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Little Imp Publications



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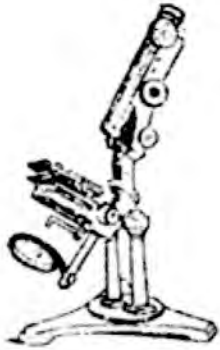
There is no strict editorial policy.

Klaus-Dieter Kemp's Diatom Database

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Deformed *Suirella* sp. by Mike Samworth

Halcyon Days

by Steve Gill

I have mentioned halcyon days before and I thought rather than describing another I would explore the origins of the term 'Halcyon Days' as understanding something of its provenance just adds to the magic.

Nearly any mention of Halcyon Days is accompanied by a picture of a kingfisher against a backdrop of a mill pool or the like. This is no coincidence. There is a Genus of Kingfishers bearing the name Halcyon. The members of this Genus tend to be Old World Kingfishers such as the Blue and White Kingfisher (*Halcyon fulgida*). Unfortunately our own European Kingfisher (*Alcedo atthis*) does not belong to this group though the genus does owe its name to the same source.

In heraldry the Kingfisher is known as the Halcyon. It is a symbol of peace and prosperity.

The ownership of the dried body of a Kingfisher was at one time considered a sure-fire way of warding off thunderbolts and storms.

The following tale of Greek Mythology is the source of the term Halcyon Days.

Alcyone (Halcyon), daughter of Aeolus, King of the Winds, married Ceyx, a sea captain. They were very much in love and when the ship Ceyx was captaining was destroyed in a great storm, Alcyone walked the shoreline crying out his name across the waves. One day, however, as she walked she found her husband's body cast up on the beach and racked with grief she threw herself into the sea. The Gods rewarded her devotion by immediately turning her into a kingfisher and Aeolus forbade the winds to blow during the seven days before and the seven days after the winter solstice, when it was believed the kingfisher laid its eggs on a raft of weed floating on the surface of the sea. This period of calm and peace was thenceforth known as the Alcyone Days.

Kingfishers are also associated with Pallas, one of the Titans (a race of giants who were thought to be the personifications of the forces of nature), also Hera, queen of the Olympian deities (the eldest daughter of Cronus and Rhea, and wife and sister of Zeus), and Thetis, one of the Nereids (the fifty daughters of Nereus and Doris who dwell in the Mediterranean Sea). These beautiful women were always friendly and helpful towards sailors fighting perilous storms.

The Kingfishers are beloved by the nymphs which in Greek mythology are spirits of nature, minor female deities and the guardians of springs, mountains, and rivers.

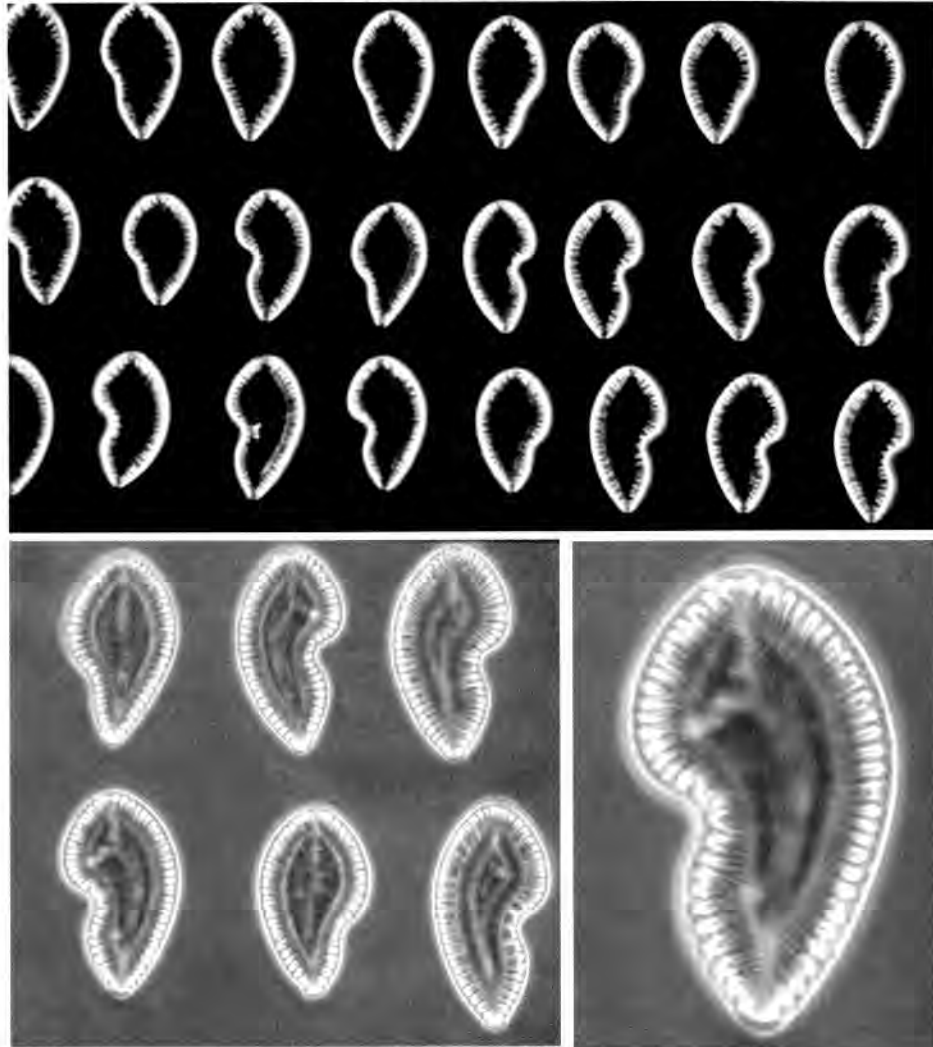


Deformations

It is a regular occurrence to find some deformations in diatom morphology. Some, however, are more spectacular and pronounced than others.

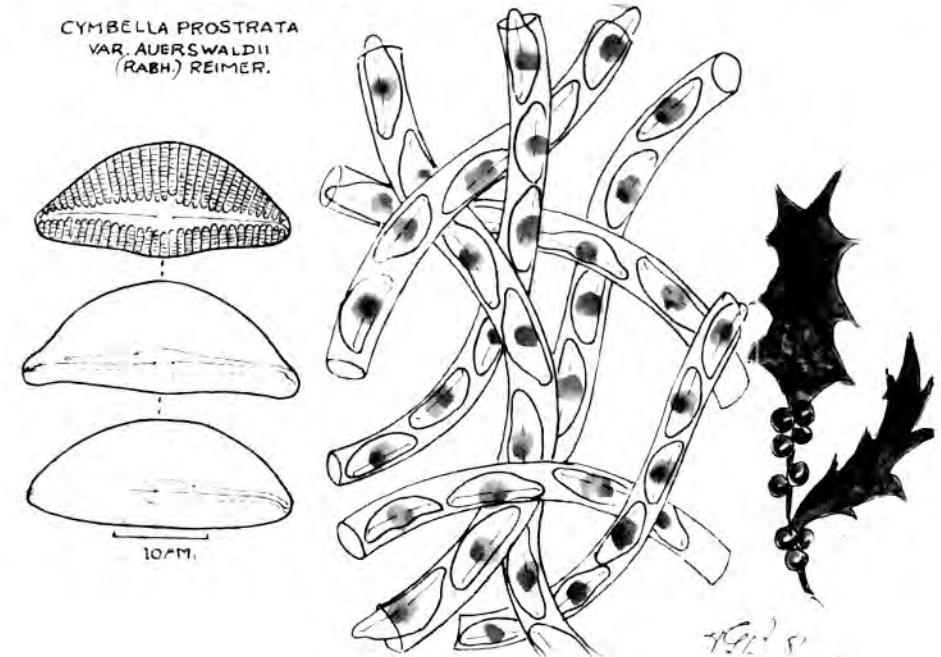
The example below, of *Surirella*?, was found whilst sampling at Max Mills, in Somerset. Some may remember from the very first issue of *Amateur Diatomist* that this site was one recorded by Charles Pooley in 1863.

This particular deformation was widespread throughout the sample comprising about 30% of the individuals examined. They were so abundant that Klaus D. Kemp had no difficulty in preparing a number of selected mounts to illustrate this small article.



The Christmas Barber

Horace Barber was another of those supremely talented amateurs we have written so much about. Many of you will know of his illustrations in the volume "An Atlas of the British Diatom Flora" by Bernard Hartley and edited by Pat Sims. We are fortunate in having a number of original illustrations in which, with the least fuss, he managed to capture the essence of the species he was illustrating. He used no shading but simply varying width of line. Amongst the papers in our possession is a Christmas card sent by him. The card is a line drawing and watercolour. It was done for Christmas 1981. It is so beautiful that a greyscale reproduction doesn't really do it justice, but we just had to let you see it.



The Christmas Theme (continued)

There's something about diatomists that compel them to promote their interests at festive times of the year and that arch exponent of diatom mounting Klaus D. Kemp is no exception.

Over the years he has produced some marvellous, imaginative vignettes composed almost entirely of diatoms and the last couple of years has seen him develop a particularly nice example for Christmas. Every slide he composes is different, the variation being in the frustules he uses even though he is creating fundamentally the same scene.

The particular example we have in mind was presented to us some years ago when he was developing his web site. It is reproduced on the next page.

Armenian Diatomite

Diatomite serves as an efficient filtration material in the food, chemical, and paper industries. The resource base of diatomite consists of five deposits with a total balance reserve of 16,126 cubic meters. There are considerable estimated reserves.

Cleaning Diatoms

The following method is one used by students for fast cleaning of large numbers of samples. It has the advantage of not using heat to increase the digestion of particulates. We have tried this method with varying results but for those willing to experiment a little and conscious of the dangers of boiling hot acids bumping around in a test tube it should be considered.

The following reagents should be prepared and placed on the bench in readiness.

Potassium Dichromate solution (10 g to 100 ml distilled water)

Concentrated Sulphuric Acid.

Hydrogen Peroxide (100 vol.)

The steps below should be followed, taking particular care when dispensing both the Sulphuric Acid and the Hydrogen Peroxide. The latter is an oxidising agent and the former a reducing agent and both produce 'burns' on the skin. Take all precautions when stirring or manipulating instruments to avoid any splashing.

A small sample is placed in a test tube.

To it should be added 1ml of the Potassium Dichromate solution

5 ml of concentrated Sulphuric Acid can now be added carefully. We would recommend the use of a pipette. Concentrated Sulphuric Acid is a thickened liquid which does not pour particularly easily from a large vessel.

The sample is now left for some 5 minutes but should be stirred at intervals during that period. Agitating the test tube by flicking it with a finger will suffice.

Add 2 drops of the Hydrogen Peroxide.

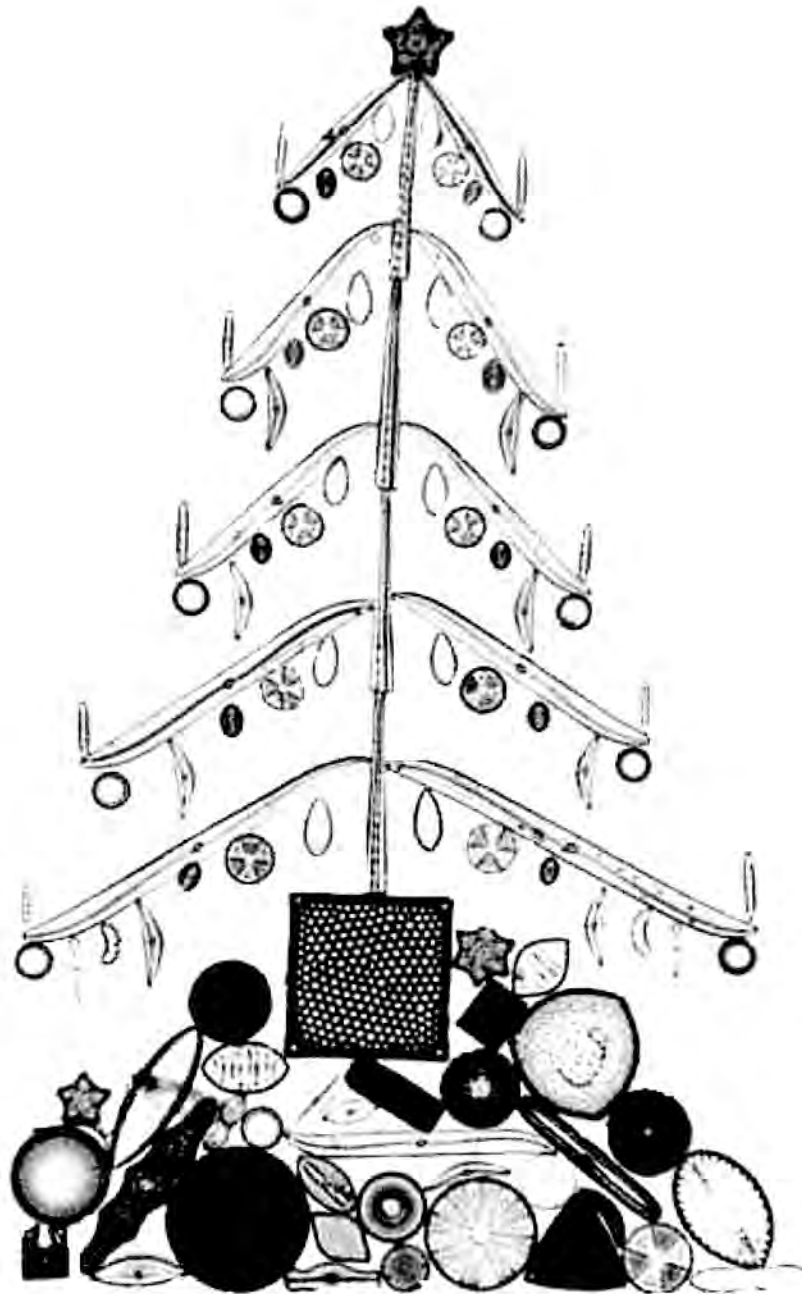
A reaction should begin which should be left to complete for a further 5 minutes.

The test tube should then be centrifuged at about 2000 rpm for 2 or three minutes or until a small plug of cleaned material collects in the bottom of the test tube and the supernatant is reasonably clear.

Decant the supernatant into a safe vessel and add a small volume of distilled water. Suspend the residue in the water by stirring or shaking, centrifuge again until a small plug of material exists in the bottom of the test-tube and repeat this centrifuging and washing twice more.

The final washing is your sample and may now be transferred to a vial for storage or used immediately in preparing strews.

Marine material should be cleaned with distilled water prior to any of the above cleaning operations. Any salts remaining in the sample may become apparent in your cleaned sample and be almost impossible to remove.



