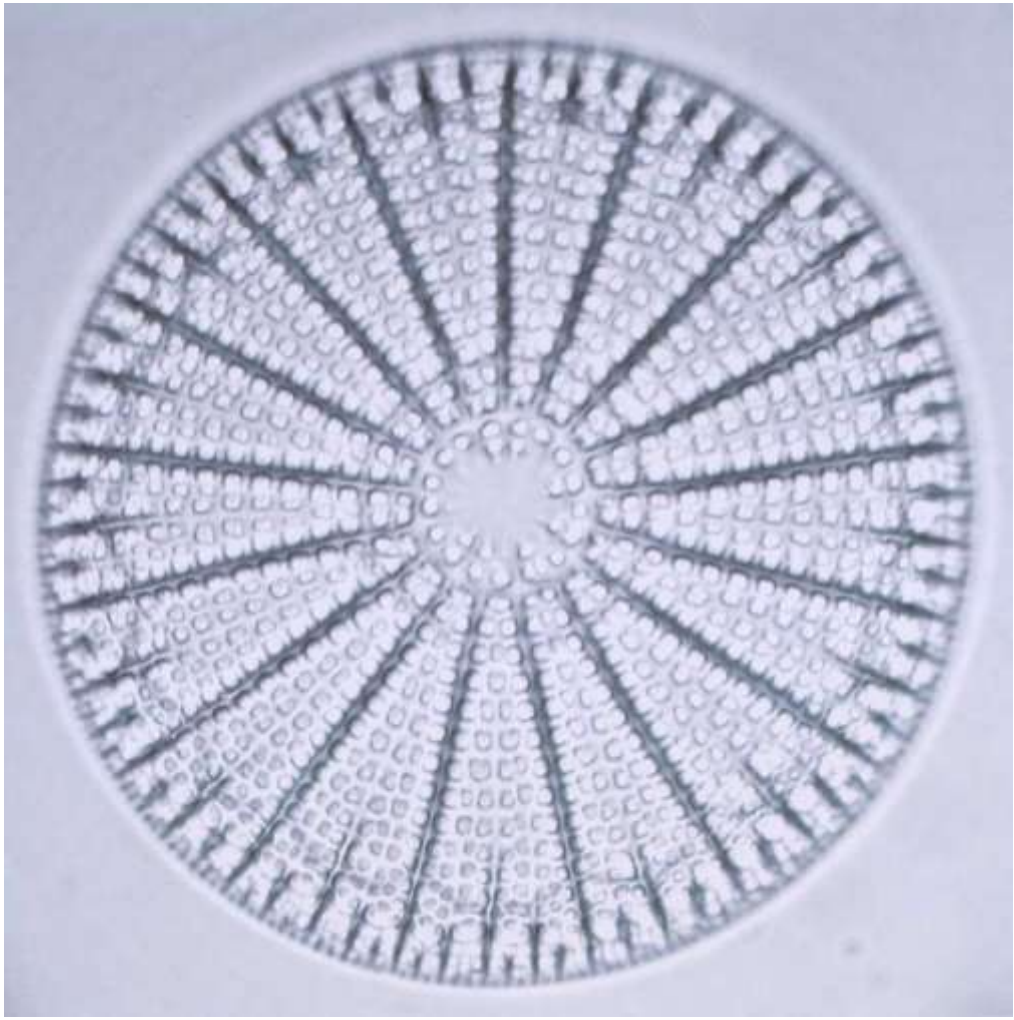


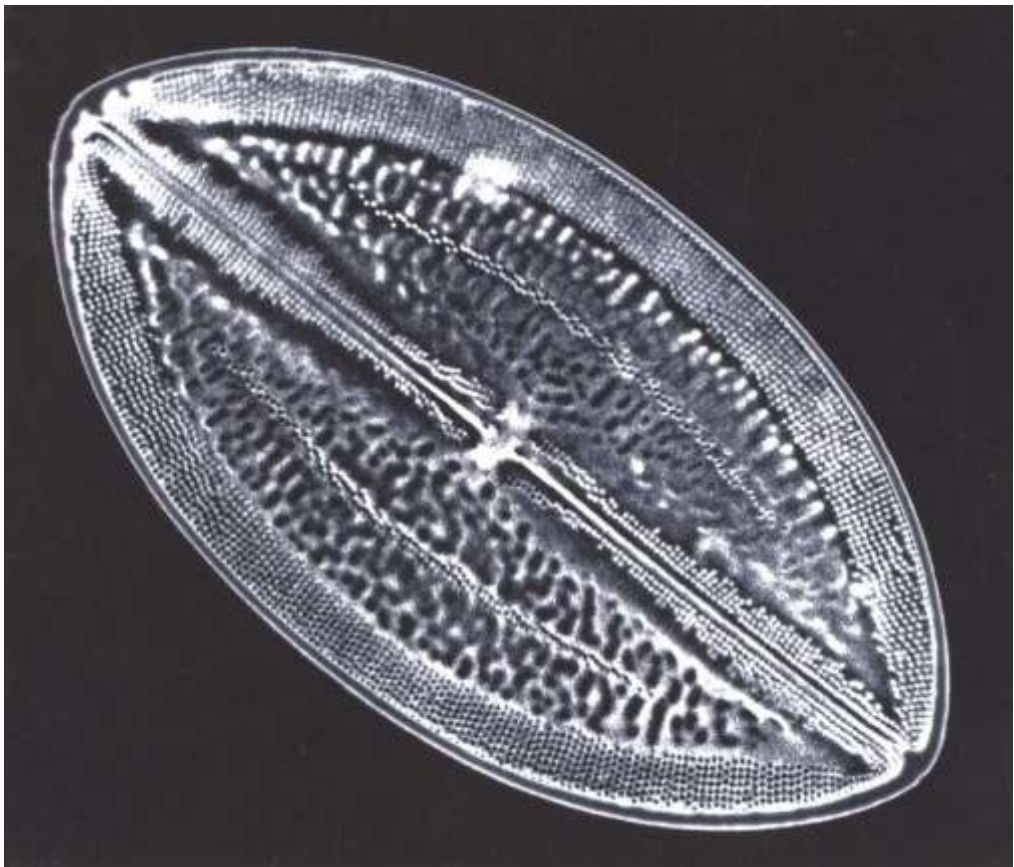
