

Arthur Earland: the foraminiferal slide collection and correspondence at the University of St Andrews, Scotland

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ABSTRACT – Arthur Earland and D’Arcy Wentworth Thompson corresponded for a period of over fifty years between 1894 and 1946. During this interval Earland supplied Thompson with Foraminifera for his growing museum collection at the University of Dundee. Following Thompson’s move to the University of St Andrews in 1917, a new collection was started. The content, general state, and labelling of the 405 slides in this collection are described. Earland’s correspondence with Thompson provides a rare insight into the early twentieth century approach to scientific research by the interested amateur and sheds new light on the nature of Earland’s long working relationship with Edward Heron-Allen. *J. Micropalaeontol.* 20(2): 97–122, December 2001.

INTRODUCTION

Arthur Earland’s (1866–1958, Fig. 1) name is noted among British foraminiferal workers and is closely allied with his long-time research collaborator, Edward Heron-Allen (see Hodgkinson, 1989). His contribution to foraminiferal research stands out amongst a long line of nineteenth and early twentieth century British amateurs, including H. B. Brady (a chemist), J. M. Flint (a surgeon) and J. Wright (a grocer); all of

whom appear to have been captivated by the extraordinary architecture and beauty of these single-celled protozoans. This was the age of the so-called ‘English School’ (Haynes, 1981), and the belief that the foraminifera were a simple, plastic group, with species ranging through much of the stratigraphic record. Such views, together with the mechanistic ideas of D’Arcy Thompson (*On Growth and Form*, 1917) who, like Williamson (1858), believed that the diverse shape variations in, for example, the genus *Lagena* were not specific, greatly influenced the study of smaller foraminifera at this time.

This passion for foraminifera appears to have come from Earland’s early mentor, Edward Halkyard, whom he first met at the Royal Microscopical Society between 1885 and 1888, and with whom he was subsequently acquainted as a member of the Quekett Microscopical Club (Hedley, 1958; Morley-Jones, 1958). By 1891 he had published his first paper on foraminifera (Earland & Cooke, 1891). However, it is the publication in 1908 with Heron-Allen (Heron-Allen & Earland, 1908), of the first of 38 joint papers that included the description of over 200 new species and varieties of foraminifera (Hodgkinson, 1989), which marks the beginning of one of the most significant partnerships in foraminiferal research from this era.

THE EARLAND–THOMPSON SLIDE COLLECTION

The slide collection, which consists of 405 assorted slides, is housed in the Bute Building, University of St Andrews, in a wooden cabinet labelled ‘Foraminifera presented by Arthur Earland’. A summary of the material, comprising more than 1500 Foraminifera specimens, and labelling of the slides is given in the Appendix (Table A1). Much of the material is rather dusty, many of the slides remain uncovered and presumably are, as Earland supplied them, ‘mounted on the “Brady” principle’ (letter dated 11.06.1894). The latter, mostly consisting of cardboard slides (76 × 25 mm) with a single round cell and black background (Fig. 2), are generally uncovered and differ from the typical Heron-Allen and Earland Type Slides housed at the Natural History Museum, London (Hodgkinson, 1989). A few of this type are present and comprise an additional paper sheath and glass cover slide. Earlier slides are generally of wooden



Fig. 1. Arthur Earland (centre), pictured with G. P. Farran and R. Sothern, both seamen with the Irish Fisheries Board, aboard the Irish Fisheries Cruiser *Helga* (date unknown). This photograph is reproduced with the permission of the Keeper of Manuscripts, St Andrews University Library (ms. 45789).



Fig. 2. Examples from the Earland-D'Arcy Thompson Foraminiferal Slide Collection. All hand-written by Earland. The reference on the slide prepared as a Christmas greeting in 1935 to 'the old ship' is the F.C. *Goldseeker*, which was replaced in 1922 by the *Explorer* (Rice, 1986). Actual slide dimensions 76 × 25 mm.

construction, e.g. *Astrorhiza limicola* collected off Lerwick in August, 1893 (Fig. 2).

In addition to the 'Earland Collection' labels, various other forms of printed slide labelling are present in this collection, notably 'selected by Charles Elcock', 'Joseph Wright's Collection', and 'G. W. Chaster', but it is not clear whether all the slides originated from Earland. Hodgkinson (1989) notes that some of the earlier slides in the Heron-Allen and Earland Type Slide collection are marked 'Charles Elcock, Belfast' and were probably gifts. In the case of *Psammosphaera fusca*, which is present on a slide labelled 'selected by Charles Elcock' (Table A1), it seems highly unlikely that a species described by Heron-Allen and Earland from the North Sea cruises of the Fisheries Cruiser (F.C.) *Goldseeker* (Fig. 3) would have been supplied by Elcock. However, Chaster and Wright may

have independently supplied Thompson with material for his collection.

Many of the specimens in this collection could potentially be regarded as topotype material (i.e. specimens that come from the same locality as the holotype) or, more significantly in the case of Heron-Allen and Earland's work, syntype (where no holotype was defined from the original type material). Hodgkinson (1989) details the sense in which 'type' was often used in reference collections of that time and also notes, from a letter of about the same period, that it was Earland who 'provided identifications, described new species, supervised artists and made up the plates'. Given that Earland himself picked 'representative' material for Thompson, the significance and value of this collection deserves wider recognition and further examination.



Fig. 3. The Fisheries Cruiser *Goldseeker* in the Caledonian Canal, Scotland (date unknown). Built in 1900, weighing 206 tons gross, 116 ft long and 21 ft beam, the F.C. *Goldseeker* undertook biological and hydrographical observations in the northern North Sea and in the Faroe-Shetland Channel as part of the British contribution to the International Council for the Exploration of the Sea (Rice, 1986). This photograph is reproduced with the permission of the Keeper of Manuscripts, St Andrews University Library (ms. 45789).

THE EARLAND-THOMPSON CORRESPONDENCE

10 Glenwood Rd.,
Catford, S.E.
June 11, 1894.

My dear Sir,

I have to acknowledge the receipt of your letter of the 6th. inst. I should be very pleased to send you some slides of Foraminifera, but have none or very few on hand as I make nearly all my exchanges in unmounted named specimens. I enclose you a list of species all named and localized of which I can supply specimens, and if your Museum authorities like to defray the cost of the slips for mounting, I shall be very pleased to prepare you 100 or 200 representative forms from the list.

They would be mounted on the 'Brady' principle in sunk cardboard cell slides, which are kept turned upside down in the cabinet. My own collection is mounted entirely on this plan which has the advantage of being simple of access and more lasting than a glass mount if kept in a dry place.