Synedra robusta

by John Miles

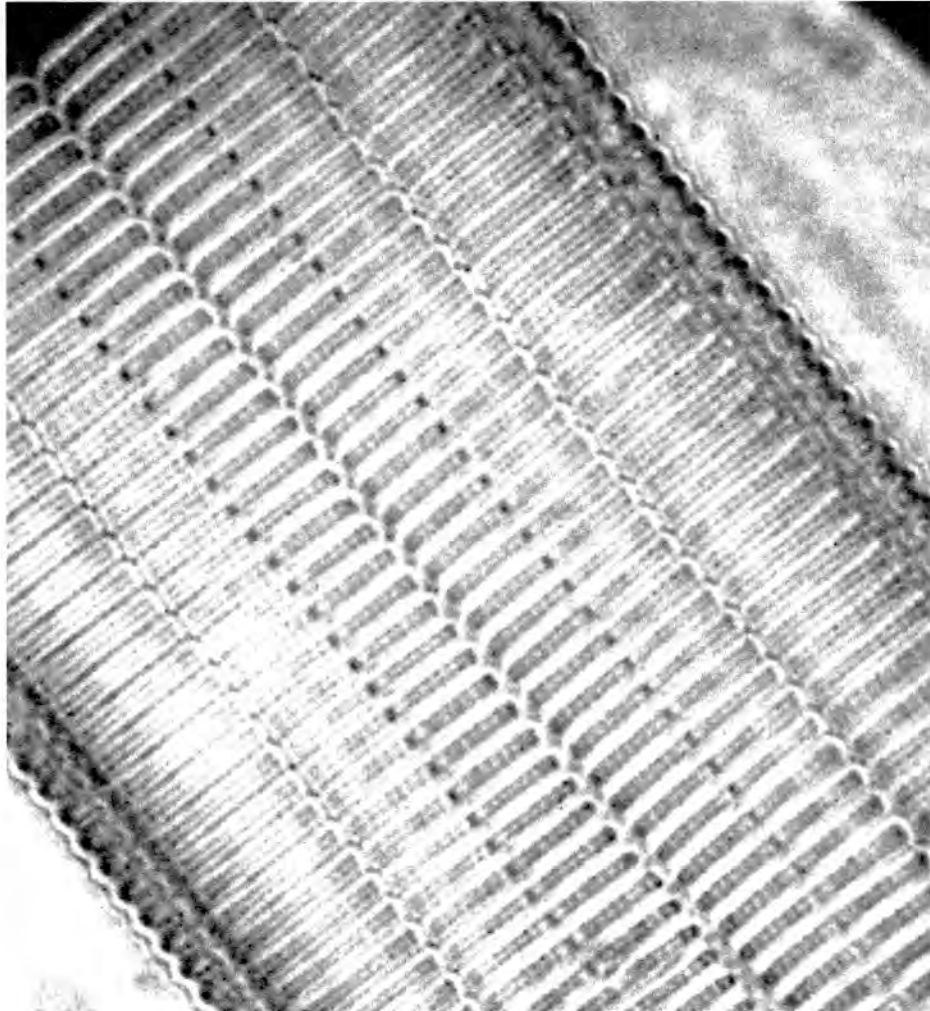
The following image of *Synedra robusta* was taken early last year using a Fuji 5602 Digital Camera, a 20X eyepiece and x40 N.A. 1.0 oil Imm. objective.

The diatom itself is from a strew (Slide 223) of a sample from the Adriatic Sea.

Width of Diatom 33microns (approx.)

I am particularly pleased with the detail achieved. Should anyone have the Kemp Database this species is No. 107.

I would be pleased to supply further details if anyone is interested in lighting techniques etc.



Editor's Note:

It is useful to compare this photograph with a drawing to appreciate the detail this photograph has achieved and also to appreciate how the structures are layered, this latter observation being difficult in line drawings.

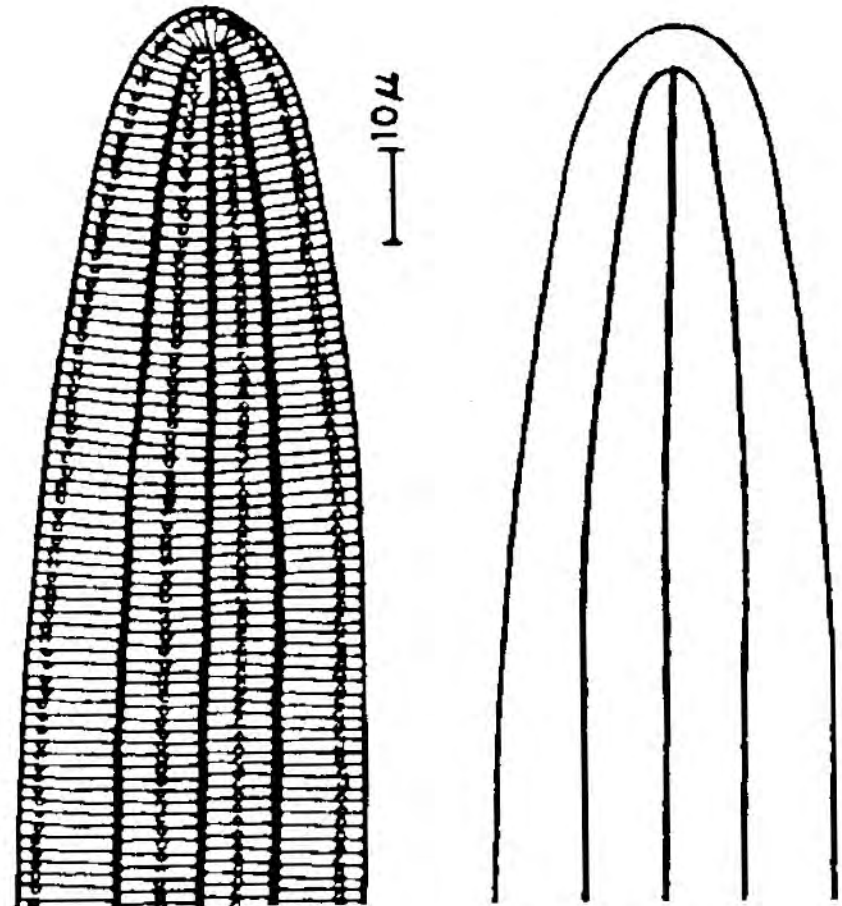


Illustration from:- Patrick & Reimer 1966

Locations cited:- Mediterranean

Plate/Figure & Notes:- Plate 8/Figure 3a,b

Species Name:- *Synedra robusta* Ralfs in Pritchard

Commercial Mounters List

The following list may prove useful to those having slides from this company in their collection. Of particular use are the slide codes. Thanks to Colin Lamb and Klaus D. Kemp for these listings.

**Flatters & Garnett Ltd.,
309, Oxford Road, Manchester 13.
Microscopical Preparations**

Diatoms

List A/F

April 1955

(This list supersedes all previous issues)

DIATOMS

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The species are accurately determined, and the girdle as well as the valve view is shown where desirable.

The specimens are mounted with the utmost precision and all slides are given suitable tests before despatch. These slides may be recommended as outstanding examples of the mounter's art and worthy of a place in the collection of any microscopist.

In addition to the species listed, many others can be supplied.

We shall be glad to hear of special requirements, so that we may look out for the desired species and send when found.

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Diatoms mounted specially to order in any desired manner.

In this series those usually mounted as "tests" are not included.

For "Test Slides" see page 5.

X4001	Achnanthes brevipes	X4014	Actinoptychus Marylandicus
X4002	Achnanthes longipes	X4015	Actinoptychus seductilis
X4003	Actinocyclus Barkleyi	X4016	Actinoptychus Simbirskianus
X4004	Actinocyclus Ehrenbergii	X4017	Actinoptychus spinifer
X4005	Actinocyclus Ralfsii	X4018	Actinoptychus splendens
X4006	Actinocyclus Roperii	X4019	Actinoptychus stella
X4007	Actinoptychus amblyoceros	X4020	Actinoptychus Szontaghii
X4008	Actinoptychus Bismarckii	X4021	Actinoptychus trilingularus
X4009	Actinoptychus glabratus	X4022	Actinoptychus undulatus
X4010	Actinoptychus Grunfleri	X4023	Actinoptychus vulgaris
X4011	Actinoptychus Heliopelta	X4024	Amphiprora alata
X4012	Actinoptychus heterostrophus	X4025	Amphiprora maxima
X4013	Actinoptychus maculatus	X4026	Amphiprora pulchra

X4027	Amphitetras antediluviana	X4072	Biddulphia rhombus v. trigona
X4028	Aporodiscus Oamaruensis	X4073	Biddulphia rigida
X4029	Arachnoidiscus deficiens	X4074	Biddulphia seticulosa
X4030	Arachnoidiscus Ehrenbergii	X4075	Biddulphia Tuomeyi
X4031	Arachnoidiscus indicus	X4076	Brightwellia pulchra
X4032	Arachnoidiscus lepidus	X4077	Caloneis amphiboena
X4033	Arachnoidiscus Oamaruensis	X4078	Caloneis latiuscula
X4034	Arachnoidiscus ornatus	X4079	Campylodiscus bicostata
X4035	Arachnoidiscus Russicus	X4080	Campylodiscus clypeus
X4036	Asterolampra Marylandica	X4081	Campylodiscus costata
X4037	Asterolampra insignis	X4082	Campylodiscus Echeenis
X4038	Asterolampra vulgaris	X4083	Cerataulus leavis
X4039	Asteromphalus Brookei	X4084	Cerataulus Smithii
X4040	Aulacodiscus amoenus	X4085	Cerataulus subangulatus
X4041	Aulacodiscus Archangelianus	X4086	Cerataulus turgidus
X4042	Aulacodiscus Comberi	X4087	Ceratoneis arcus
X4043	Aulacodiscus Grunowii	X4088	Cestodiscus ovalis
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X4045	Aulacodiscus Johnsonii	X4090	Cestodiscus superbus
X4046	Aulacodiscus Kittonii	X4091	Climacosphenia monilifera
X4047	Aulacodiscus margariteceus	X4092	Coconeis costata
X4048	Aulacodiscus Molleri	X4093	Coconeis imperatrix
X4049	Aulacodiscus Novae Zealandiae	X4094	Coconeis pellucida
X4050	Aulacodiscus Oamaruensis	X4095	Coconeis regalis
X4051	Aulacodiscus oregonus	X4096	Coconeis scutellum
X4052	Aulacodiscus Petersii	X4097	Corinna elegans
X4053	Aulacodiscus Rogersii	X4098	Coscinodiscus biangulatus
X4054	Aulacodiscus Simbirskianus	X4099	Coscinodiscus ateromphalus v. ampholanthus
X4055	Aulacodiscus Sollitanus	X4100	Coscinodiscus diorama
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X4058	Auliscus caelatus	X4103	Coscinodiscus Lewisianus
X4059	Auliscus Hardmanianus	X4104	Coscinodiscus lineatus
X4060	Auliscus Hauckii	X4105	Coscinodiscus lobatus
X4061	Auliscus Joynsonii	X4106	Coscinodiscus radiatus
X4062	Auliscus mirabilis	X4107	Coscinodiscus robustus
X4063	Auliscus Oamaruensis	X4108	Coscinodiscus Simbirskianus
X4064	Auliscus pruinus	X4109	Craspedodiscus coscinodiscus
X4065	Auliscus punctatus	X4110	Craspedodiscus elegans
X4066	Auliscus sculptus	X4111	Cyclotella comta
X4067	Auliscus Stockhardtii	X4112	Cymbella aspera
X4068	Biddulphia aurita	X4113	Cymbella australicum
X4069	Biddulphia Edwardsii	X4114	Cymbella cuspidata
X4070	Biddulphia pulchella	X4115	Cymbella Ehrenbergii
X4071	Biddulphia rhombus		

X4116	<i>Cymbella gastroides</i>	X4161	<i>Hydrosera trifoliata</i>	X4206	<i>Navicula tabellaria</i>	X4251	<i>Stictodiscus californicus</i>
X4117	<i>Cymbella heteropleura</i>	X4162	<i>Hydrosera triquetra</i>	X4207	<i>Neidium affinis</i>	X4252	<i>Stictodiscus californicus v. ecostata</i>
X4118	<i>Cymbella Janischii</i>	X4163	<i>Isthmia enervis</i>	X4208	<i>Neidium amphigomphus</i>	X4253	<i>Stictodiscus Hardmanianus</i>
X4119	<i>Cymbella lanceolata</i>	X4164	<i>Isthmia nervosa</i>	X4209	<i>Neidium dilatata</i>	X4254	<i>Stictodiscus Kamischevensis</i>
X4120	<i>Cymbella Mexicana</i>	X4165	<i>Leudugeria Janischii</i>	X4210	<i>Neidium firma</i>	X4255	<i>Stictodiscus parallelus</i>
X4121	<i>Diatoma anceps</i>	X4166	<i>Licmophora Ehrenbergii</i>	X4211	<i>Neidium iridis</i>	X4256	<i>Stictodiscus parallelus v. gibbosa</i>
X4122	<i>Diatoma vulgare</i>	X4167	<i>Kittonia granulata</i>	X4212	<i>Neidium tumescens</i>	X4257	<i>Surirella anceps</i>
X4123	<i>Dicladia capreolus</i>	X4168	<i>Mastogloia angulata</i>	X4213	<i>Nitzschia maxima</i>	X4258	<i>Surirella bifrons</i>
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X4127	<i>Epithemia Hyndannii</i>	X4172	<i>Melosira crenulata</i>	X4217	<i>Pinnularia cardinalis</i>	X4262	<i>Surirella elegans</i>
X4128	<i>Epithemia turgidus</i>	X4173	<i>Melosira granulata</i>	X4218	<i>Pinnularia dactylus</i>	X4263	<i>Surirella fatuosa</i>
X4129	<i>Epithemia zebra</i>	X4174	<i>Melosira nummuloides</i>	X4219	<i>Pinnularia divergens</i>	X4264	<i>Surirella Febigerii</i>
X4130	<i>Eunotia arcus</i>	X4175	<i>Melosira Oamaruensis</i>	X4220	<i>Pinnularia flexulosa</i>	X4265	<i>Surirella nobilis</i>
X4131	<i>Eunotia gracilis</i>	X4176	<i>Melosira ornata</i>	X4221	<i>Pinnularia major</i>	X4266	<i>Surirella robusta</i>
X4132	<i>Eunotia major</i>	X4177	<i>Melosira sol</i>	X4222	<i>Pinnularia nobilis</i>	X4267	<i>Surirella spiralis</i>
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X4143	<i>Eupodiscus oculatus</i>	X4188	<i>Navicula formosa</i>	X4233	<i>Scoliopleura latestriata</i>	X4278	<i>Trochneis aspera</i>
X4144	<i>Eupodiscus radiatus</i>	X4189	<i>Navicula gemmata</i>	X4234	<i>Scoliopleura tumida</i>	X4279	<i>Triceratium archangelskianum</i>
X4145	<i>Fragilaria Antartica</i>	X4190	<i>Navicula genifera</i>	X4235	<i>Solium exsculptum</i>	X4280	<i>Triceratium americanum</i>
X4146	<i>Fragilaria Harrisonii</i>	X4191	<i>Navicula irrorata</i>	X4236	<i>Stauroneis acuta</i>	X4281	<i>Triceratium antarcticum</i>
X4147	<i>Fragilaria virescens</i>	X4192	<i>Navicula lyra v. recta</i>	X4237	<i>Stauroneis fulmen, v. capitata</i>	X4282	<i>Triceratium arcticum</i>
X4148	<i>Gephyria media</i>	X4193	<i>Navicula lyra v. subcarinata</i>	X4238	<i>Stenopterobia anceps</i>	X4283	<i>Triceratium castellatum</i>
X4149	<i>Glorioptychus callidus</i>	X4194	<i>Navicula approximata v. kittoniana</i>	X4239	<i>Stenopterobia intermedia</i>	X4284	<i>Triceratium castelliferum</i>
X4150	<i>Gomphonema acuminatum</i>	X4195	<i>Navicula maculata</i>	X4240	<i>Stephanodiscus astraera</i>	X4285	<i>Triceratium crenulatum</i>
X4150	<i>Gomphonema constrictum</i>	X4196	<i>Navicula maculata v. maxima</i>	X4241	<i>Stephanodiscus Niagarae</i>	X4286	<i>Triceratium foveosum</i>
X4150	<i>Gomphonema geminatum</i>	X4197	<i>Navicula nitescens</i>	X4242	<i>Stephanopyxis corona</i>	X4287	<i>Triceratium formosum</i>
X4153	<i>Grammatophora robusta</i>	X4198	<i>Navicula oblonga</i>	X4243	<i>Stephanopyxis coronata</i>	X4288	<i>Triceratium fractum</i>
X4154	<i>Hantzschia virgata</i>	X4199	<i>Navicula oswaldii</i>	X4244	<i>Stephanopyxis diadema</i>	X4289	<i>Triceratium glandiferum</i>
X4155	<i>Hemiaulus ornithocephalus</i>	X4200	<i>Navicula peregrina</i>	X4245	<i>Stephanopyxis ferox</i>	X4290	<i>Triceratium grande</i>
X4155	<i>Hemiaulus polycistinorum</i>	X4201	<i>Navicula praetexta</i>	X4246	<i>Stephanopyxis Grunowii</i>	X4291	<i>Triceratium inelegans</i>
X4155	<i>Hemiaulus polymorphus</i>	X4202	<i>Navicula praetexta v. abundans</i>	X4247	<i>Stephanopyxis permarginata</i>	X4292	<i>Triceratium majus</i>
X4158	<i>Hemidiscus cuneiformis</i>	X4203	<i>Navicula serians</i>	X4248	<i>Stephanopyxis spinosissima</i>	X4293	<i>Triceratium Montereyi</i>
X4159	<i>Hyalodiscus maximus</i>	X4204	<i>Navicula splendida</i>	X4249	<i>Stephanopyxis turris</i>	X4294	<i>Triceratium Morlandii</i>
X4160	<i>Hyalodiscus radiatus</i>	X4205	<i>Navicula Yarensis</i>	X4250	<i>Stictodiscus californicus</i>	X4295	<i>Triceratium nobile</i>