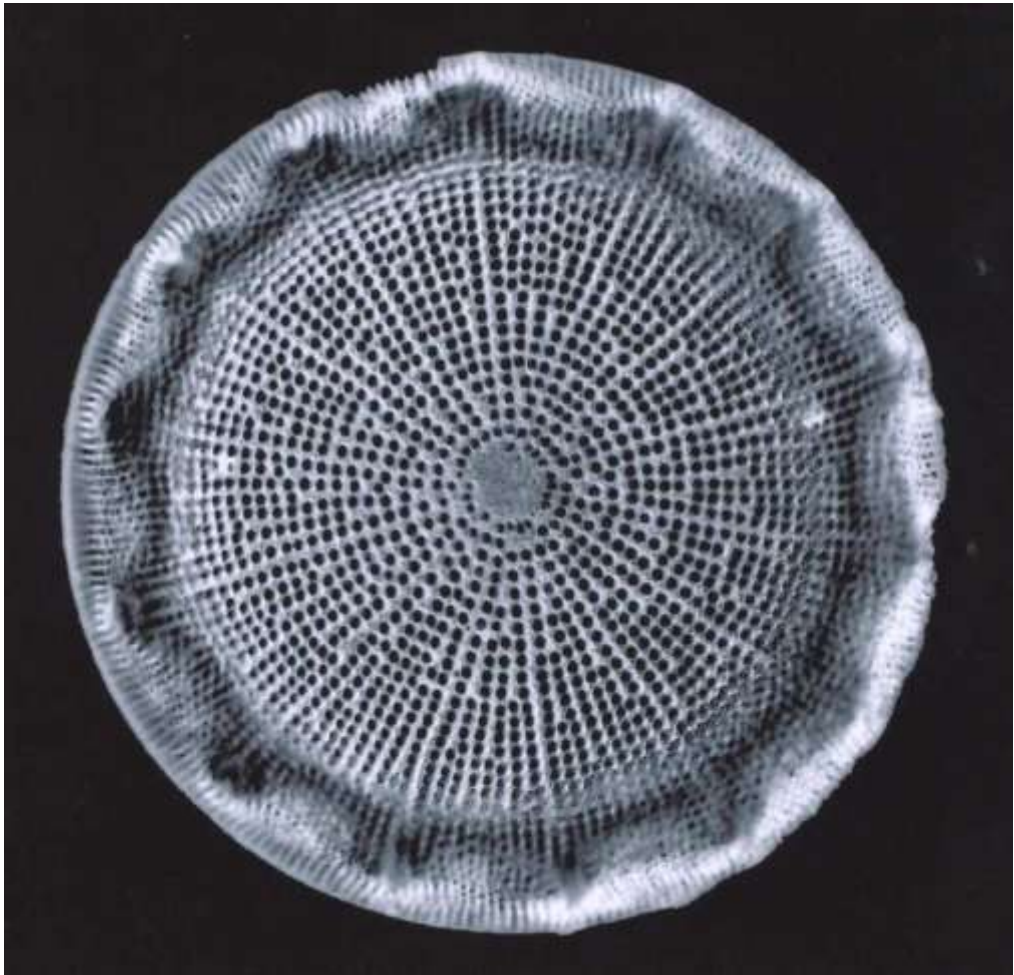