If you don't feel inclined to accept the offer, please return my list, and I send you a type slide of the principal genera in exchange for your *Astrorhizidae* and *Rhabdammina*.

Yours very truly,

A. Earland
D'Arcy W. Thompson Esq. Quekett Microscopical Club

The foregoing is the first of 125 letters written by Arthur Earland to the polymath Sir D'Arcy Wentworth Thompson,

during the period 1894 to 1946, which are housed in the Library of the University of St Andrews (Appendix, Table A2). This and other quotations are published here by permission of the Keeper of Manuscripts, St Andrews University Library. The collection also contains a smaller number of letters from Thompson, but these are not considered here. The distribution of correspondence throughout the period is uneven, about half the letters being written before 1910, and very few dating from the 1920s and 1930s.

Earland's letters span a large part of his life, the correspondence commencing when he was 28 in 1894 and ending in 1946, 12 years before his death at 91 years of age (Thompson died in 1948). During this period Earland lived at Catford and Watford, whilst working in the Savings Bank Department of the General Post Office (becoming Principal in charge of War Loan Redemptions in 1920); in Hastings and Edinburgh after his retirement; and finally in Broughty Ferry (near Dundee) with his daughter Iris Ramsay and her family. Thompson was Professor of Biology at the University of Dundee where, amongst other pursuits, he established a museum; hence Earland's initial involvement with him as a supplier of mounted Foraminifera specimens. In 1917 Thompson moved to the University of St Andrews and Earland, supposing the museum collection assembled over so many years to have been left behind in Dundee, offered to supply some more mounts for teaching purposes: 'I have still some of your slides left so they would cost you nothing and me nothing more than the trouble of picking out specimens as I come across them.' (2.7.1921). It seems probable that this second collection comprises the 405 slides of Foraminifera referred to above, which were stored together with about 90 diatom slides in one cabinet. (The diatom slides are currently on loan to the Royal Botanic Garden, Edinburgh.)

The correspondence is primarily concerned with Earland's work undertaken for Thompson: the examination of Foraminifera and the provision of 'types', mainly through the cleaning of material supplied by Thompson from Arctic waters (Greenland), the *Challenger* expedition and, principally, the North and Norwegian seas. Earland's own early collection contained few deep-water gatherings, mainly comprising coral sands and mud of littoral deposits, and he was keen to extend it: 'I am always glad of material from any locality, recent or fossil, which contains Forama. as I make a special study of the distribution of species, and am consequently glad of stuff containing even the commonest forms' (27.10.1894). This concern with distribution continues and letters from 1908, for instance, contain interesting ideas formulated by Earland on the basis of collections from stations in the North Sea. These were summed up thus (23.10.08):

The North Sea foraminifera were originally cold or arctic in type; they now present a mixture of cold and warm types; the warm types have immigrated into the area around the north of Scotland being most numerous in the area round the Pentland Firth and in the North of Moray Firth; they have worked their way southwards displacing the older cold fauna which still lingers on in some few localities where it is probably protected by local conditions from the influx of warm Atlantic water.

My boys have hearted a good deal with the few but as soon as I am able to work again I will send you a few specimens which will illustrate some of the points I refer to & you can measure them.

ms 28106
314 Franklin Road
Watford
7 March 1915

My dear Professor

Ned has forwarded to me your two letters of the 20th and 25th ulto. I suppose you have him out of his depth as bibliography is more in his line than biometrics. Anyhow I will try to answer your queries & would have done so before but have been laid up with flu.

i) Measurements are probably of less value in the forms than in other orders. The range of size in most species is so great that it is quite likely that the average of a series would be quite abnormally large or small.

Size appears to depend on depth & food conditions. A species may occur abundantly in shallow & deep & shallow water dredgings and subject to very little variation in size over large areas. Call its dimensions X.

Take the same species from a dredging on or near the "mid line" - say Gillskeller Str IX or XXXIX and you may find the ~~specimens~~ ^{specimens} occurring up to dimensions 5X or even 10X. Which are you to regard as normal dimensions?

On the other hand you might find the same species occurring in a diminutive & gregarious form as compared with shallow water specimens. This I take it would merely prove that the animal could not adapt itself to the depth & pressure in spite of more favorable conditions for food.

Of course there is what you may call an average dimension for each species and in any particular gathering this will be fairly constant, so that if you pass your material through a series of sieves, one particular sieve will stop nearly all the specimens. Only young or immature specimens will pass through. This particular sieve, and only a few abnormally large specimens would be retained by the next coarser sieve of the series.

Now as to your "floating drift" theory. This is an ingenious mechanistic theory but it won't stand because *Leptena* is near a pelagic or surface form but always benthic. The genus is of course worldwide in distribution & ranges from shore sand to the greatest depths, but the shallow water forms are few & small compared with the deep water species. Most of the specimens found in shore sands are I think dead shells leaved from deeper water.

I have watched living *Leptena*, they lie on their sides with dimensions ~~same~~ ^{as} ~~and~~ ^{experimentally suggested} i.e. the amount of protoplasm exuded from the neck is small & they do not wave about much as the big *Melobesia* do.

So far as I have been able to observe the protoplasm is extended from the neck only, not from the tubules all over the flaps. But there may be an extension of protoplasm from these tubules speaking over the outer surface in a thin layer, it does not whittle away in pseudopodia from the surface of the flaps, only from the neck. The protoplasm is yellow

ms. 28106

or orange in colour & free from metaphlastic bodies, so it seems that food must be captured & digested outside the shell.

I think I know the what you have in mind when you write that you have read somewhere that many forms actually do hang from the surface of the water. Siddall in his paper refers to skimming forams from the surface of tidal pools - and I think Brady in his Tidal Rivers paper refers to forams in the surface scum of pools. But these have never been carried up to the surface by the gas bubbles formed by the diatoms which overlie on the surface mud of pools and lagoons. The diatoms & all the surface mud forms get swept together & go up in a felled scum. I have often seen it swept but its purely accidental & outside the control of the forams.

Of course as you know there are surface living foraminifera but they are all truly pelagic. No trace of rare occurrence to find them at all in ~~Shallow~~ ~~littoral~~ or English seas though they are more numerous off the N. & S.W. of Ireland. I thought you after year on the Gipsy but very rarely come across more than an occasional specimen & always small. With a few exceptions all these pelagic forms, (there are very few species of the habit) belong to the Globigerinidae & are their power of flotation to the exceedingly long spines with which they are endowed. The few pelagic species which are not spinous are I believe furnished with oil globules like the Radiolaria to alter their specific gravity. One pelagic form Cybicides has a definite gas chamber or float, first worked out & described by myself in 1895. I am certain no forams or any member of the Sargassoidae has ever been recorded as pelagic.