X4296	Triceratium Novae Zeelandiae	X4309	Triceratium Weisii
X4297	Triceratium pentacrinus	X4310	Trinacria excavata
X4298	Triceratium pulvinar	X4311	Trinacria Heibergii
X4299	Triceratium pseudo-nervatum	X4312	Trinacria insipiens
X4300	Triceratium rugosum	X4313	Trinacria regina
X4301	Triceratium scitulum	X4314	Trinacria simulacrum
X4302	Triceratium scitulum v. quadrata	X4315	Trinacria simulacrum v. gross-punctata
X4303	Triceratium secedens	X4316	Trinacria ventricosa
X4304	Triceratium sculptum		See also Test Slides - Page 5
X4305	Triceratium spinosum		
X4306	Triceratium Stokesianum		
X4307	Triceratium trisulcum		
X4308	Triceratium trisulcum v. cuneata		

EXHIBITION SLIDES

"Circle Slides" Selected specimens mounted within a circle, from various localities.

No. of forms	Price
25	7/6
50	15/-
100	24/-

Rosettes and Stars Selected specimens symmetrically arranged in Star or Rosette form.

About	25	50	100 forms
Price	7/6	16/-	25/-

Slides with intermediate numbers of forms will be charged at corresponding prices.

DIATOM TYPE SLIDES

Mounted in StyraX. Selected typical species mounted in rows, each with list of names.

A few additional forms are often included, where desirable, without extra charge.

Interesting forms from various localities.

No. of forms	Price
12	4/6
20	9/-
40	15/-
50	20/-

GENUS TYPE SLIDES (in StyraX)

Each containing 5 or 6 species of one genus with list of names. Mounted on selected slides .9 to 1.0 mm and covers .16 to .18 in thickness.

Price per slide 5/-

X4801	Actinocyclus	X4807	Coscinodiscus	X4813	Pinnularia
X4802	Actinoptychus	X4808	Cymatopleura	X4814	Pleurosigma
X4803	Arachnoidiscus	X4809	Cymbella	X4815	Stauroneis
X4804	Aulacodiscus	X4810	Melosira	X4816	Surirella
X4805	Auliscus	X4811	Navicula	X4817	Synedra
X4806	Biddulphia	X4812	Nitzschia	X4818	Triceratium

DIATOM TEST PLATES

Specially selected typical specimens mounted on slides .9 to 1.0 mm and covers .16 to .18 mm thick. Each with list of names.

No. of forms	Prices
8	7/6
15	13/6
20	17/6
30	25/-

Mounted in StyraX (R. I. 1.58); Clearax (R. I. 1.67); Naphrax (R. I. 1.78); Hyrax (R. I. 1.82); Pleurax (R. I. 1.88); Sirax (R. I. 1.66).

N. B. The stability of synthetic resins cannot be guaranteed.

DIATOM TEST SLIDES

Mounted in StyraX, Clearax, Hyrax, Naphrax, Pleurax or Sirax on slides .9 to 1.0 mm and covers .16 to .18 mm thick.

Price per slide 2/6

Collection of 24 slides, in Pine Cabinet £2. 18. 6.

N.B. Only a few species are available "dry".

X3891	Amphipleura Lindheimeri	X3914	Navicula cuspidata
X3891	Amphipleura pellucida	X3914	Navicula elliptica
X3893	Brebissonia Boeckii	X3914	Navicula firma
X3894	Coscinodiscus asteromphalus	X3914	Navicula iridis
X3894	Coscinodiscus oculus-irridis	X3914	Navicula lyra
X3896	Cymatopleura apiculata	X3914	Navicula lyra v. elliptica
X3896	Cymatopleura elliptica	X3914	Navicula major
X3896	Cymatopleura Hibernica	X3914	Navicula nobilis
X3896	Cymatopleura solea	X3914	Navicula rhomboides
X3900	Diatoma anceps	X3914	Navicula Smithii
X3900	Diatoma vulgare	X3914	Navicula sculpta
X3902	Cymbella aspera	X3914	Navicula tumescens
X3902	Cymbella lanceolata	X3929	Nitzschia acuminata
X3904	Frustulia Saxonica	X3929	Nitzschia circumsuta
X3905	Grammatophora marina	X3929	Nitzschia granulata
X3905	Grammatophora oceanica	X3929	Nitzschia maxima
X3905	Grammatophora serpentina	X3929	Nitzschia obtusa
X3908	Hantzschia amphioxys	X3929	Nitzschia panduriformis
X3908	Hantzschia marina	X3929	Nitzschia plana
X3908	Hantzschia elongata	X3929	Nitzschia punctata
X3911	Hyalodiscus laevis	X3929	Nitzschia scalaris
X3911	Hyalodiscus stelliger	X3929	Nitzschia sigma
X3911	Hyalodiscus subtilis	X3929	Nitzschia sigmoidea
X3914	Navicula amphigomphus	X3929	Nitzschia tryblionella
X3914	Navicula amphisoena	X3941	Pleurosigma acuminatum
X3914	Navicula aspera	X3941	Pleurosigma aestuarii

X3941	Pleurosigma angulatum	X3957	Stauroneis anceps
X3941	Pleurosigma angulatum v. strigosum	X3957	Stauroneis phoenicenteron
X3941	Pleurosigma attenuatum	X3960	Surirella gemma
X3941	Pleurosigma balticum	X3960	Surirella biseriata
X3941	Pleurosigma balticum v. major	X3960	Surirella cardinalis
X3941	Pleurosigma decorum	X3960	Surirella striatula
X3941	Pleurosigma elongatum	X3964	Synedra affinis
X3941	Pleurosigma fasciola	X3964	Synedra capitata
X3941	Pleurosigma formosum	X3964	Synedra crystallina
X3941	Pleurosigma hippocampus	X3964	Synedra fulgens
X3941	Pleurosigma quadratum	X3964	Synedra Gaillonii
X3941	Pleurosigma rigidum	X3964	Synedra robusta
X3941	Pleurosigma strigosum	X3964	Synedra ulna
X3941	Pleurosigma Terryanum	X3964	Synedra undulata
X3957	Stauroneis acuta	X3972	Triceratium favus

LOCALITY STREWN DIATOM SLIDES

The following localities are selected from our extensive list of gatherings and fossil deposits. All show a fair variety of form, and are particularly recommended for the beauty and interest of the species shown.

Price per slide 2/-

"Strewn" slides in Styrax, Clearax, Hyrax, Sirax, Naphrax or Pleurax.

Abbreviations used :-

R. F.	Recent Freshwater	F. F.	Fossil Freshwater
R. B.	Recent Brackish Water	F. B.	Fossil Brackish Water
R. M.	Recent Marine	F. M.	Fossil Marine

British Isles

X4601	Aberdeen	F. F.	X4622	Harwich, England	R. M.
X4602	Balcombe Lake, Sussex	R. F.	X4623	Haweswater, Westmorland.	R. F.
X4603	Barlavington, Petworth, Sussex	R. F.	X4624	Hells Kettle, Darlington.	R. F.
X4064	Bearg Loch, Skye	F. F.	X4625	Isle of Arran	F. F.
X4605	Beddingham, Sussex	R. B.	X4626	Itchen Abbas, Hants.	R. F.
X4606	Black Moss, Aberdeen	F. F.	X4627	Isle of Lewis, Scotland.	F. F.
X4607	Bodmin, Cornwall	R. F.	X4628	Lancing, Sussex.	R. F.
X4608	Bog Anoe, Aberdeen	F. F.	X4629	Lewes, Sussex.	R. F.
X4609	Bolton le Sands, Lancs.	R. M.	X4630	Loch Goil, Scotland	R. M.
X4610	Bramber, Sussex	R. F.	X4631	Loch Leven, Scotland.	R. F.
X4611	Brand's Bay, Dorset	R. B.	X4632	Loch Kimrock, Scotland.	F. F.
X4612	Burnsall, Yorks	R. F.	X4633	Michelham Pr. Moat, Sussex	R. F.
X4613	Calver Brook, Derbyshire	R. F.	X4634	New Ferry, Ireland	F. F.
X4614	Chald Beck, Wakefield	R. F.	X4635	Newick Park Lake, Sussex.	R. F.
X4615	Cheriton, Hants	R. F.	X4636	Newton in Bowlands, Yorks.	R. F.
X4616	Chichester Channel, Sussex	R. B.	X4637	Norman's Bay, Sussex.	R. B.
X4617	Cuckmere Haven, Sussex	R. B.	X4638	Pagham Harbour, Sussex.	R. B.
X4618	Denton, Sussex	R. F.	X4639	Pevensley Sluice, Sussex.	R. B.
X4619	Exceat Bridge, Sussex	R. M.	X4640	Poole Harbour, Dorset.	R. M.
X4620	Fishbourne Mill Pond, Sussex	R. F.	X4641	Retford Pond, Notts.	R. F.
X4621	Gorpley, Bacup, Lancs.	R. F.	X4642	Ribblehead, Yorks.	R. F.
			X4643	River Tamar, Devon.	R. F.

X4644	Sartil, Skye.	F. F.	X4691	Delagoa Bay, Cape Town.	R. B.
X4645	Shoreham Aerodrome, Sussex.	R. F.	X4692	Dredging, S. W. Africa.	R. M.
X4646	Sidmouth, Devon.	R. B.	X4693	False Bay, South Africa	R. M.
X4647	South Heighton, Sussex.	R. F.	X4694	Oran, Algiers.	F. M.
X4648	Southeast, Sussex.	R. F.	X4695	Orange R. Dredging, S. Africa.	R. M.
X4649	Sth Lancing Saltings, Sussex.	R. B.	X4696	Ramleh, Egypt.	R. M.
X4650	Southport, Lancs.	R. B.	X4697	Walvis Bay, South Africa.	R. M.
X4651	Toome Bridge, Ireland.	F. F.	X4698	Warri River, Nigeria.	R. M.
X4652	Tor Bay, Devon.	R. M.			
X4653	West Dean, Sussex.	R. F.			
X4654	Winchester, River Itchin.	R. F.			

CONTINENT OF EUROPE

X4655	Ananino, Russia	F. M.	X4701	Hakodate, Japan.	F. M.
X4656	Antibes, France	R. M.	X4702	Hong Kong (Plankton)	R. M.
X4657	Bergenop Toom, Holland.	R. M.	X4703	Japanese Fish Stomachs	R. M.
X4658	Bilin, Hungary.	F. F.	X4704	Kisstib, Caucasus	F. F.
X4659	Bory, Hungary	F. M.	X4705	Miyagi Ken, Japan.	F. F.
X4660	Cannes, France.	R. M.	X4707	Penang, Malaya.	R. M.
X4661	Catania, Sicily	R. M.	X4707	Port Dickson, Malaya	R. M.
X4662	Cadzano, Holland	R. M.	X4708	Sendai, Japan.	F. F.
X4663	Carlovo, Russia.	F. M.	X4709	Yezzo Netanai, Japan.	F. M.
X4664	Castel, Hungary.	F. M.			
X4665	Christianstadt, Sweden	F. F.			
X4666	Franzen Hal. Austria.	F. F.			
X4667	Georgia, Russia.	F. F.			
X4668	Haslital, Switzerland (5000 ft.)	R. F.			
X4669	Inza, Russia.	F. M.			
X4670	Kamischev, Russia.	F. M.			
X4671	Kavna, Hungary.	F. M.			
X4672	Marmorito, Italy.	F. M.			
X4673	Mors, Denmark.	F. M.			
X4674	Nournsky, Russia.	F. F.			
X4675	Nykjobing, Denmark.	F. M.			
X4676	Osuna, Spain.	F. M.			
X4677	Santa Anita, Italy.	F. M.			
X4678	Santa Fiora, Italy.	F. F.			
X4679	Seerfeld, Austria.	R. M.			
X4680	Selecin Lebriga, Spain.	F. M.			
X4681	Simbirsk, Russia.	F. M.			
X4682	Singiliewsky, Russia.	F. M.			
X4683	Soos, Bohemia.	F. F.			
X4684	St. Laurent la Verne, France.	F. M.			
X4685	Szurdok Puspoki, Spain.	F. M.			
X4686	Thrais, Hungary.	F. F.			
X4687	Isenski, Russia	F. M.			

ASIA

X4699	Anso Mur, Japan.	F. F.			
X4700	Atika, Japan.	F. M.			
X4701	Hakodate, Japan.	F. M.			
X4702	Hong Kong (Plankton)	R. M.			
X4703	Japanese Fish Stomachs	R. M.			
X4704	Kisstib, Caucasus	F. F.			
X4705	Miyagi Ken, Japan.	F. F.			
X4707	Penang, Malaya.	R. M.			
X4707	Port Dickson, Malaya	R. M.			
X4708	Sendai, Japan.	F. F.			
X4709	Yezzo Netanai, Japan.	F. M.			

AUSTRALASIA

X4710	Auckland, N. Z.	F. F.			
X4711	Barraba, N. S. W.	R. M.			
X4712	Gunnamutta Bay, Australia	R. M.			
X4713	Kangaroo Valley, Australia	F. F.			
X4714	Lake Pupuke, N. Z.	F. F.			
X4715	Lake Sumner, N. Z.	F. F.			
X4716	McClay River, Australia.	R. M.			
X4717	Ongarota Valley, N. Z.	F. F.			
X4718	Orange, N. S. W.	F. F.			
X4719	Port Macquarie, N. S. W.	R. M.			
X4720	Sydney Harbour, N. S. W.	R. M.			
X4721	Takapima, N. Z.	F. F.			
X4722	Tuggerah Lake, N. S. W.	F. F.			