My New Diatom Project

Maurice Vaughan

Having completed a 2 year study of Pollen grains (with over 500 pollen slides), and a 2 year project on the Honey Bee (*Apis mellifera*) I now have moved into the realms of the Diatoms. I have been fortunate to know Barry Ellam and Steve Gill who both have been very supportive and have furnished me with plenty of good information about these photosynthesising algae. So how I approached the initial stages of collecting, cleaning and mounting diatoms I will explain. Any place where there is water you should find diatoms as they attach themselves to aquatic plants, rocks and the substratum. I won't bother to give the scientific jargon regarding diatoms except to say they are microscopic. My collecting items are two jam jars with screw on lids, a number of sealable plastic bags and a garden fork.

My first location was "The Serpentine" which is a lake in the middle of a massive housing estate in Peterborough. So I travelled to the Serpentine and collected two bundles of old aquatic plants that had turned brown. This I placed into a plastic bag and shook it thoroughly and mixed it around with my hand. Once the brown muddy water had settled in the bag I threw back the remnants of the brown plants. Next I moved around the lake to where there were some stones near the bank but these stones were clean, no brown coatings.



Now I had my sample I needed to clean the diatoms so I filtered the muddy water through a butcher's cloth which has large holes in it. Folded over a couple of times it makes a great filter as it allows plenty of water through the large holes but retains the grit, mud and most of the vegetable matter. I then allowed this to settle until the water became fairly clear and then decanted the majority of the water until about one quarter of an inch remained with a light muddy sediment on the bottom of the jar. To this I added 200 ml of Hydrogen Peroxide 9% and left for three days minimum. The colour in the jar turned a lot lighter in colour and the muddy bits in the bottom also seemed to be lighter in colour and less substantial. I then used a pipette to place a small amount on to a cover glass which was placed on a sheet brass plate. This was heated up to evaporate the water and leave the diatoms secured to the cover glass. The cover glass was then mounted on a slide with warm mountant. I left them for two days before I examined them under a microscope. Yes, I achieved my aim as there were loads of different types of diatomaceae spread all over the slide. [Note; the mountant must be of a high refractive index to show the structure of the diatoms]. Try it and see for yourself, its magic!

Diatoms moving relative to the tides

The following anecdote courtesy of Klaus-Dieter Kemp.

"I set off for a microscopical club meeting in Reading with a sample of diatoms, some 2 hours distant from their natural home in Somerset. I arrived in the morning when the tide was out in Weston and the tub of muddy sample was the colour you would expect from mud. Members asked why I had brought a tub of mud and I suggested they kept an eye on it. By 2.00 pm a very distinct change had occurred where there was mud there was now a dark brown colouration, which meant the Diatoms had migrated through the mud and were now sunbathing on the surface. What was very interesting was that where you would expect a pure culture of *Gyrosigma balticum*, which are long and sigmoid, to be lying flat and horizontal, this was not the case. They in fact looked as though each one had been planted upright in the mud. Now if you had placed a nylon stocking over the mud you would have had a pure collection of this species, but because they were so abundant they formed a skin of Diatoms which I peeled off like a plaster."