Apart from their life history I think the various shapes & characters of the forams would rule out any hanging drop theory of construction. The theory would fall in all right with such species as *L. globosa* - *L. laevis* - *operculata* & where the shape suggests a drop. But how would the drop theory work when the globe of *globosa* & *laevis* of forams draws gradually out until it becomes a long fusiform or even tubular body as in *diatoma*, *gracilis*, *longata* &c. Even these might be possible of mechanical explanation as they are circular in section. But what of the enormous group of compressed forams, often identical in plan with the circular forms but thin & scale-like in section? You could not have a hanging drop with a section & could you.

No I don't see how you are going to cover the variable forms of forams with such a theory. There are certain genera whose forms I have always regarded as spheroidal or mechanical lines - *Globosina* for instance - but for that I can see no clue.

There is one point I should like you to think over & see if you can give any explanation for - I mean the delicate & often beautiful surface markings of some of the small forams. They are extremely varied, often very minute, have no apparent use or purpose & so far as I can see could not have been formed under any evolutionary scheme for they couple of any service to the animal.

I should like immensely to have a Symposium with you sometime on this subject. All my collections are now in the big joint collection at Hamilton Terrace but I could show you things there that I would take you a month of Sunday to explain. I hope you are keeping well.

Kind regards
Arthur Earland

ms. 28106

or orange in colour & free from metaphlastic bodies, so it seems that food must be captured & digested outside the shell.

I think I know the what you have in mind when you write that you have read somewhere that many forms actually do hang from the surface of the water. Siddall in his paper refers to skimming forams from the surface of tidal pools - and I think Brady in his Tidal Rivers paper refers to forams in the surface scum of pools. But these have never been carried up to the surface by the gas bubbles formed by the diatoms which overlie on the surface mud of pools and lagoons. The diatoms & all the surface mud forms get swept together & go up in a felled scum. I have often seen it swept but its purely accidental & outside the control of the forams.

Of course as you know there are surface living foraminifera but they are all truly pelagic. No trace of rare occurrence to find them at all in ~~Shallow~~ ~~littoral~~ or English seas though they are more numerous off the N. & S.W. of Ireland. I thought you after year on the Gipsy but very rarely come across more than an occasional specimen & always small. With a few exceptions all these pelagic forms, (there are very few species of the habit) belong to the Globigerinidae & are their power of flotation to the exceedingly long spines with which they are endowed. The few pelagic species which are not spinous are I believe furnished with oil globules like the Radiolaria to alter their specific gravity. One pelagic form Cybicides has a definite gas chamber or float, first worked out & described by myself in 1895. I am certain no forams or any member of the Sargassoidae has ever been recorded as pelagic.

Fig. 4. Letter dated 7.3.1915 from Earland to D'Arcy Thompson (ms. 28106).

By 'local conditions' Earland meant submarine topographic ridges.

Earland was also intrigued by the occurrence of chalk fragments in some Moray Firth (Kinnaird Deep) dredgings where he understood that only older rocks should occur ('It is rather too much to believe that they have traveled with the drift from say Yorkshire or across the North Sea') (1.1.1908). Discussions with an interested geologist, Mr W. Hill, resulted in a paper being written on the topic (Hill, 1915). Another topic of concern, which Earland referred to Thompson for help, was the

minute chitinous spherical body which often occurs in myriads in N. Sea dredgings . . . I think they are probably Infusoria (Peridiniaceae) but have spent some time at B. Museum with Dr. Colman's assistance without result. They agree in dimensions with the well known 'spheres' of the Chalk which are certainly not forams. (9.1.1909)

Thompson helped Earland by supplying some of the necessary equipment such as metal sieves and silk gauze used in the separation and extraction of specimens by 'rocking and spinning'. In the early years of this century they debated the merits and demerits of Earland's manual technique and Thompson's new centrifugal method of separation (Earland remaining unimpressed by the latter). Copies of papers on Foraminifera were also supplied by Thompson and, later, a cabinet of drawers for cleaned material. Publication of some of Earland's reports was also assisted by Thompson (e.g. letter of 3.7.1911).

Amongst the most detailed letters are the accounts of Earland's North Sea voyages on the hydrographic research vessel *Goldseeker*, arranged by Thompson as head of the International Committee for Investigation of the North Sea (Scotland). Earland greatly enjoyed these trips taken during annual leave from 1907 onwards until 1910 or 1912 as a break from 'the monotony of life in a Government office', and looked back on them as 'amongst the most enjoyable days of my life' (25.10.1944). He recognized the value of seeing samples being collected and better appreciated the practical problems. Refinement of the techniques and equipment used resulted and new dredging stations were added to the agenda. Earland's powers of observation emerge in his description of one specimen recovered from North Sea station 11A,

a pebble covered with a colony of *Saccammina sphaerica* in the sessile stage & with a young brood of individuals surrounding the colony. This is a most valuable find from a biological point of view & is doubly interesting for the reason that the large individuals are covered with an armour of sponge spicules built in for defensive purposes with the points radiating in all directions. (13.8.1909)

Findings in the North Sea on the geographical ranges of some types led him to query some published ideas on habitats (water depth and temperature, in particular). He also questioned Rhumbler's hypothesis that *Saccammina sphaerica* was the adult form of *Psammosphaera fusca*, since he knew that the two did not occur together in *Goldseeker* dredgings (20.7.1910).

The letters from around this time show that Earland was much concerned with the form of the foraminiferal test and, especially how and why they developed particular structures. He

believed that certain forms could only imply the existence of 'selective or discriminative powers', a kind of 'intelligence', as opposed to the 'mechanistic theory of construction involving simply gravity and surface tension' (3.7.1911 and 19.7.1911). Later (7.3.1915, Fig. 4), he asks Thompson to consider, and offer an explanation for,

the delicate & often beautiful surface markings of some of the small Lagenae. They are extremely varied, often very minute, have no apparent use or purpose & so far as I can see could not have been formed under any evolutionary scheme for they can hardly be of any service to the animals.

Doubtless he was not the first or last to ponder that particular question.