OAMARU LOCALITIES (NEW ZEALAND)

X4723	Allan's Farm	F. M.			
X4724	Bain's Farm	F. M.			
X4725	Bain's Middle Bed	F. M.			
X4726	Cormack's Farm	F. M.			
X4727	Dick's Farm	F. M.			
X4728	Flume Creek	F. M.			
X4729	Forrester's Hill	F. M.			
X4730	Hurst's Farm	F. M.			
X4731	Jackson's Paddock	F. M.			
X4732	Jackson's Middle Bed	F. M.			
X4733	Jackson's North End	F. M.			
X4734	Jackson's South End	F. M.			
X4735	Papakaio	F. M.			

AFRICA

X4688	Accra	R. M.
X4689	Cape Agulhas	R. M.
X4690	Delaforde Bog, Cape Town.	R. B.

X4736	Totara	F. M.	X4783	Leate's Island, Conn.	F. B.	X4832	Tiburon, Cal.	R. M.	2900 fathoms.	R. M.			
X4737	Troublesome Gully	F. M.	X4784	Leestown, Va.	F. M.	X4833	West River, Conn.	R. B.	X4849	Hawaii	R. M.		
X4738	William's Bluff	F. M.	X4785	Lompoc, Cal.	F. M.	X4834	Westmoreland, Va.	F. M.	X4850	Java	F. M.		
X4739	Cornack's Sidings	F. M.	X4786	Long Island Sound, N. Y.	R. M.	X4835	Wilmurt, N.Y.	F. F.	X4851	Kerguelen Island.	R. M.		
<u>CANADA</u>			X4787	Lyon's Creek, Maryland.	F. M.	<u>CENTRAL AND SOUTH AMERICA</u>					X4852	Manila, Phillipines.	R. M.
X4740	Baysville, Ontario	F. F.	X4788	Malaga Cove, Cal.	F. M.	X4836	Chile	F. F.	X4853	Paama, New Hebrides.	R. M.		
X4741	Drakesville, N. S.	F. F.	X4789	McKittrick, Cal.	F. M.	X4837	Lorica, Colombia	F. F.	X4854	Tjakisong, Java.	F. M.		
X4742	Fitzgerald Lake	F. F.	X4790	Monterey, Cal.	F. M.	X4838	Mexillones, Bolivia	F. M.	<u>WEST INDIES</u>				
X4743	Grand Lake, Cape Breton Is.	R. F.	X4791	Moreno Shale, Cal.	F. M.	X4839	Para River, Brazil.	R. B.	X4855	Bissex Hills, Barbados	F. M.		
X4744	Huntsville, Ontario.	F. F.	X4792	Moss Beach, S. F., Cal.	R. M.	X4840	Peruvian Guano	F. M.	X4856	Cambridge, Barbados	F. M.		
X4745	Ingonish, Cape Breton Island	F. F.	X4793	Moulton Ranch, Cal.	F. M.	X4841	San Fernando, Trinidad.	F. M.	X4857	Conset Bay, Barbados	F. M.		
X4746	Little Lake, N. B.	F. F.	X4794	Mount Whitney, Cal.	F. M.	X4842	Tlaxcala, Mexico.	F. F.	X4858	Havana, Cuba	R. M.		
X4747	Macintosh Lake, N. S.	F. F.	X4795	Muddy Creek, Maryland.	F. M.	X4843	Toco, Chile.	F. F.	X4859	Jeremie, Haiti	F. M.		
X4748	Mud Lake, N. B.	F. F.	X4796	New Haven, Conn.	R. M.	<u>OCEANIC</u>			X4860	Joe's River, Barbados	F. M.		
X4749	New Annan, Nova Scotia.	F. F.	X4797	Newport, Cal.	F. M.	X4844	Ambrim, New Hebrides	R. M.	X4861	Mount Hillaby, Barbados	F. M.		
X4750	Nootka, B. C.	F. F.	X4798	Newport Beach, Cal.	F. M.	X4845	Arafura Sea (Plankton)	R. M.	X4862	Newcastle, Barbados	F. M.		
X4751	Oxen Pond, Newfoundland	F. F.	X4799	Nottingham, Maryland.	F. M.	X4846	Celebes	R. M.	X4863	Par's Plantation, Barbados	F. M.		
X4752	Pollet Lake, N. B.	R. M.	X4800	Palmer Isle, Mass.	R. M.	X4847	Challenger Station 157, Indian Ocean	R. M.	X4864	Río Santa Cruz, Cuba	R. M.		
X4753	Savona, B. C.	F. F.	X4801	Palos Verdes, Cal.	F. M.	1950 fathoms.			X4865	Springfield, Barbados	F. M.		
X4754	Silver Lake, Ontario	F. F.	X4802	Panoche, Cal.	F. M.	X4848	Challenger Station 244, North Pacific		X4866	Windy Ridge, Barbados	F. M.		
X4755	Square Lake	F. F.	X4803	Petersburg, Va.	F. M.								
<u>U. S. A.</u>			X4804	Point Dume, Cal.	F. M.								
X4756	Allan Island, Cal.	R. M.	X4805	Pope's Creek, Maryland.	F. M.								
X4757	Anno Newto, Cal.	R. M.	X4806	Portland, Oregon.	F. F.								
X4758	Apopkya, Florida.	R. F.	X4807	Puget Sound, Washington.	R. M.								
X4759	Atlantic City	F. M.	X4808	Redondo Beach, Cal.	F. M.								
X4760	Baker's Beach, San Fransisco	R. M.	X4809	Redondo Beach, Cal.	R. M.								
X4761	Beddington, Maine.	F. F.	X4810	Rehoboth Beach, Delaware.	R. B.								
X4762	Boldpatte Pd, Georgetown	F. F.	X4811	Richmond, Va.	F. M.								
X4763	Calvert Co. Maryland.	F. M.	X4812	Rock Springs, Florida.	F. F.								
X4764	Cape Cod, Maryland.	F. M.	X4813	San Pedro, Cal.	F. M.								
X4765	Carlin, Nevada.	F. F.	X4814	San Pedro, Cal.	R. M.								
X4766	Carmel Bay, Cal.	R. M.	X4815	San Redondo, Cal.	F. M.								
X4767	Cherryfield, Maine.	F. F.	X4816	Santa Barbara, Cal.	F. M.								
X4768	Clermont, Florida.	F. F.	X4817	Santa Cruz, Cal.	F. M.								
X4769	Coalville, Utah.	F. F.	X4818	S. Monica (Float. Foss. 1889)	F. M.								
X4770	Croom, Maryland.	F. M.	X4819	Santa Rosa Sound, Fla.	R. M.								
X4771	Deschute River, Oregon.	F. F.	X4820	Seattle Marine Beach, Wash.	R. M.								
X4772	Dunkirk, Maryland.	F. M.	X4821	Sharktooth Gully, Cal.	F. M.								
X4773	Duxbury Reef, Bolinas Bay.	R. M.	X4822	Sharktooth Hill, Cal.	F. M.								
X4774	Econlochatcha River, Florida.	R. F.	X4823	Sherman Oaks, Cal.	F. M.								
X4775	Fairhaven, Calvert Cliffs, Md.	F. M.	X4824	Shiloh, N. J.	F. M.								
X4776	Girard, Los Angeles Co. Cal.	F. M.	X4825	Shoshone Springs, Cal.	F. M.								
X4777	Golden Gdns Beach, Seattle.	R. M.	X4826	Sing Sing, Hudson River.	F. M.								
X4778	Grant, New York.	F. F.	X4827	Smith's Island, Penn.	F. B.								
X4779	Grime's Canyon, Cal.	F. M.	X4828	Snaky Pond, Mass.	F. F.								
X4780	Jewell, Maryland.	F. M.	X4829	Sonoma Co. Cal.	F. F.								
X4781	Juncaee, Alaska	R. M.	X4830	Temiscal Canyon, Cal.	F. M.								
X4782	Kreyenhagen Shale, Cal.	F. M.	X4831	Terrebonne, Oregon.	F. F.								

Field Microscopes (III) "Nature Microscopes"



- B 97-805. MICROSCOPE, Student's.** Magnification $\times 75$, height 6 in. Sliding tube focusing, inclinable stand, plane silvered mirror. Body and base castings stoved black enamel finish, tube and other fittings, bright nickel plated.
- B 97-810. Ditto,** specification as **B 97-805** but magnification $\times 100$, height 7½ in., rack and pinion focusing, complete with supply of microscope slides, cover slips, glass tube and pair of forceps, in fitted polished wood case with lock and key.
- B 97-820. MICROSCOPE, Student's.** Magnifications 50-200. Inclinable stand, telescopic draw tubes, with fine adjustment by milled ring. ¼ in. fully corrected objective fitted with standard R.M.S. thread, special stage to facilitate slide adjustment, mirror mounted in universal ball joint and detachable to enable microscope to be used as a projector. Extended height 10½ in., closed height 7½ in., weight 3 lb., complete in wood case.
- B 97-820a Condenser,** with iris diaphragm.

We have termed this group "Nature Microscopes", a name gleaned from the catalogues of C. Baker.

All these microscopes have a similar mechanical design, simple but effective optics and are small and compact.

The illustration on the previous page is taken from the Griffin and Tatlock 1954 catalogue and depicts a Britex Minor. On the next two pages are a. an illustration from the C.Baker 1932 catalogue and the associated text from the 1935 catalogue of the same company which really says it all.

These microscope types can often be found at car boot sales and are considered by many to be but toys. In the field, however, where lightness is the key these simple stands have proven to be a worthwhile addition to the rucksack.

Many manufacturers have produced versions of this design.



Britex Minor



CD Scientific



Hensoldt Tami

A late model, but Hensoldt produced a model almost identical to the Nature microscope on the following page.



Fig. 8

THE NATURE MICROSCOPE

NEW IMPROVED MODEL

Suitable for use in Schools, Colleges and Universities

To realise the capabilities of this wonderful instrument it is necessary to use one to examine a specimen. We are therefore prepared to send an instrument on 7 days' approval against a deposit to cover its value.



The Nature Microscope

This microscope (Fig. 12), originally introduced to interest the younger generation in nature study, has taken everybody by surprise, and is now being installed in bacteriological, physiological, botanical and agricultural laboratories, in schools, colleges and universities in ever-increasing numbers. The sales have even been a surprise to ourselves.

Such specimens as typhus, trypanosome, karyconesis, etc., can easily be diagnosed with this little microscope.

The construction, both mechanically and optically, is made with a view to placing on the market a compact microscope combined with a variable magnification having a very extensive range, viz., $\times 25$ to $\times 220$. In order to obtain this variation the tube of the microscope must be varied in length and any degree of magnification can be obtained.

The optical equipment consists of an eyepiece and a combination objective, the latter situated at the lower end of the tube and constructed in such a manner that the front lens may be unscrewed, leaving a lens giving a low magnification and large field of view for the examination of large objects. The definition of this combination is surprisingly good, and is equal to many of the more expensive lenses already on the market. The instrument is furnished with a very sensitive fine focussing adjustment of an extensive range to permit of a definite focus at any position of the tube.

The stage of the microscope consists of a very rigid plate measuring $2\frac{1}{2} \times 2\frac{1}{2}$, firmly fixed to the limb, and is provided with two spring clips for securing the specimen. Underneath this stage is fitted in a gymbal a concave mirror for reflecting the light through the specimen up into the microscope.

For particulars of the School micro-projection apparatus employing one of these microscopes see Fig. 157, page 94.

The whole instrument is inclinable to an angle of 45° and mounted on a heavy base. It packs away into a neat case measuring $7 \times 3\frac{1}{4} \times 3\frac{1}{4}$ and weighing 2 lb. 4 oz. complete.

£3 10 0

Extras

Small Spot Lens for dark ground illumination and tube with flange to take it to the understage of the microscope 15 0

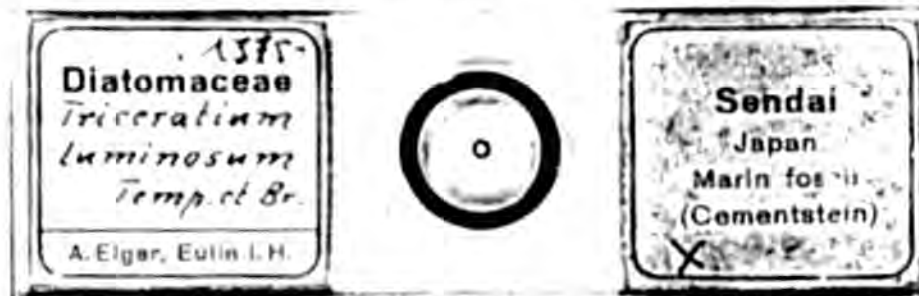
Stage Bull's-Eye Condenser on universal fittings 12 6

A use can be found in every laboratory for this microscope—it is already installed in numerous SCIENCE, PHYSICAL, BACTERIOLOGICAL and BOTANICAL Laboratories.

Famous Diatomists

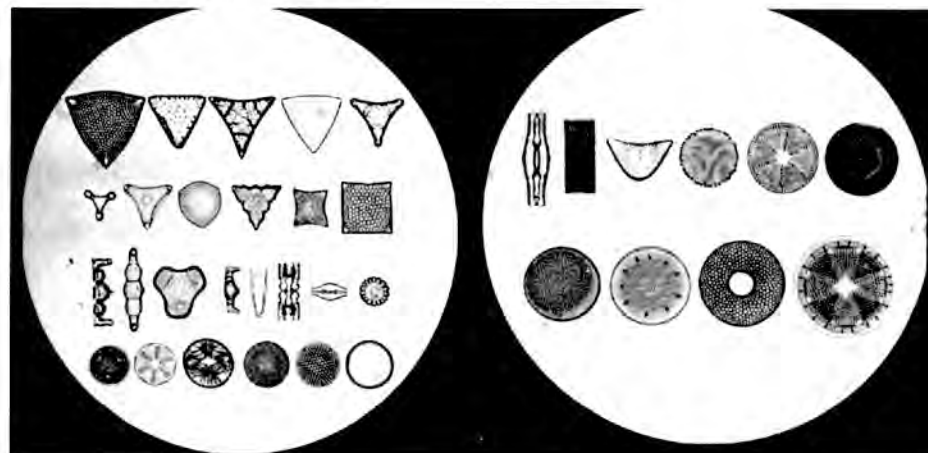
Albert Elger - Supplier of Diatom slides and Diatom material.

Eutin in Holstein (Eutin, Schleswig Holstein, Germany)



A number of pre-war German slides have been sitting in our respective collections for some time and a project, some while back, to discover details of the preparers was undertaken. Termed the 'Microslide' project it consumed our efforts for a period in excess of five years, ploughing through material accumulated during the past twenty five years. This project has now been put on hold as similar publications have been and are being published. However, much of this material is of interest to Diatomists and we felt that including such information as we have available would be both interesting and informative, allowing those with examples of these slides to appreciate their origins.

Reproduced on the following pages are a business letter on a standard letterhead, detailing prices for 10 and 25 form Type slides and an accompanying list of diatom samples in Alcohol which were on offer. We have seen two such lists and both offer the same 50 samples. We have been fortunate in being able to put together the letterheads (courtesy of Colin Lamb) and the two micrographs mentioned (from our own collection). Unfortunately the lists mentioned on the reverse of the photographs are missing.



Diatomeen.
 Typen-Platte mit 25 Formen
 und Namenliste.

Oamaru
 Neu-Seeland
 marin, fossil

Laboratorium A. Elger
 Eutin in Holstein,
 (Germany)

Diatomeen.
 Typen-Platte mit 10 Formen
 und Namenliste.

Nottingham
 Maryland U.S.A.
 marin, fossil

Laboratorium A. Elger
 Eutin in Holstein,
 (Germany)

Albert Elger Laboratorium für Mikroskopie **Eutin in Holstein**

Spezialität: Präparate von Diatomeen, Radiolarien, Foraminiferen, Plankton-Organismen (von 1500 Fundorten aus allen Weltteilen)

Bank-Konto: Oldenburg-Lübeker Landesbank, Eutin

Eutin in Holstein, den 24. April 39
 Deutschland

Herrn
 D.W. Robinson,
 120, Clumber Street
 Princes Av.

Hull, Yorks.
 England

Sehr geehrter Herr Robinson!

Jch danke Ihnen sehr für Ihren freundlichen Brief, aus welchem ich ersehe, daß die Proben mit dem Diatomeen-Material gut in Ihre Hände gelangt sind. Jch bin erfreut, daß Ihnen meine Materialien gut gefallen.

Wunschgemäß erhalten Sie beiliegend eine Liste meiner neuen 25 Diatomeen-Typenplatten aus allen Teilen der Welt. Diese Platten, zu denen eine Namenliste beigegeben wird, werden in 2 Größen angefertigt. Es gibt:

Typenplatten mit je 10 Formen und Liste, pro Stück RM. 2.00
 Typenplatten mit je 25 Formen und Liste, pro Stück RM. 5.00

2 Mikrophographien meiner Typenplatten lege ich diesem Brief bei. Jch hoffe, von Ihnen, oder von einem Ihrer Mitglieder der Microscopical Society, Hull eine Bestellung zu erhalten.

Hochachtungsvoll!

Anbei:
 Eine Liste
 Zwei Mikrophographien

A. Elger

Reines Diatomeen - Material in Glastuben in Alcohol.

1. Sydney, Australien.	Marin, recent.
2. Seattle, Wash., U.S.A.	" "
3. La Rochelle, Frankreich	" "
4. Triest, Adria	" "
5. Blankenberg, Belgien	" "
6. Kap der Guten Hoffnung, Sud Africa.	" "
7. Saint Malo, Frankreich.	" "
8. Para, Brasilien.	" ✓ 8 X
9. Sendai, Japan.	fossil. ✓ 9
10. Palos Verdes, Californien, U.S.A.	" ✓ 11 X
11. Santa Monica, Californien, U.S.A.	" "
12. Richmond, Virginia, U.S.A.	" "
13. Nottingham, Maryland, U.S.A.	" ✓ 13
14. Oamaru, Neu-Seeland.	" ✓ 14
15. Bory, Ungarn.	" "
16. Moron, Spanien.	" "
17. Kamischev an de Wolga, Russland.	" "
18. Licata, Sicilien, Italien.	" "
19. St. Laurent la Vernede, Gard, Frankreich.	" "
20. Carlowo, Gouv. Simbirsk, Russland.	" ✓ 20
21. Westernas, Schweden	Brackwasser, recent.
22. Elwood Swamp bei Melbourne, Australien	" "
23. Arcachon, Gironde, Frankreich.	" "
24. Santa Cruz, Californien, U.S.A.	" "
25. Odense, Funen, Danemark.	" "
26. Toco, Chile, Sud Amerika	fossil.
27. Franzensbad, Sudetengau, Deutschland	" "
28. Terre Bonne, Oregon, U.S.A.	" "
29. Fagoino Presso, Italien.	" "
30. Dubravica, Ungarn.	" "
31. Yellowstone, Park, U.S.A.	Susswasser, recent.
32. Züricher, See, Schweiz.	" "
33. Leipzig, Sachsen, Deutschland	" "
34. Gr. Ploner See, Holstein, Deutschland.	" "
35. San Francisco, Californien, U.S.A.	" "
36. Wedel, Holstein, Deutschland.	" "
37. Bruseel, Belgien	" "
38. Santa Fiera, Italien.	Susswasser, Fossil.
39. Luneburg, Hannover, Deutschland.	" "
40. Auckland, Neu Seeland.	" "
41. Black Water, Florida U.S.A.	" 8
42. Grant, N.Y. U.S.A.	" "
43. Troy, N.H., U.S.A.	" "
44. Brocton, Mass., U.S.A.	" "
45. Silver Lake, Ont. Canada.	" "
46. Tlalnepan, Cala, Mexico	" "
47. Kittitas, Oregon, U.S.A.	" "
48. Theix, Puy de Dome, Frankreich	" "
49. Philippville, Nord Africa.	" "
50. Portland, Viktoria, Australien	" "

Diatomaceae – Cowside, Cherry Tree Hole, Yew Cogar, Dew Bottoms, Darnbrook, Thoragill. 2002/03

Darnbrook Research Project – Douglas T. Richardson

Class Key:- S=Stream : SP=Spring : CF=Calcareous Flush : WRF=Wet Rock Face : R=Resurgence : SF=Stream Foam : TS=Tufa Spring : YC=Yew Cogar Beck : CL=On Cladophera

Grid. Ref.	Cowside							Cherry Tree		YC	Dew Btms		Darnbrook			Thoragill			8914/ 7010	8912/ 7010	
	8950/ 6980	9088/ 7002	8878/ 6914	9242/ 7122	9288/ 7169	9136/ 7052	9045/ 7001	8889/ 6923	8889/ 6923	9081/ 7003	9147/ 6980	9119/ 7014	8910/ 7110	8910/ 7110	8954/ 7096	8955/ 7097	8944/ 7104	8910/ 7017			8918/ 7006
Class	S	S	SP	SP	CF	WRF	WRF	R	R	S	S	SF	S	TS	CF	CF	S	S	CL	S	
Date	22/4	1/10	22/4	30/5	20/6	30/5	1/10	20/6	24/8	1/10	22/4	1/10	24/8	24/8	24/8	24/8	24/8	20/6	4/7/3	4/7/3	24/6
<i>Amphora ovalis</i>)							*	*		*	
<i>Cocconeis pediculus</i>	*	*	*		*	*		*	*	*	*				*		*	*	*	*	*
<i>Cocconeis placentula</i>	*		*								*	*									*
<i>Cymbella cistula</i>				*	*					*		*	*			*			*		*
<i>Cymbella cymbiformis</i>							*						*		*						
<i>Diatoma hymale</i>										*		*									
<i>Diatoma tenue</i>	*									*	*										
<i>Diatoma vulgare</i>	*	*																			
<i>Didymosphenia geminata</i>									*	*	*	*				*	*	*		*	*
<i>Diploneis elliptica</i>										*											
<i>Diploneis ovalis</i>				*	*				*	*			*		*						
<i>Encyonema minutum</i>	*			*		*															
<i>Epithemia argus</i>														*							
<i>Eunotia arcus</i>		*			*		*				*		*		*						
<i>Eunotia sp.</i>				*																	
<i>Fragilaria crotonensis</i>										*											
<i>Fragilariforma virescens</i>																					*
<i>Frustulia rhomboides</i>						*	*	*				*									*
<i>Gomphoneis olivaceum</i>				*	*								*	*		*					
<i>Gomphonema acuminatum</i>				*												*					
<i>Gomphonema clavatum</i>																*					
<i>Gyrosigma attenuatum</i>											*										
<i>Melosira varians</i>	*											*			*						
<i>Meridion circulare</i>		*	*	*	*	*		*	*			*	*		*	*	*				
<i>Navicula radiosa</i>		*		*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	*
<i>Nitzschia linearis</i>				*	*	*		*								*					
<i>Pinnularia viridis</i>				*				*)					*						
<i>Rhopalodia gibba</i>				*	*	*)			*	*		*					
<i>Synedra rumpens</i>)		*									
<i>Synedra ulna</i>				*	*			*	*	*	*	*	*		*	*					
<i>Synedra ulna var oxyrynchus</i>	*																				
<i>Tabellaria flocculosa</i>										*											

The Cowside Beck project is an ongoing exercise involving many Amateurs and Professionals from many disciplines whose purpose is to catalogue and understand the flora and fauna of this upland area to the North East of Malham Tarn.

Arthur C. Cole & Son.

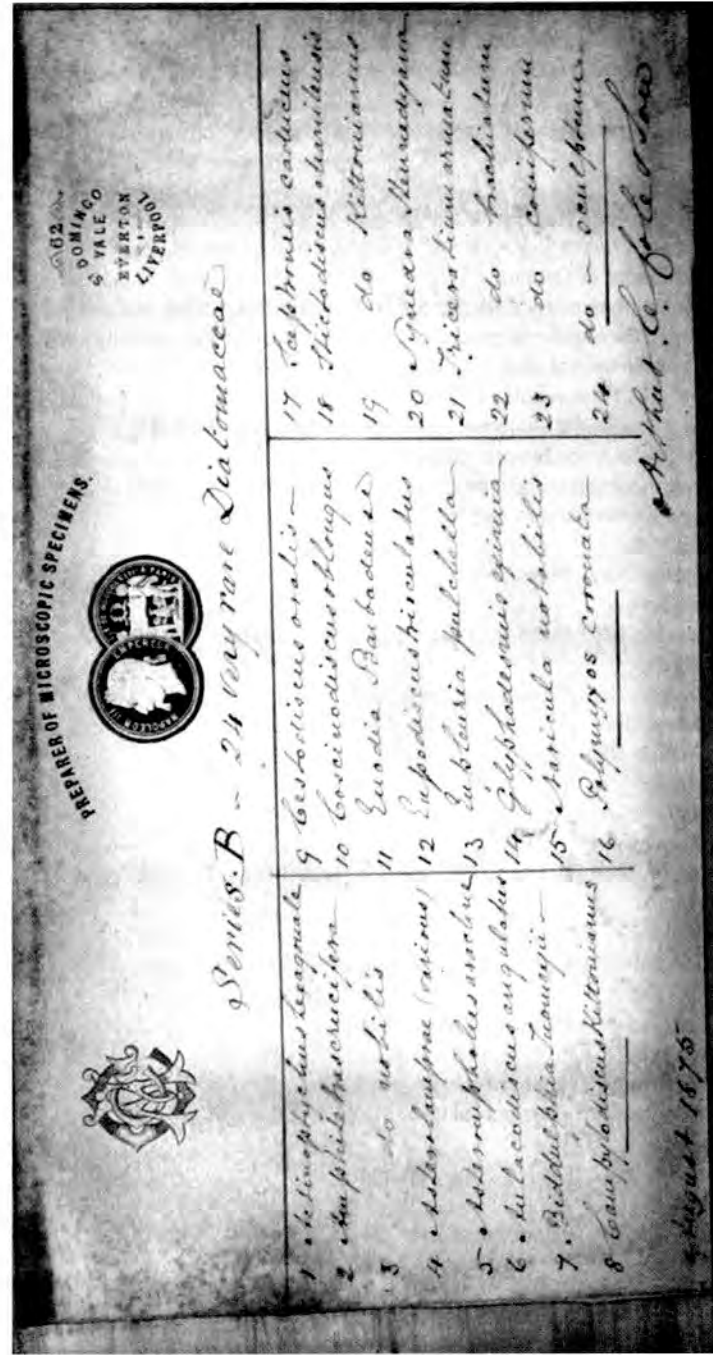
Series B.

24 Very Rare Diatomaceae

Some while ago at a meeting we were shown a set of microslides from the mounter Arthur C. Cole. In the very brief period that these were available to us we managed to photograph the case and contents. Unfortunately we did not get an opportunity to examine the slides under a microscope. Nonetheless, we determined to present this set as an article using illustrations from texts that were probably used to name the specimens. The name list pasted to the inside of the lid bears the date August 1875, a signature, a monograph, and an address.

The slides are very well presented and in most cases the mountant seems to have remained clear and even. There is a little drying back on a couple of the slides.

There was also a sheet from a Slide Catalogue but in our haste we forgot to photograph this. Next time perhaps!



Details concerning Arthur C. Cole have appeared in an earlier issue of Amateur Diatomist (Vol. II, No. III).

The following list is our interpretation of the contents, which we believe is accurate.

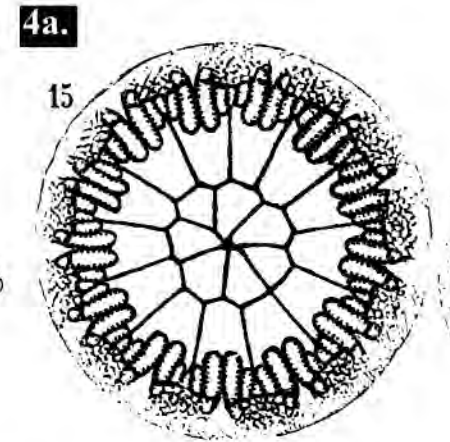
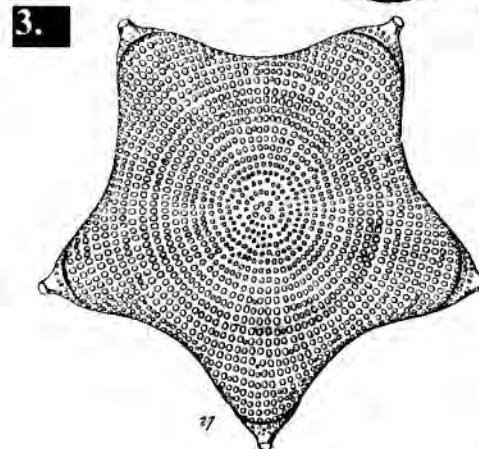
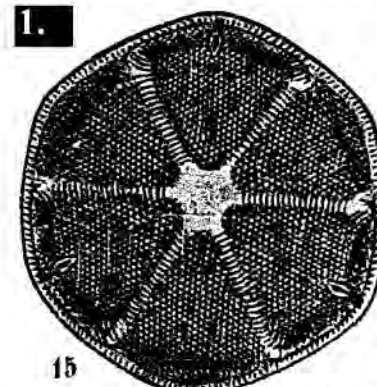
The first line of each slide description is the name as given in the original list, followed by what we believe to be the authority, though no authorities are noted in the list.

If the original name is considered to be a synonym then the next line will be the name we have sourced for the illustration.

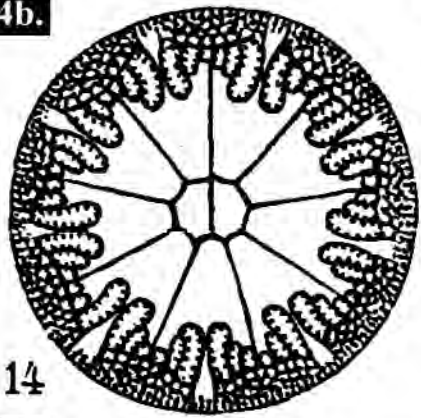
The next line refers to the source of the illustration.