Much of Earland's work on material gathered on the *Goldseeker* voyages appears to have been published between 1912 and 1917 under the joint authorship of Edward Heron-Allen and Earland (Hodgkinson, 1989). Heron-Allen collaborated amicably with Earland for nearly 30 years, the former financing the essential illustrations of new forms for publication, and working together with Earland on their large joint collection of foraminifera housed (certainly in 1915) at Heron-Allen's London home in Hamilton Terrace. After removal of the collection to the British Museum (in the 1930s?) Heron-Allen and Earland ceased to collaborate, a source of regret to Earland at least, forming a final and rather bitter schism for which he later accepted no blame (5.9.1933). Unfortunately, many of the later letters after Heron-Allen's death in 1943 are largely concerned with this episode. However, even in the mid-1940s, Earland was still sending slides to Thompson and discussing types and methodology.

Throughout the correspondence there are references to other aspects of Earland's life and career. For several years from 1903 on, he was Hon. Secretary of the Quekett Microscopical Club, responsible for arranging meetings for about 100 members every two weeks throughout the season. Later that decade he mounted an exhibition of Arenaceous Foraminifera at the Club, only to suffer the loss of one of his best specimens of *Technitella thompsonii* (named by Earland after D'Arcy Thompson), a species which he believed demonstrated the 'selective power' of certain Foraminifera particularly well (20.3.1909). (An account of the lecture and exhibition is contained in the Proceedings of the meeting on 1.1.1909, *J. Quekett Microscopical Club*, **10**, 479-483.)

There are references in the letters to Mrs Earland and at least three children. One son, Vivian, was at the age of nearly 16 ('At present he seems to have no tastes beyond football etc.') taken on the *Goldseeker* in an effort to broaden his horizons, since 'Watford is a very little world and it is almost all he can imagine now' (23.5.1909). The cure appears to have been effective despite much seasickness, for within ten years Vivian was a successful tea and rubber planter in Ceylon.

Both Earland and Thompson seem to have suffered from rather frequent minor health complaints, such as colds and weak chests, to the extent of their work being interrupted. During the First World War Earland had little time for anything except his official duties, which occupied 12 and often 14 hours a day. In 1920 he could report that he had time to 'do a good deal in winter weekends with Allen' (19.10.1920).

The fact that he continued at all is a measure of Earland's dedication to his subject. In earlier, and presumably more leisurely, days he observed that 'this microscopic examination is a long business and results often bulk very small compared with the time consumed, especially when the material is poor' (26.8.1907), but it is unlikely that he ever regretted those hours spent at the microscope. His honesty regarding his own abilities as a young man is seen in response to Thompson's request to describe some new Arctic faunas from the *Challenger* expedition: 'my experience is not sufficiently extensive to make sure of it being done properly and unless properly done it is better left alone' (17.4.1900). Earland did undertake this task, and many more, with Thompson's encouragement; presumably the study of Foraminifera would have been much the poorer if this fruitful correspondence had never occurred.

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Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
'A souvenir of the old ship with good wishes for Christmas 1935'	Fishery Cruiser <i>Goldseeker</i> . International North Sea Commission. Haul 172, Station XVA, cold area Faroe Channel	1230 m		Arthur Earland	18.2.1	C	Many
<i>Alveolina</i>	EOCENE			Text, wood slide Selected by Charles Elcock	2.3.9 19.2.1	NC C	1 2
<i>Alveolina boscii</i>	RECENT			Arthur Earland	18.3.6	NC	14
<i>Alveolina boscii</i> Defrance	Anchor mud, Perim Isl., Red Sea		Coral mud				
<i>Alveolina boscii</i>	Perim Harbour, Red sea			Defrance	13.2.2	NC	3
<i>Ammodiscus gordialis</i>	Off Oban, W. Scotland	18-30 fms		Arthur Earland	5.2.2	NC	2
P. & J.							
<i>Ammodiscus gordialis</i>	Lerwick VIII/93			Text, wood slide	5.2.3	NC	1
Parker & Jones							
<i>Ammodiscus incertus</i>	Oban, W. Scotland	18-30 fms		Arthur Earland	5.2.5	NC	2
d'Orbigny							
<i>Amphistegina</i>	MIOCENE	Nr Vienna			18.3.1	NC	1
<i>Amphistegina</i>	MIOCENE	Nufzdorf nr Vienna			18.3.2	NC	2
<i>Amphistegina</i>	MIOCENE, Nufzdorf, Vienna				18.1.5	NC	1
<i>Amphistegina lessonii</i>	Off Havannah, Cuba	6 fms	Coral sand	Arthur Earland	18.1.6	NC	4
d'Orbigny							
<i>Articulina conico-articulata</i>	Barbados and Ch. Stn, Raine Isl., Torres Sts	Shallow water and 155 fms		No text, wood slide	2.1.2	NC	4
Batsch							
<i>Articulina sagra</i> d'Orbigny	Bermuda		Coral (anchor) mud	Arthur Earland	2.1.3	NC	3
<i>Articulina sulcata</i> Reuss	Cape Cruz, Cuba	70 fms	Coral mud	Arthur Earland	2.1.1	NC	4
<i>Astrorhiza arenaria</i> Norm.	Lervik VIII/93			Text, wood slide	3.1.3	NC	1
<i>Astrorhiza arenaria</i> Norm.	Lervik VIII/93			Text, wood slide	3.1.4	NC	1
<i>Astrorhiza arenaria</i>	Stn 39B, Haul 6830, Fry Net, <i>Goldseeker</i>	152 m		No text, wood slide	3.2.5	NC	6
Norman							
<i>Astrorhiza limicola</i>	Lervik 8/93		Sand	Text, wood slide	3.1.1	NC	1
<i>Astrorhiza limicola</i>	Lervik VIII/93		Sand	Text, wood slide	3.1.2	NC	1
<i>Astrorhiza limicola</i>	Lervik 8/93			Text, wood slide	3.1.5	NC	1
<i>Astrorhiza limicola</i>	Lervik 8/93			Text, wood slide	3.1.6	NC	1
<i>Astrorhiza limicola</i>	Lervik VIII/93		Sand	Text, wood slide	3.2.4	NC	1
<i>Bathysiphon filiformis</i> Sars	Off Valentia	426 fms		Text, wood slide	3.2.2	NC	4
<i>Bigenenerina capreolus</i>	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	G. W. Chaster	7.3.5	NC	2
d'Orbigny				Arthur Earland			
<i>Bigenenerina digitata</i>	S. W. Ireland	110 fms		Arthur Earland	7.3.1	NC	4
d'Orbigny							
<i>Bigenenerina digitata</i>	<i>Lord Bandon</i> , log 16, off Ft SKillig	120 fms		Joseph Wright's Collection	7.3.3	NC	4
d'Orbigny							
<i>Bigenenerina nodosaria</i>	S. W. Ireland	200 fms	Grey mud	Arthur Earland	7.3.2	NC	5
d'Orbigny							
<i>Bigenenerina nodosaria</i>	<i>Lord Bandon</i> , log 16, off Ft SKillig	120 fms		Joseph Wright's Collection	7.3.6	NC	1
d'Orbigny							

Table A1. Summary table listing the contents of the Earland-D'Arcy Thompson Foraminiferal Slide Collection at the University of St Andrews.