1. *Actinoptychus hexagonale* Grun.
This is a synonym for *A. hexagonus*.
Adolf Schmidt - Atlas der Diatomaceenkunde Plate 1/Figure 15.
2. *Amphitetras crucifera*
This is a synonym for *Rhaphoneis amphiceros* var. *tetragona*
(Not illustrated)
3. *Amphitetras nobilis* Grev.
Robert Kaye Greville 1865 Red Sea. Plate 9/Figure 27.
4. *Asterolamprae* - various
Probably from Barbados or Oamaru
These specimens are particularly difficult to sort out to species, variety or form due to the wide variation in the number of processes on the frustule, and the variability within a single species of the central area.
Both illustrations are of *Asterolampra* varians.
4a. Adolf Schmidt - Atlas der Diatomaceenkunde. Oamaru New Zealand. Plate 202/Figure 15-16 *Asterolampra vulgaris* Robert Kaye Greville
4b. Adolf Schmidt - Atlas der Diatomaceenkunde. Oamaru New Zealand. Plate 202/Figure 14 *Asterolampra vulgaris* Robert Kaye Greville
5. *Asteromphalus arachne* Breb.
Wallich 1860 Indian Ocean Plate 2/Figure 11.
6. *Aulacodiscus angulatus* Grev.
Robert Kaye Greville 1863 Barbados Plate 5/Figure 5.
7. *Biddulphia Tuomeyü* Ehren.
Adolf Schmidt - Atlas der Diatomaceenkunde. Balearic Isles. Plate 118/Figures 19-21
8. *Campylodiscus Kittonianus* Grev.
Robert Kaye Greville 1860 West Indian. Plate 1/Figure 7.
9. *Cestodiscus ovalis* Grev.
(Not Illustrated)
10. *Coscinodiscus oblongus* Grev.
Robert Kay Greville 1866 Barbados Plate 1/Figures 9 & 10.
11. *Euodia Barbadense* Grev.
This is a synonym for *E. Barbadensis*.
Robert Kaye Greville 1861 Barbados Plate 8/Figures 6 & 7.
12. *Eupodiscus trioculatus* Grev.
Robert Kaye Greville 1864 Barbados Plate 12/Figure 3.
13. *Eupleuria pulchella* Arnott.
This is a synonym for *Entopyla ocellata* var. *pulchella* (Arnott) Fricke
Adolf Schmidt - Atlas der Diatomaceenkunde Plate 231/Figure 11.
14. *Glyphodesmis eximia* Grev.
Robert Kay Greville 1862 Jamaica. Plate 10/Figures 7-10.
15. *Navicula notabilis* Grev.
Adolf Schmidt - Atlas der Diatomaceenkunde Plate 8/Figures 46 & 47.
16. *Polymyxus coronata* Bail.
This is a synonym for *P. coronalis*.
Adolf Schmidt - Atlas der Diatomaceenkunde. Para River. Plate 132/Figures 2 & 3.

17. *Sceptroneis caduceus* Ehren.
Henri van Heurck 1881. U.S.A. Plate 37/Figure 5.
18. *Stictodiscus Manilensis* Grev.
This is a synonym for *S. californicus*.
Robert Kaye Greville 1861. Monterey, California, U.S.A. Plate 10/Figure 1.
19. *Stictodiscus Kittonianus* Grev.
Robert Kaye Greville 1861. Richmond, Maryland, U.S.A. Plate 10/ Figures 2 & 3.
20. *Synedra Henedyana* Grev.
Peragallo 1897-1908 Adriatic. Plate 78/Figure 8.
21. *Triceratium arcuatum* Shadb.
Shadbolt 1854 Port Natal. Plate 1/Figure 5.
22. *Triceratium brachiatum* Brightw.
T. Brightwell 1856 Barbados Plate 17/Figure 3.
23. *Triceratium coniferum* Brightw.
Adolf Schmidt - Atlas der Diatomaceenkunde. Plate 98/Figures 27-31.
24. *Triceratium sculptum* Shadb.
Adolf Schmidt - Atlas der Diatomaceenkunde Plate 76/Figures 9 & 10.

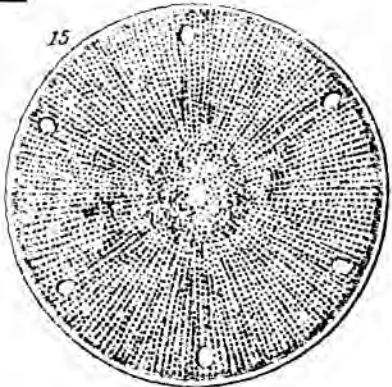


4b.



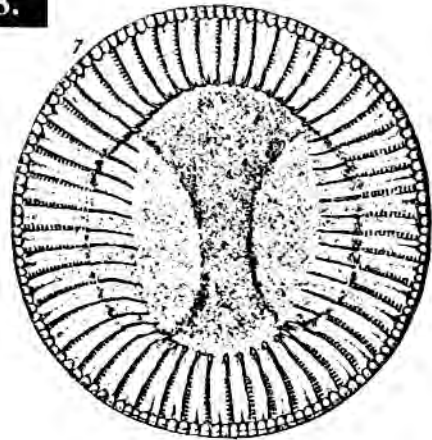
14

6.



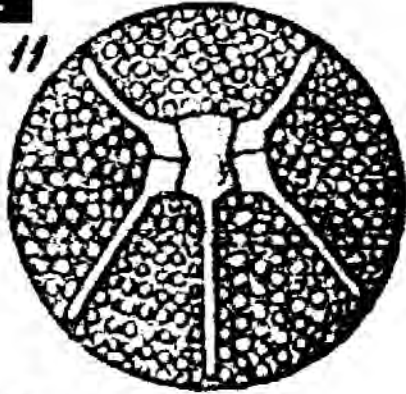
15

8.



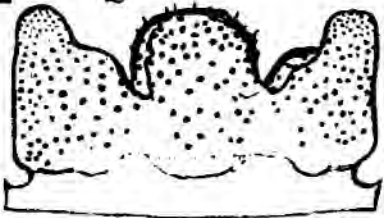
7

5.

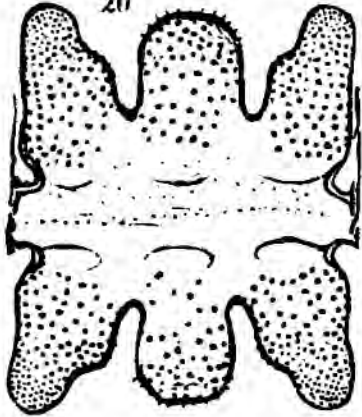


11

7.

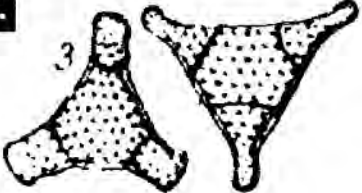


19



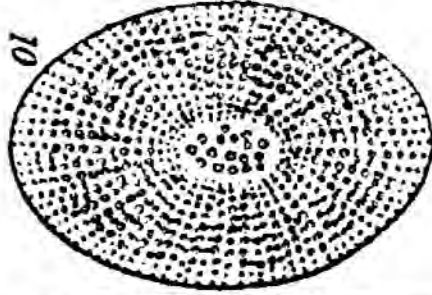
20

22.



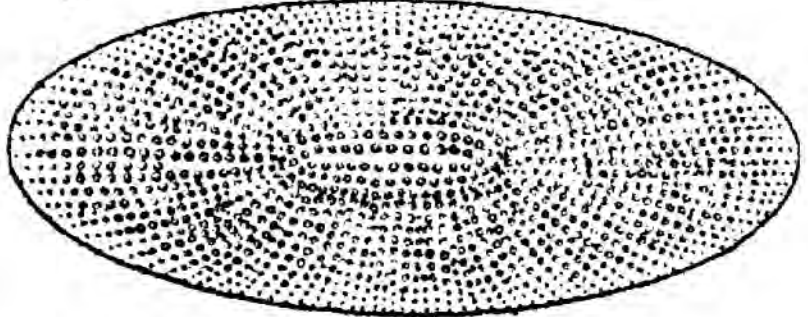
3

10.

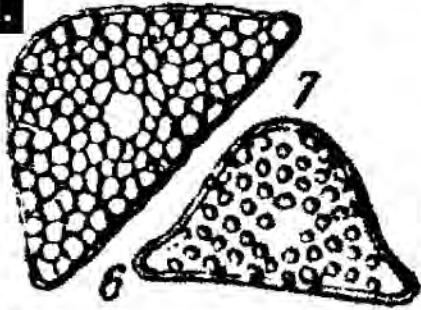


10

6



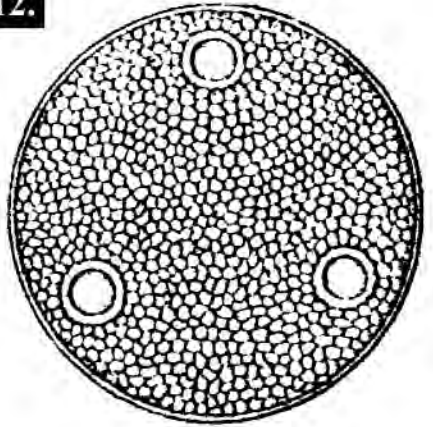
11.



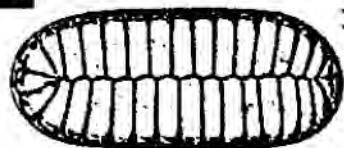
6

7

12.



13.



11



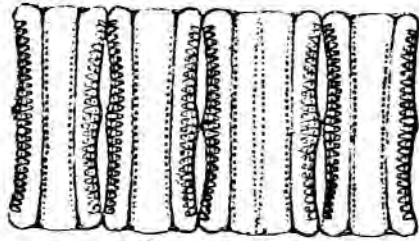
11a

17.

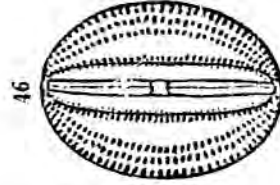
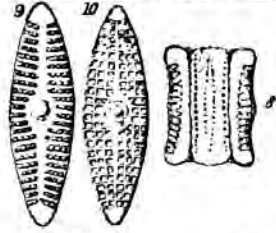
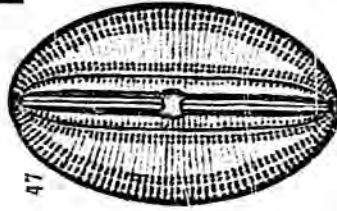


5

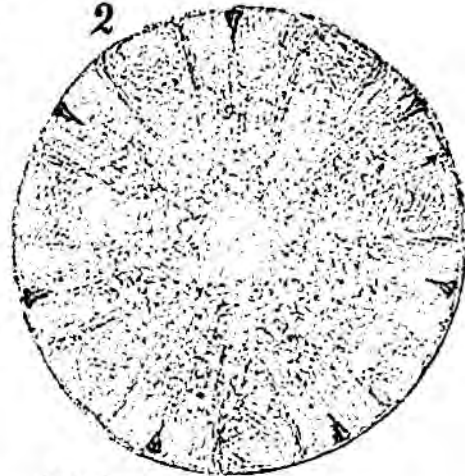
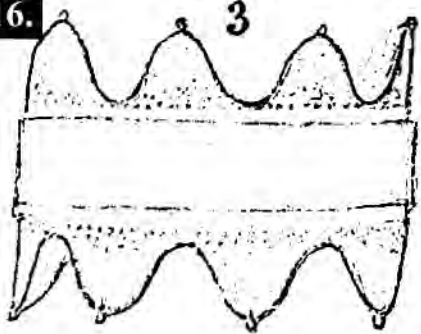
14.



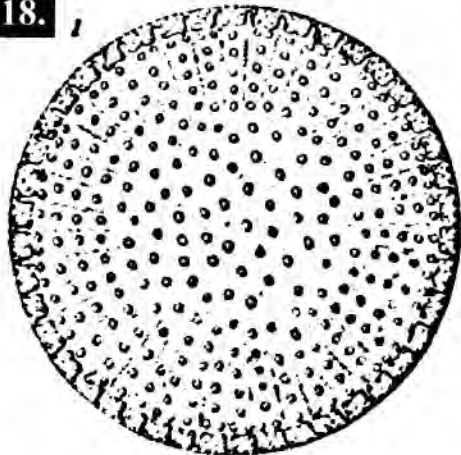
15.



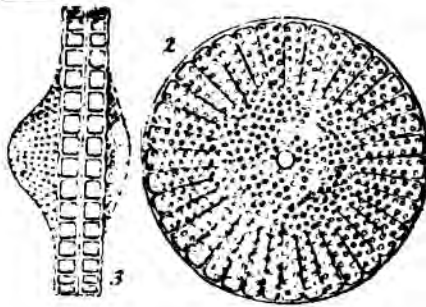
16.



18.



19.



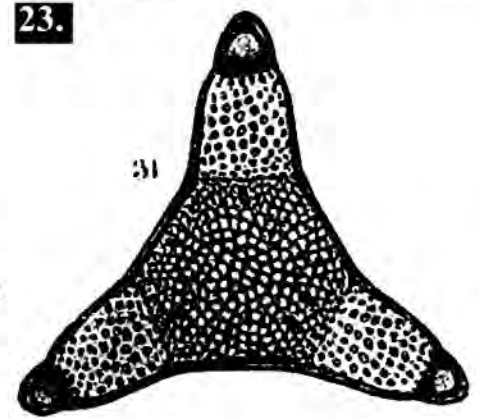
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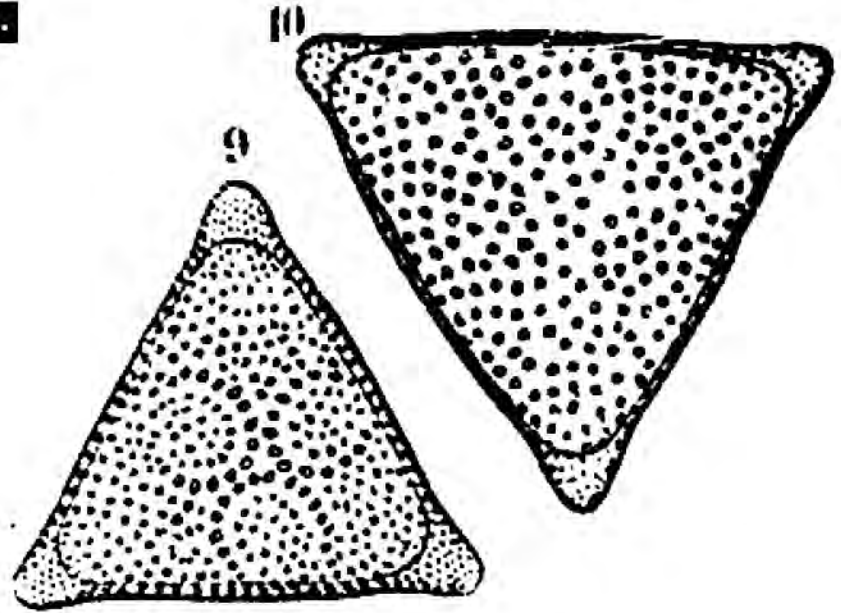
21.



23.



24.



Loch na Cuile

A favoured source of diatomaceous earth from beneath the peat beds. The earth may be extracted using an augur or bore. Earth from this location tends to be grey and friable. Loch na Cuile is Gaelic for Loch of Reeds.

Comparative list of Discoid and Gonoid diatoms in the deposits of Simbirsk, Mors and Oamaru

From a paper read at the Quekett Microscopical Club 13th January 1920 (author not recorded)

SIMBIRSK

- Hemiaulus**
Antarcticus Weiss
Applanatus Brun.
punctatus Grv.
Weissei Grun.
includens Ehr.
ornithocephalus Grev.

Corinna elegans Heib.
- Eunotogramma**
Weissei Grun.
variabilis Grun.
- Anaulus**
species?
- Triceratium**
Archangelskianum O.W.
blandum O.W.
caudatum O.W.
duplicatum
Flos Ehr.
nobile O.W.
Wessei Grun.
sentum O.W.
simplicissimum O.W.
subcapitatum Grev.
arietinum A. S.
Kinkerianum O.W.
venustum
Truani Pant.
Antediluvianum Ehr.
- Trinacria**
insipiens O.W.

MORS

- Hemiaulus**
Proyeus Heib.
affinis Grun.
Danicus Grun.
Kittonii Grun.
hostilis Heib.

Payeri Grun.

Corrina elegans Heib.
Solium exsculptum Heib.
- Anaulus**
Weyprechtii Grun.
- Triceratium**

Wessei Grun.

Kinkerianum O.W.
- Trinacria**
Wittii A.S.

OAMARU

- Hemiaulus**
polymorphus Grun.
polycystinorum Ehr.
Barbadensis Grun.
Weissei Grun.
includens Ehr.
ornithocephalus Grev.
Payeri Grun.
syndetoneis amplexans Grun.
- Eunotogramma**
Weissei Grun.
producta Grun.
- Anaulus**
birostratus Grun.
- Triceratium**
Thumii A.S.
Castellatum West
Barbadense Grev.
Oamaruense Gr. & St.
Nova-Zelaniae Gr. & St.
Americanum Ralfs
Wessei Grun.

Arcticum Brightw.
capitatum Ralfs
Auliscoides Gr. & St.
Kinkerianum O.W.
bimarginatum Gr. & St.
cancellatum Grev.
favus var quadrata
about 40 more species
- Trinacria**
ventricosa

Regina Heib.
Heibergii Kitt.
Weissflogii
excavata Heib. var.
Pileolus Ehr.
coronata O.W.
Princeps O.W.
Grevillei O.W.
Grunowii O.W.

- Aulacodiscus**
Archangelskianus O. W.
Crux Ehr.
Lahusenii O. W.
probabilis A. S.
Yutlandicus Kitt.
antiquus Pant.
Ananinensis Pant.
hispidus Pant.
Weissflogii Pant.
- Actinoptychus**
heterostrophus A. S.
Simbirskianus A. S.
undulatus Ehr.
vulgaris Ehr.
splendens Ralfs.
Leptomitos Pant.
delicatissimus O. W.
- Asterolampra**
species?
- Auliscus**
trigemmis A. S.
punctulatus Grun.
nanus A. S.

Regina Heib.
Heibergii Kitt.

excavata Heib.
Pileolus Ehr.
Kittoniana Grun.

- Aulacodiscus**
excavatus A. S.
suspectus A. S.

Yutlandicus Kitt.

hispidus Pant.
- Actinoptychus**
heterostrophus A. S.

fragilis Grun.
ligulata Grev.
Weissflogii
simulacrum Gr. & St.
Pileolus Ehr.

- Aulacodiscus**
Barbadensis Ralfs.
Crux Ehr.
Rattrayi Gr. & St.
margaritaceus.
- Actinoptychus**
Simbirskianus A. S.
undulatus Ehr.
vulgaris Ehr.
splendens Ralfs.
constrictus Gr. & St.
nitidus Grun.
- Asterolampra**
vulgaris Grev.
decora Grev.
Uraster Gr. & St.
- Auliscus**
punctatus Bail.
Joynsoni A. S.
lacunosus Gr. & St.
Oamaruensis Gr. & St.
Ellipticus A. S.
fenestratus Gr. & St.
lineatus Gr. & St.
inflatus Gr. & St.
polyphemus A. S.
Stockhardtii Jan.
Barbadensis Grun.
confluens Grun.
Grevillei Jan.

10. Melosira

sulcata Ehr.
s. var. radiata
s. var. biseriata
s. var. coronata
Oamaruensis Gr. & St.
Thumii Pant.

Siberica

11. Pyxilla

dubia Grun.
hungarica Pant.

12. Goniothecium**13. Gyrodiscus**

Vortex O. W.

14. Mastogonia

Simbirskiana

15. Stephanogonia

Danica Ehr.
Simbirskiana Pant.
Californica Grun.

16. Biddulphia

Ruthenica O. W.
robusta Pant.
Longispina Grun.

17. Stictodiscus

Angulatus Grun.
Californicus Grev.

7. Melosira

Sulcata Ehr.
s. var. radiata
s. var. biseriata
s. var. coronata

8. Pyxilla

dubia Grun.
Kittoniana Grun.
aculeifera Grun.
carinifera Grun.
Johnsoniana Grev.

9. Goniothecium

odontella Ehr.
Danicum Grun.

10. Stephanogonia

Danica Ehr.

11. Biddulphia

Heibergii Grun.

12. Stictodiscus

Angulatus Grun.
Californicus Grev.
Morsianus A. S.

Hardtmanni Grev.
notatus Grun.
propinquus Gr. & St.
prunosus Bail.
racemosus Ralfs.

10. Melosira

sulcata Ehr.
s. var. radiata
s. var. biseriata
s. var. coronata
Oamaruensis Gr. & St.
Clavigera Grun.
Sol Ehr.
Truncata Grove.

11. Pyxilla

dubia Grun.
aculeifera Grun.
carinifera Grun.
Johnsoniana Grev.

12. Goniothecium

odontella Ehr.
Rogersi Bail. var.

13. Stephanogonia

Danica Ehr.

14. Biddulphia

sinensis
dissipata Gr. & St.
villata Gr. & St.
Tuomeyi Bail.
Oamaruensis Gr. & St.
pedalis Gr. & St.
lata Gr. & St.

15. Stictodiscus

Californicus nitida Gr. & St.

18. Cestodiscus

ovalis Grev.

19. Hyalodiscus

subtilis Bail.
laevis Ehr.

20. Podosira

hormoides Grun.

21. Arachnoidiscus

Simbirskianus Pant.
Russicus Pant.

22. Xanthiopyxis

oblonga Ehr.

23. Pyrodiscus

simplex Grun.

24. Rattrayella

Simbirskiana Grun.

25. Lepidodiscus

Elegans O. W.

26. Odontotropis

carinata Grun.
hyalina O. W.

27. Cheloniodiscus

Ananinensis Pant.

28. Raphoneis**13. Craspedodiscus**

Klavseni H. Grundler

14. Hyalodiscus

subtilis Bail.

radiatus Grun.

15. Podosira

hormoides Grun.

16. Xanthiopyxis

cingulata Ehr.

17. Odontotropis

carinata Grun.
hyalina O. W.

18. Janischia

Antiqua Grun.

19. Sceptroneis**16. Brightwellia**

Pulchra Grun.

17. Craspedodiscus

Coscinodiscus Ehr.

18. Hyalodiscus

subtilis Bail.

radiatus Grun.

Arcticus Grun.

maximus Petit.

19. Podosira

hormoides Grun.

20. Liradiscus

ovalis Grev.
marginatus Grove.
furcatus Grove.

21. Porodiscus

nitidus Grev.
hirsutus Gr. & St.

22. Arachnoidiscus

Lepidus N. E. Browne

23. Xanthiopyxis

oblonga Ehr.

24. Glyphodiscus

Oamauensis Grun.
stellatus Grun.

Fuchsii Pant.
amphicerus Ehr.
Sceptroneis marina Grun.

Gemmata H. V. H.
marina Grun.

29. Stephanopyxis

apiculata Ehr.
appendiculata Ehr.
Turris Grun.
ferox Grev.

20. Chaetoceros

hispidum (rest spores)

21. Stephanopyxis

apiculata Ehr.
appendiculata Ehr.
Turris Grun.
Antiqua Pant.

30. Coscinodiscus

Symbolophorous Grun.
Simbirskianus Grun.
concaus Greg.
Molleri A. S.
radiatus Ehr.
macroporous Grun.
excentricus Ehr.
elegans Grev.
obscurus A. S.
subvelatus Grun.
subconcaus A. S.
vigilans A. S.
lineatus Ehr.
griseus Grev.

22. Coscinodiscus

Symbolophorous Grun.
crassus Morsianus Grun.
concaus Greg.
Molleri A. S.
radiatus Ehr.
macroporous Grun.
antiquus Grun.
Oculus Iridis Ehr.
obscurus A. S.
subtilis Normani V. H.
robustus Grev.

23. Trochosira

ornata Grun.
mirabilis Kitt.

31. Pseudocerataulus

Kinkeri Pant.

32. Systephania

Diadema Ehr.
corona Ehr.

24. Euodia

gibba Bail.

25. Chaetoceros

species

26. Stephanopyxis

Grunowii Gr. & St.
appendiculata Ehr.
Turris Grun.
ferox Grev.
Barbadensis Grun.
apiculata Ehr.

27. Coscinodiscus

Symbolophorous Grun.
Oamaruensis Grun.
concaus Greg.
marginatus Ehr.
radiatus Ehr.
Thumi Cl.
debilis Grove.
elegans Grev.
Asteromphalus Ehr.
subtilis Ehr.

28. Kittonia

elaborata Gr. & St.

29. Cerataulus

marginatus Gr. & St.

30. Euodia

striata Gr. & St.
Janischii Grun.

31. Isthmia

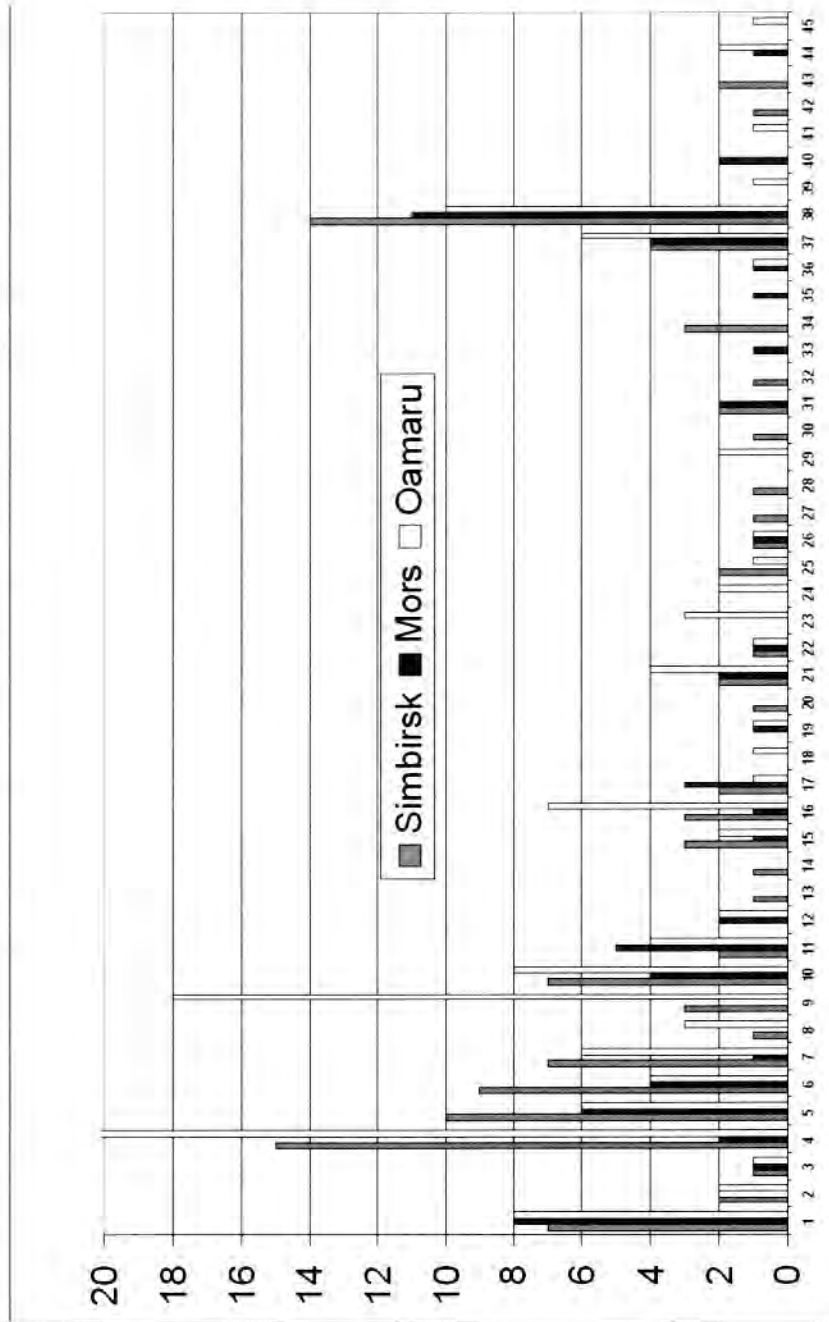
enervis Ehr.

This is an interesting comparison of widely distributed fossil samples. There is a minor commonality in species content, but a more significant difference between localities. This might

best be appreciated by considering the summary table below and the graph on the page following.

Count of species/genus/location

	Simbirsk	Mors	Oamaru
1	<i>Hemiaulus</i>	7	8
2	<i>Eunotogramma</i>	2	0
3	<i>Anaulus</i>	1	1
4	<i>Triceratium</i>	15	2
5	<i>Trinacria</i>	10	6
6	<i>Aulacodiscus</i>	9	4
7	<i>Actinoptychus</i>	7	1
8	<i>Asterolampra</i>	1	0
9	<i>Auliscus</i>	3	0
10	<i>Melosira</i>	7	4
11	<i>Pyxilla</i>	2	5
12	<i>Goniothecium</i>	0	2
13	<i>Gyrodiscus</i>	1	0
14	<i>Mastogonia</i>	1	0
15	<i>Stephanogonia</i>	3	1
16	<i>Biddulphia</i>	3	1
17	<i>Stictodiscus</i>	2	3
18	<i>Brightwellia</i>	0	0
19	<i>Craspedodiscus</i>	0	1
20	<i>Cestodiscus</i>	1	0
21	<i>Hyalodiscus</i>	2	2
22	<i>Podosira</i>	1	1
23	<i>Liradiscus</i>	0	0
24	<i>Porodiscus</i>	0	0
25	<i>Arachnoidiscus</i>	2	0
26	<i>Xanthiopyxis</i>	1	1
27	<i>Pyrodiscus</i>	1	0
28	<i>Ratrayella</i>	1	0
29	<i>Glyphodiscus</i>	0	0
30	<i>Lepidodiscus</i>	1	0
31	<i>Odontotropis</i>	2	2
32	<i>Cheloniodiscus</i>	1	0
33	<i>Janischia</i>	0	1
34	<i>Rhaphoneis</i>	3	0
35	<i>Sceptroneis</i>	0	1
36	<i>Chaetoceros</i>	0	1
37	<i>Stephanopyxis</i>	4	4
38	<i>Coscinodiscus</i>	14	11
39	<i>Kittonia</i>	0	0
40	<i>Trochosira</i>	0	2
41	<i>Cerataulus</i>	0	0
42	<i>Pseudocerataulus</i>	1	0
43	<i>Systephania</i>	2	0
44	<i>Euodia</i>	0	1
45	<i>Isthmia</i>	0	0



Policy Statement - Names, Synonyms and Taxonomy

The editors of this publication will not presume to alter names to 'conform to the current taxonomy'. Taxonomists maintain a state of flux and what might be correct today will be wrong tomorrow. Where a species name is given we (and authors) should where possible state the authority they are using when naming. This simply means that if someone else has subsequently renamed the species or re-categorised it in some fashion the basis for the identification will be clear.

Sales, Wants and Exchanges

Exchanges should be described accurately and fully. They should be FAIR.

Diatomaceous Earth - from Oamaru. Small samples exchanged for fossil earths from other locations. Mike Samworth Tel. 07801 819954 with details before sending.

Peragallo et Peragallo etc. - Little Imp CDs exchanged for well mounted diatoms, literature and cleaned samples. See publications list for offerings. Contact the publishers to discuss exchange.