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Bigenenerina pennatula</i> Batsch	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	7.3.4	NC	2
<i>Bigenenerina pennatula</i> Batsch	Off Valentia, Ireland	426 fms		G. W. Chaster	7.3.7	NC	5
<i>Biloculina bulloides</i> d'Orbigny	Off Valentia	426 fms		G. W. Chaster	1.1.1	NC	1
<i>Biloculina comata</i> Brady	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	9.1.6	NC	3
<i>Biloculina comata</i>	RECENT			Selected by Charles Elcock	1.1.3	C	2
<i>Biloculina irregularis</i> d'Orbigny	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	9.1.7	NC	3
<i>Biloculina ringens</i> Lamark	<i>Lord Bandon</i> log 17, off Ft SKillig	110 fms		Joseph Wright's Collection	1.3.8	NC	1
<i>Biloculina sphaera</i> d'Orbigny	<i>Lord Bandon</i> , log 17, off Ft SKillig	110 fms		Joseph Wright's Collection	1.3.6	NC	4
<i>Bolivina beyrichi</i> Reuss and var. <i>alata</i> Seguenza	Ch. Stn, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.2.6	NC	7
<i>Bolivina beyrichi</i> Reuss var. <i>alata</i> Seguenza	Cebu, Phillipine Isl.	120 fms	Volcanic mud	Arthur Earland	8.2.4	NC	5
<i>Bolivina costata</i> d'Orbigny	Andaman Isl.	45 fms	Coral sand	Arthur Earland	8.2.7	NC	4
<i>Bolivina costata</i> d'Orbigny	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.2.8	NC	4
<i>Bolivina dilatata</i> Reuss	S. W. Ireland	110 fms		Arthur Earland	8.2.5	NC	12
<i>Bolivina tortuosa</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.2.9	NC	4
<i>Bulimina affinis</i> d'Orbigny (passing into <i>ovata</i> d'Orbigny)	Albatross Stn 2106, North Atlantic	1497 fms		No text, wood slide	8.3.1	NC	5
<i>Bulimina convoluta</i> Williamson	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.1.7	NC	2
<i>Bulimina inflata</i> Seguenza	Ch. Stn, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.1.8	NC	1
<i>Bulimina marginata</i>	RECENT			Selected by Charles Elcock	8.3.2	C	3
<i>Bulimina pyrula</i> d'Orbigny	Cebu, Phillipine Isl.	120 fms	Volcanic mud	Arthur Earland	8.1.2	NC	0
<i>Bulimina pyrula</i> d'Orbigny passing into <i>ovata</i> d'Orbigny	Albatross Stn 2106, North Atlantic	1497 fms		No text, wood slide	8.1.5	NC	5
<i>Bulimina subcylindrica</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.1.6	NC	3
<i>Bulimina subteres</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.1.3	NC	2
<i>Bulimina williamsoniana</i> Brady	Macassar Sts	45 fms	Coral sand	Arthur Earland	8.1.4	NC	6

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
C. Zoology							
<i>C. zoology</i>				Text, wood slide (planktonics)	9.3.1	NC	6
<i>C. Zoology</i>					13	NC	6
<i>C. zoology</i>					18.2.4	NC	5
C. zoology planktics					13	NC	4
<i>Calcarina defrancii</i>	Java Sea	45 fms	Coral sand	d'Orbigny	13	NC	5
<i>Calcarina defrancii</i>	Andaman Isl.	45 fms		d'Orbigny, G. W. Chaster	16	NC	3
	RECENT			Selected by Charles Elcock	20	NC	3
<i>Calcarina spengleri</i>				Selected by Charles Elcock	19.2.2	C	1
<i>Carpentaria proteiformis</i>	Java Sea	45 fms	Coral sand	Goes	15	NC	3
<i>Carpentaria utricularis</i>	Off Delos	10 fms		Carter, G. W. Chaster	15	NC	1
<i>Carpentaria?</i> sp.	Java Sea	45 fms	Coral sand		15	NC	3
<i>Cassidulina laevigata</i>	RECENT			Selected by Charles Elcock	22.1.6	C	7
<i>Cassidulina</i> (= <i>Orthoplecta</i>)	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.2.11	NC	1
<i>clavata</i> Brady	S. W. Ireland	110 fms		Arthur Earland	8.2.10	NC	10
<i>Cassidulina laevigata</i>				Arthur Earland	8.2.2	NC	0
<i>Chilostomella ovoidea</i>	Cebu, Phillipine Isl.		Volcanic mud				
Reuss							
<i>Clavulina angularis</i>	Anchor sand, Bermuda		Coral sand		7.3.9	NC	6
d'Orbigny							
<i>Clavulina communis</i>	Albatross Stn 2668	294 fms		No text, wood slide	7.2.8	NC	4
d'Orbigny							
<i>Clavulina communis</i>	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	7.3.8	NC	3
d'Orbigny							
<i>Clavulina cylindrica</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	7.3.10	NC	3
Hantken							
<i>Clavulina parisiensis</i>	RECENT			Selected by Charles Elcock	19.2.4	C	1
<i>Cornuspira carinata</i> Costa, sp.	Off Valentia, Ireland	370 fms		G. W. Chaster	2.2.1	NC	2
<i>Cornuspira foliacea</i>	Salona Bay	10–15 fms					
Philippi					2.2.2	NC	1
<i>Cornuspira foliacea</i>	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	2.2.3	NC	1
Philippi							
<i>Cristellaria aculeata</i>	Culebra Isl., W. Indies, Challenger Sm. 24	390 fms	Pteropod ooze	d'Orbigny	11	NC	2
<i>Cristellaria acutauricularis</i>	Challenger Stn, Rain Isl., Torres Sts	155 fms		Fichtel & Moll	11	NC	1
<i>Cristellaria calcar</i>	Albatross Stn 2420	104 fms		Linne	11	NC	2
<i>Cristellaria costata</i>	Prob. Torres Straits			Fichtel+Moll	11	NC	1
<i>Cristellaria costata</i>	Challenger Stn 185, Rain Isl., Torres Sts	155 fms		Fichtel & Moll	11	NC	2

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Cristellaria crepidula</i>	Southport Shore			G. W. Chaster	18.3.3	NC	3
Fichtel and Moll							
<i>Cristellaria cultrata</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Montfort	11	NC	4
	Challenger Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Montfort	11	NC	3
<i>Cristellaria echinata</i>	Prob. Torres Straits			d'Orbigny	11	NC	2
<i>Cristellaria gemmata</i>	Challenger Stn 185, Raine Isl. Torres Sts	155 fms		Brady	11	NC	3
<i>Cristellaria italica</i>	Challenger Stn 24, Culebra Isl. W. Indies	390 fms	Pteropod ooze	Defrance	11	NC	1
<i>Cristellaria reniformis</i>	Albatross Stn, 2106	1497 fms		d'Orbigny	11	NC	1
<i>Cristellaria rotulata</i>	Challenger Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Lamarek	11	NC	3
<i>Cristellaria schoenbachi</i>	Challenger Stn, Raine Isl., Torres Sts	155 fms		Reuss	11	NC	1
<i>Cristellaria tennis</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Bornemann	11	NC	3
<i>Cristellaria tricarinnella</i>	Off Zebru, Philippine Isl.	120 fms		Reuss & G. W. Chaster	11	NC	1
<i>Cristellaria tricarinnella</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Reuss	11	NC	3
<i>Cristellaria variabilis</i>	S. W. Ireland	390 fms	Grey ooze	Reuss	11	NC	4
<i>Cristellaria variabilis</i>	Albatross Stn 2659	509 fms		Reuss	11	NC	3
<i>Crithionina mamilla</i>	Stn 39B, Haul 6830, Fry Net, <i>Goldseeker</i>	152 m		No text, wood slide	3.2.5	NC	6
(Goes)—attached to <i>A. arenaria</i>							
<i>Crithionina mamilla</i>	Stn 39B, Haul 6830, Fry Net, <i>Goldseeker</i>	152 m		No text, wood slide	3.1.7	NC	1
(Goes)—attached to <i>S. sphaerica</i>							
<i>Crithionina pisum</i>	<i>Helga</i> SR 364, S. W. Ireland	620–695 fms		Goes, Earland Collection	20	C	4
<i>Cyclammima cancellata</i>	Off Valentia	370 fms		G. W. Chaster	5.3.1	NC	2
H. B. Brady							
<i>Cymbalopora</i>	Raine Isl., Torres Sts	155 fms	Coral sand	Arthur Earland	19.1.4	NC	3
(<i>Tretomphalus</i>) <i>bulloides</i>							
<i>Cymbalopora bulloides</i>	RECENT			Selected by Charles Elcock	22.2.16	C	2
<i>Cymbalopora bulloides</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	19.1.2	NC	5
<i>Cymbalopora poeyi</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		d'Orbigny	14	NC	3
<i>Cymbalopora poeyi</i>	Raine Isl., Torres Sts	155 fms	Coral sand	d'Orbigny	14	NC	5

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Discorbina</i>	Rosacea	St Vincents Gulf, S. Australia	Shore sand	d'Orbigny	14	NC	5
<i>Discorbina allomonorhinooides</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Reuss	14	NC	3
<i>Discorbina biconcava</i>	Challenger Stn, Raine Isl., Torres Sts	155 fms		Parker & Jones	14	NC	2
<i>Discorbina ventricosa</i>	Java Sea	45 fms	Coral sand	Brady	14	NC	4
<i>Discorbina vesicularis</i>	St Vincents Gulf, S. Australia		Shore sand	Lamarek	14	NC	5
<i>Ehrenbergina serrata</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.2.1	NC	3
Reuss							
Foram 17.2.86							
Foraminifer	Various localities	Mar-39		Glass slide From Earland Collection	20.1.2 12	C	Rare fragments Many sp.
Foraminifera	Scotia Sins 313.417, Weddell Sea	1410-1775 fms		Earland Collection	12	C	Many sp.
Foraminifera sand							
Foraminifera Shells	Ka-fzia, Greece			Glass slide	13 19.2.3	C	Empty
Foraminifera+Radiolaria	New Guinea				13	C	Many v. small specs
G. zoology	Dingle Bay			G. W. Chaster	7.2.6	NC	3
<i>Gaudryina pupoides</i>						NC	0
d'Orbigny							
<i>Gaudryina pupoides</i>	Albatross Stn 2570	1813 fms		No text, wood slide	7.2.9	NC	0
d'Orbigny							
<i>Gaudryina subrotundata</i>	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	7.2.5	NC	2
Schwager							
<i>Gaudryina? sp. baccata</i>	Sargo Bay, Australia		Shore sand	Arthur Earland	7.2.7	NC	4
Schwager							
Group of Polycystina							
<i>Gypsina globulus</i>	Andaman Isl.	40 fms		For Binocular EW (radiolaria)	2.3.6	C	8
<i>Gypsina vesicularis</i>	Perim Harbour		Coral sand	Reuss Parker & Jones sp. G. W. Chaster	17 17	NC NC	3 4
<i>Haplophragmium</i>	Davis Sts						
<i>Haplophragmium</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		Text, wood slide	4.3.3	NC	1
<i>agglutinans</i> d'Orbigny	Albatross Stn 2106	1497 fms		No text, wood slide	4.2.1	NC	3
<i>Haplophragmium</i>							
<i>agglutinans</i> d'Orbigny							
<i>Haplophragmium</i>	Salona Bay	10-15 fms		No text, wood slide	4.2.2	NC	3
<i>agglutinans</i> d'Orbigny	North Atlantic	1700 fms	Globig. ooze	G. W. Chaster	4.2.5	NC	1
<i>Haplophragmium</i>							
<i>agglutinans</i> d'Orbigny	Nixon Rocks, Selsey, Sussex			Arthur Earland	4.2.7	NC	1
<i>agglutinans</i> d'Orbigny							
<i>Haplophragmium</i>							
<i>agglutinans</i> d'Orbigny							
'selective' variety							
<i>Haplophragmium</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		Earland Collection Foraminifera	4.1.1	C	4
<i>calcareum</i> Brady							
				No text, wood slide	4.2.3	NC	3