Material from exotic locations - wanted. Contact Klaus Kemp (see advertisement). Exchange for slides of material supplied.

Old diatom mountants wanted. - Particularly Hyrax. Any condition. Contact Steve Gill. Tel. 024 76 641823, Diatom strew slides in exchange.

Filter material - Does anyone know of a supply of brass wire material suitable for diatom filters? If so contact the publishers, or contact the supplier and get them to contact the publishers.

Postcards - The publishers have printed a set of six colour postcards, 4 depicting diatoms and two polarising objects

These are available direct from the printers (see back cover).

The Questionable Fixation With High R.I.

by Mike Samworth, Steve Edgar and Steve Gill

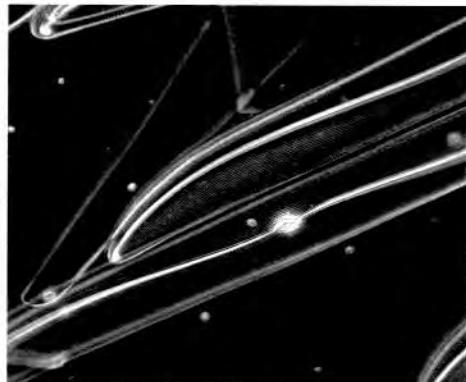
Many amateurs are put off mounting diatoms by the requirement to be mounted in as high a refractive index mountant as can be acquired. This can involve expense, which as most are aware, is something we go to extraordinary lengths to avoid.

Most of us have dabbled with slide making in one form or another, even if it's just butterfly scales in Canada Balsam and as a consequence we have stocks of relatively cheap mountants which unfortunately for those with a penchant for diatoms is considered to be 'mostly useless'. We would like to disavow you of this view and we're not talking about only mounting the highly siliceous forms such as *Arachnoidiscus* sp.

We have been using Phase Contrast techniques for examining live diatoms for quite a while and achieving quite reasonable results. Phase is nearly always considered to be the most useful when examining living material with cell contents. However, the principles involved with Phase should work with any materials that will interfere with light and particularly with diatom frustules whose silica structures can be considered as so many million prisms and lenses.

To test this premise we decided to mount *Gyrosigma balticum* in a number of normal R.I. mountants and photograph these using Phase Contrast and also ordinary Transmitted Light for

comparison. We also mounted one set in a high R.I. medium to act as a control. The results are set out over the next few pages.



Naphrax - Phase



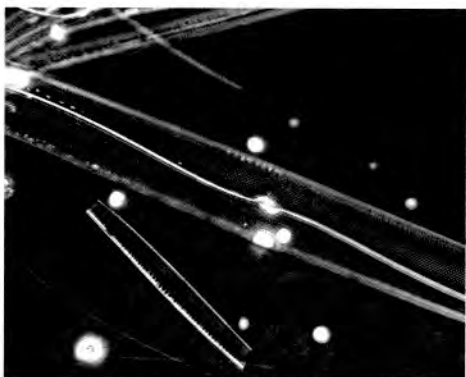
Naphrax - Transmitted



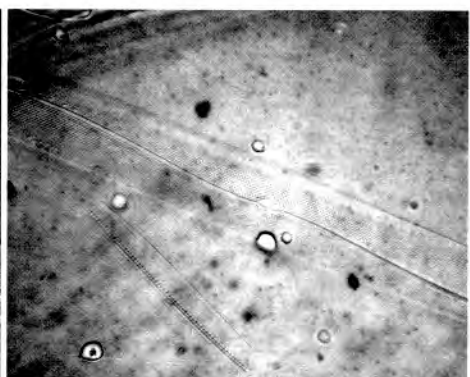
Gum Arabic - Phase



Gum Arabic - Transmitted



Canada Balsam - Phase

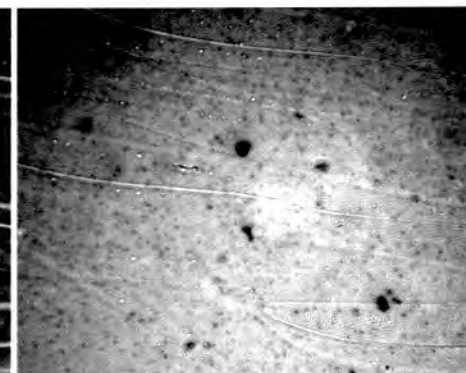


Canada Balsam - Transmitted

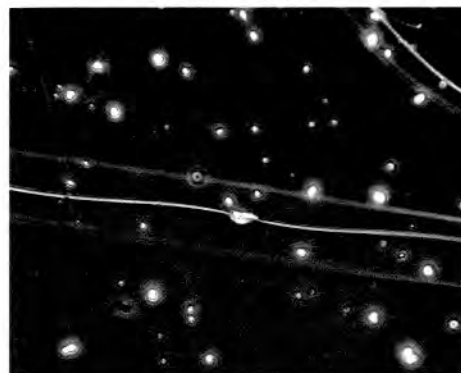
The photographs are taken with a Nikon CoolPix 990 and are all at x400.



Clear Nail Varnish - Phase



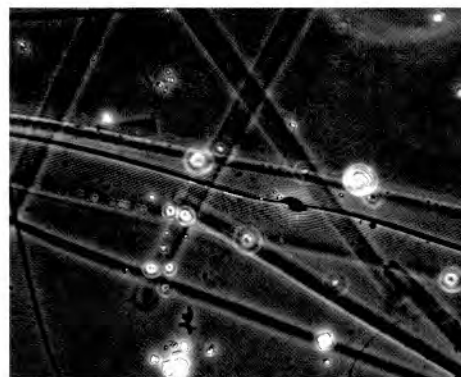
Clear Nail Varnish - Transmitted



Loctite Superglue - Phase



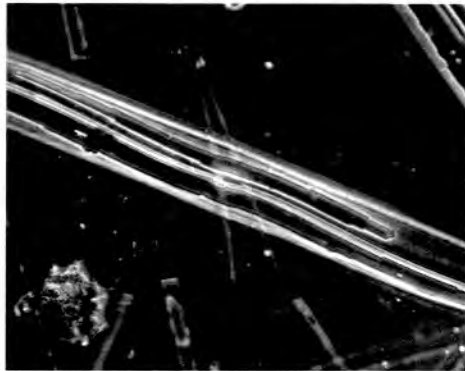
Loctite Superglue - Transmitted



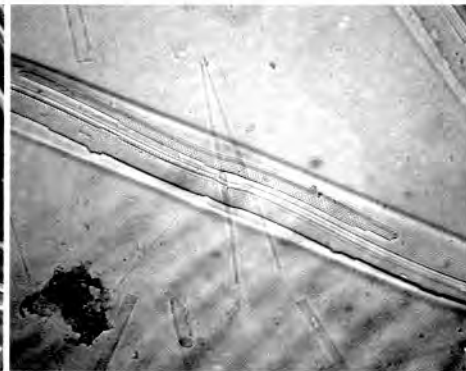
Gurr AquaMount - Phase



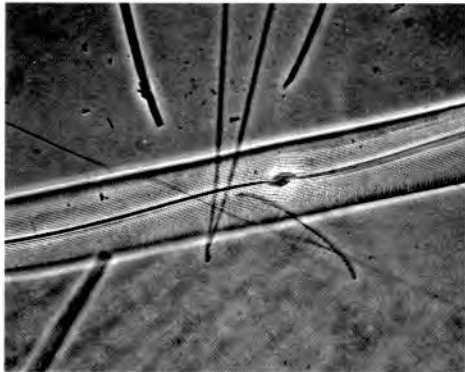
Gurr AquaMount - Transmitted



Polystyrene Cement - Phase



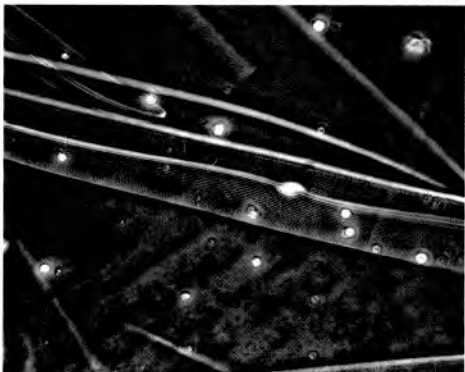
Polystyrene Cement - Transmitted



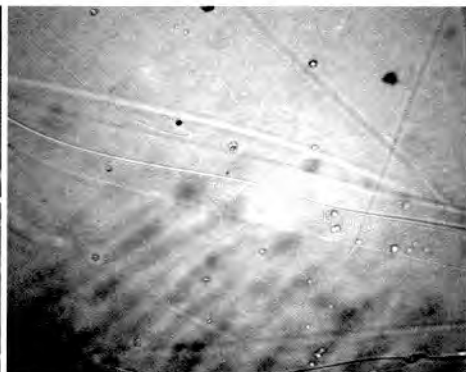
Shandon Aqueous Mounting Media - Phase



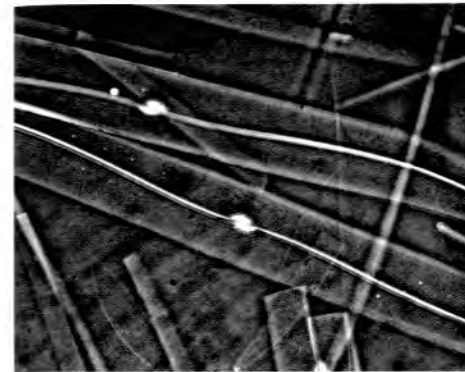
Shandon Aqueous Mounting Media - Transmitted



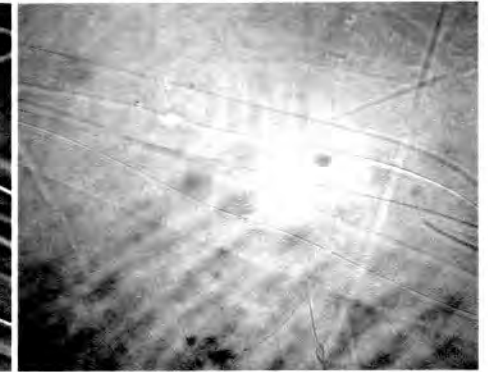
XAM - Phase



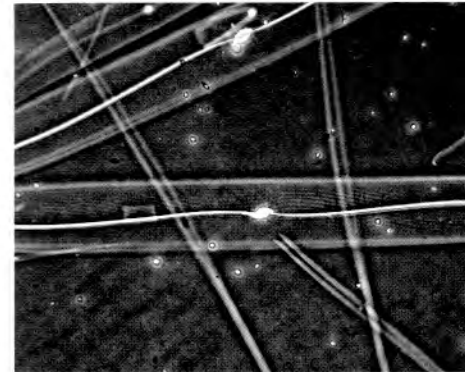
XAM - Transmitted



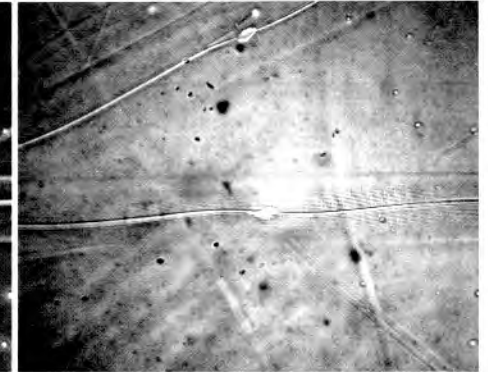
Xylene Substitute Mountant - Phase



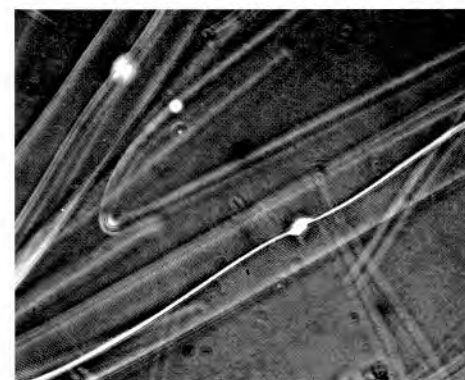
Xylene Substitute Mountant - Transmitted



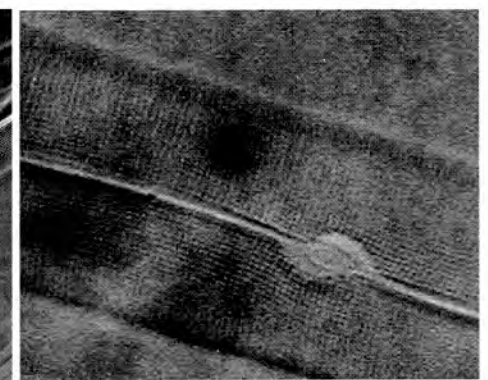
Ralmount - Phase



Ralmount - Transmitted



Eukitt - Phase



Eukitt - Transmitted



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BALAÏA - PARIS
Téléphone 997 33

ETABLISSEMENT
SPÉCIAL POUR
ISOLATIONS
CONTRE LE RAYONNEMENT
DE LA CHALEUR ET DU FROID

Section I
CALORIFUGES
EN TOUTS GENRES POUR L'INDUSTRIE

Section II
MATÉRIAUX ISOLANTS
POUR LE BÂTIMENT

The following extract from a French catalogue demonstrates the use of Diatomite as pipe lagging. The catalogue dates from between the wars.

Further entries refer to the use of Diatomite Briquettes, again for heat conservation.

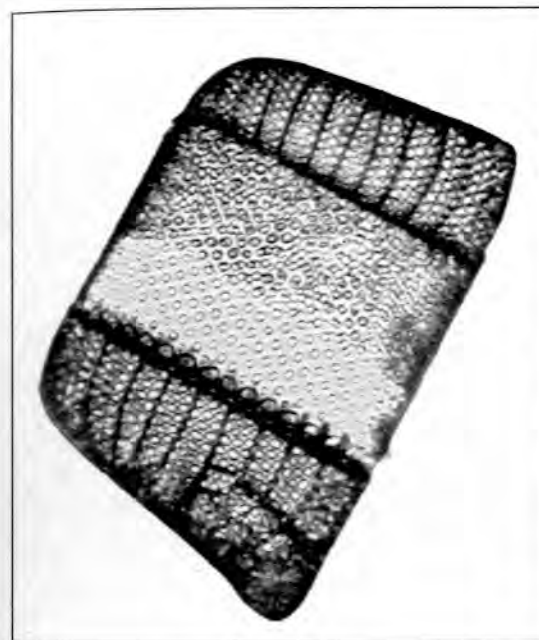
"Présentation des produits : matières protectrices de la chaleur (terre siliceuse dite "Kieselguhr"), coquilles-briques et pièces façonnées DIATOMITE, coquilles de liège, bourrelets calorifuges, REMANITE, liège aggloméré, etc..."

Records of past use of Diatomaceous Earth would be very interesting, as indeed would samples and analyses.

What products have you found it in?

The next issue of

The Amateur Diatomist



In the next Issue:-

Diatom Sample Set

Frederick Kitton

Field Microscopes

Sprung Girdle Bands

Ringing Slides

Comparative List - Oamaru

An Illustrated Diatom Glossary

Sales, Wants and Exchanges

Correspondence

Notes for contributors.

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If you wish to name anyone then get their permission first as seeing your name in print, and perhaps associated with something you would rather was forgotten, can come as something of a shock.

We hope that by adopting this relaxed approach to the submission of copy you will all break out the notepads and begin writing. What you have to say concerning Diatoms, mounting and Microscopy is of interest to us all.

"No one of us know all there is to know, and yet we do not know what we do not know." - Anon.