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Haplophragmium calcareum</i> Brady	Ch. Stn 24, Culebra Isl., W. Indies East?	390 fms	Pteropod ooze	Arthur Earland	4.2.6	NC	4
<i>Haplophragmium canariense</i> d'Orbigny	Oban, W. Scotland	18 fms		Arthur Earland	4.2.8	NC	4
<i>Haplophragmium canariensis</i> d'Orbigny	Albatross Stn 2150, North Atlantic	382 fms		No text, wood slide	4.2.4	NC	2
<i>Haplophragmium emaciatum</i> Brady	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	4.2.9	NC	1
<i>Haplophragmium emaciatum</i> Brady	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	4.1.10	NC	5
<i>Haplophragmium latidorsatum</i> Bornemann	W. Indies	1813 fms		No text, wood slide	4.3.5	NC	7
<i>latidorsatum</i> Bornemann	Off Valentia	370 fms		G. W. Chaster	4.3.7	NC	7
<i>Haplophragmium latidorsatum</i> Bornemann				Glass slide	4.1.8	C	4
<i>Haplophragmium pseudo-spirale</i> Williamson	Bantry Bay, Ireland	10 fms		Arthur Earland	4.3.1	NC	5
<i>Haplophragmium pseudo-spirale</i> Williamson	Lord Bandon, log 17, off Ft SKilling Irish Sea	110 fms		Joseph Wright's Collection	4.3.2	NC	5
<i>Haplophragmium pseudo-spirale</i> Williamson		60 fms		Text, wood slide	4.3.4	NC	2
<i>Haplophragmium pseudo-spirale</i> Williamson	RECENT			Selected by Charles Elcock	19.2.5	C	3
<i>Haplophragmium pseudo-spiralis</i>	Off Nukualofa, Tonga, Pacific	18 fms	Coral sand	Arthur Earland	2.1.5	NC	6
<i>Hauerina ornaticissima</i> Karver	Mid-channel between Belfast and Port Patrick Lervik VIII/93	100 fms		Joseph Wright's Collection	3.3.2	NC	2
<i>Hyperammima elongata</i> Brady				Text, wood slide	3.2.1	NC	3
<i>Hyperammima elongata</i> H. B. Brady	Ch. Stn 74, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	3.2.6	NC	3
<i>Hyperammima vagans</i> Brady	Albatross Stn 2096	1451 fms		No text, wood slide	3.3.1	NC	4
<i>Hyperammima vagans</i> Brady				Text, wood slide	9.2.3	NC	0
<i>Lagena</i>	Java Sea	45 fms	Coral sand	Arthur Earland	9.1.5	NC	1
<i>Lagena aspera</i> Reuss	Oban, Scotland	15-30 fms		Brady	10	NC	Empty
<i>Lagena clathrata</i>	Southport Shore			d'Orbigny, G. W. Chaster	12	NC	Empty
<i>Lagena clavata</i>				G. W. Chaster	9.2.6	NC	2
<i>Lagena costata</i> Williamson	Southport Shore						
<i>Lagena crenata</i>	Lord Bandon log 17, off Ft SKilling	110 fms		P+J, Joseph Wright's Coll	12	NC	1
<i>Lagena feildeniana</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		Text, wood slide	9.2.2	NC	1

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Lagena formosa</i> Schwager (variety)	Java Sea	45 fms	Coral sand	Arthur Earland	1.3.7	NC	4
<i>Lagena herrivigiana</i> Brady	Raine Isl., Torres Sts	155 fms	Coral sand	Arthur Earland (showing cellular shell wall)	9.2.4	NC	2
<i>Lagena hexagona</i> Williamson	S. W. Ireland	390 fms	Grey mud	Arthur Earland	9.1.3	NC	0
<i>Lagena marginata</i> Walker and Boys	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	9.1.4	NC	4
<i>Lagena marginata</i> Walker and Boys	Bantry Bay, S. W. Ireland	37.5 fms		Arthur Earland	9.3.7	NC	7
<i>Lagena melo</i> d'Orbigny	Southport Shore			G. W. Chaster	9.3.6	NC	1
<i>Lagena orbignyana</i> Seguenza	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		Text, wood slide	9.2.10	NC	8
<i>Lagena radiato-marginata</i> Parker and Jones	Ch. Stn 185, Raine Isl., Torres Sts	155 fms	Rare	Text, wood slide	9.2.1	NC	1
<i>Lagena raphanus</i> Parker and Jones (two varieties)	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		Text, wood slide	9.2.9	NC	6
<i>Lagena semistriata</i>	Southport shore			Williamson, G. W. Chaster	12	NC	3
<i>Lagena sulcata</i> Walker and Jacob sp.	Southport Shore			d'Orbigny, G. W. Chaster	12	NC	5
<i>Lagena williamsoni</i>	Southport Shore			G. W. Chaster	9.2.5	NC	8
<i>Lagena</i>				Alcock, G. W. Chaster	12	NC	2
<i>Margulina Behmi</i>	Gozo, Malta		Coral sand		12	NC	1
<i>Margulina glabra</i>	Albatross Stn 2217	924 fms	Miocene, Blue Marl.	Reuss	11	NC	11
<i>Marsipella cylindrica</i>	Haul 228, 57°59'N, 10°34'W	1600 meters		d'Orbigny Brady	11 20	NC C	2 20
<i>Marsipella spiralis</i>	Haul 145, station i × B	330 meters		H.A. & E.	20	C	4
<i>Mitilina abeoliformis</i>	Perim Harbour, Red Sea			Blue border, wood slide	1.2.4	NC	3
H. B. Brady	Perim Island, Red Sea		Anchor mud-coral mud	Arthur Earland	1.2.11	NC	6
<i>Mitilina caltrata</i> Brady (variety)	Java Sea	45 fms	Coral sand	Arthur Earland	1.2.9	NC	3
<i>Mitilina fichteliana</i> d'Orbigny	Coast of Crete	Shallow water		Arthur Earland	18.2.3	NC	3
<i>Mitilina insignis</i> H. B. Brady	Sargo Bay, Australia		Shore sand	Arthur Earland	1.2.10	NC	9
<i>Mitilina linnaea</i>	RECENT			Selected by Charles Elcock	1.1.4	C	2
<i>Mitilina linnaea</i> d'Orbigny	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	1.2.1	NC	5

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Miliolina oblonga</i> Williamson	Southport Shore			G. W. Chaster	2.1.10	NC	6
<i>Miliolina reticulata</i> d'Orbigny	Off Delos	10 fms		G. W. Chaster	1.1.2	NC	1
<i>Miliolina reticulata</i> d'Orbigny (type)	ii. Mediterranean		Sponge sand	Arthur Earland	1.2.3	NC	5
<i>Miliolina reticulata</i> d'Orbigny (variety)	i. Java Sea	45 fms	Coral sand	Arthur Earland	1.2.3	NC	5
<i>Miliolina rupestriana</i> Brady	Perim Isl., Red Sea		Coral sand	Arthur Earland	1.2.5	NC	3
<i>Miliolina rupestriana</i> H. B. Brady	Perim Harbour, Red Sea		Coral sand	Blue border, wood slide	1.2.6	NC	3
<i>Miliolina seminulum</i>	Montrose			Foraminifera	1.2.2	NC	5
<i>Miliolina subrotunda</i>	Southport Shore			G. W. Chaster	1.2.8	NC	14
Montagu sp.							
<i>Miliolina tricarinata</i>	Java Sea	45 fms	Coral sand	Arthur Earland	1.2.12	NC	5
d'Orbigny							
<i>Miliolina triquetra</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	1.2.7	NC	4
No label				Wood slide	9.1.2	NC	0
No label				Wood slide	9.3.5	NC	1
No label				Wood slide	19.1.3	NC	2
No label				Glass slide	20.1.1	C	5
No label				Glass slide	20.1.3	C	Rare fragments
No label				Glass slide	20.1.4	C	9
No label				Glass slide (2 not forams)	20.1.6	C	7
<i>Nodosaria</i> (= <i>Glandulina</i>) <i>aequalis</i>	Albatross Stn 2106	1497 fms		Reuss	10	NC	1
<i>Nodosaria</i> (<i>Dentalina</i>) <i>adolphina</i>	Chambray, Gozo, Malta		Miocene, Blue Marl	d'Orbigny	10	NC	4
<i>Nodosaria</i> (<i>Glandulina</i>) <i>rotundata</i>	Java Sea	45 fms	Coral sand	Reuss	10	NC	2
<i>Nodosaria communis</i>	Southport Shore			G. W. Chaster	10	NC	5
<i>Nodosaria consobrina</i> var. <i>emaciata</i>	Challenger Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Reuss	10	NC	1
<i>Nodosaria hispida</i>	Challenger Station 185. Raine Isl. Torres Sts	155 fms		d'Orbigny	10	NC	4
<i>Nodosaria obliqua</i> Linne	Albatross Stn 2041	1608 fms		No text, wood slide	9.3.3	NC	2
<i>Nodosaria pyrula</i>	Southport shore			d'Orbigny; G. W. Chaster	10	NC	Empty
<i>Nodosaria pyrula</i> d'Orbigny	Albatross Stn 2420	104 fms		No text, wood slide	9.3.4	NC	3
<i>Nodosaria radicata</i> Linne	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	9.1.1	NC	3
<i>Nodosaria scalaris</i>	S. W. Ireland	390 fms	Grey mud	Batsch	10	NC	10
<i>Nodosaria soluta</i>	Challenger Stn 24, Culebra Isl.	390 fms	Pteropod ooze	Reuss	10	NC	3

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Nodosaria soluta</i> Reuss	Albatross Stn 2217	924 fms		No text, wood slide	9.3.2	NC	2
<i>Nodosaria vertebralis</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Batsch	10	NC	2
<i>Nontonina orbicularis</i> Brady	<i>Lord Bandon</i> , off Ft SKilling	110 fms		Joseph Wright's Collection	18.1.1	NC	4
<i>Nontonina pompilioides</i> Fichtel and Moll	Ch. Stn 224, North Pacific	1850 fms	Globbig ooze	Arthur Earland	18.1.2	NC	Empty
<i>Nontonina scapha</i> Fichtel and Moll	<i>Lord Bandon</i> , log 17, off Ft SKilling	110 fms		Joseph Wright's Collection	18.1.3	NC	3
<i>Nontonina umbilicata</i>	S. W. Ireland	110 fms		Arthur Earland	18.1.4	NC	4
<i>Nubecularia</i>	Dingle Bay, Ireland			Montagu sp. G. W. Chaster	17	NC	6
<i>Nubecularia divaricata</i> Brady	Kischemwar, Bessarabia		Miocene	Black border, wood slide	1.3.1	NC	3
<i>Nubecularia divaricata</i> H. B. Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	1.3.3	NC	7
<i>Nubecularia lucifuga</i> Defrance	Statis of Sunda	5 fms	Coral sand	Arthur Earland	1.3.5	NC	4
<i>Nubecularia lucifuga</i> Defrance	Off Delos	10 fms		G. W. Chaster	1.3.2	NC	5
Nummulitic limestone	Coast of Crete	Shallow water		Arthur Earland	18.2.2	NC	23
	Ghizen, Egypt			Thin section: Flatters and Garnett Ltd, 309 Oxford Road, Manchester	18.3.5	C	Many
<i>Operculina complanata</i>	Off Amboyna spice Islands	28 fms		Defrance	22.3.17	C	9
<i>Operculina complanata</i> Defrance var. <i>granulosa</i> Leymeric	Havannah, Cuba	6 fms	Coral sand	Arthur Earland	18.2.8	NC	5
<i>Ophalimidium inconstans</i> Brady	Cape Cruz, Cuba	70 fms	Coral mud	Arthur Earland	2.1.8	NC	4
<i>Ophalimidium inconstans</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	2.2.5	NC	3
<i>Orbitolite</i> —Foraminifera Shells				Glass slide	18.2.5	C	8
<i>Orbitolites complanata</i> Lamarek	Ch. Stn 172, off Tongatabu, Pacific	18 fms	Coral sand	Arthur Earland	2.3.4	NC	4
<i>Orbitolites complanatus</i> Carpenter	Perim Harbour, Red Sea			Text, wood slide	2.3.3	NC	1
<i>Orbitolites duplex</i> Carpenter	Perim Isl., Red Sea			Text, wood slide	2.3.5	NC	1
				Text, wood slide	2.3.1	NC	3
				Arthur Earland	2.3.2	NC	5

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Orbulina bilobata</i>	RECENT			Selected by Charles Elcock	18.2.6	C	1
<i>Orbulina group</i>	Zoology			Glan slide	12	NC	1
<i>Orbulina univerrsa</i>	<i>Lord Bandon</i> log 17, off Ft SKillig RECENT	110 fms		d'Orbigny, Joseph Wright's Coll. Selected by Charles Elcock	13 12	NC NC	2 5
<i>Patellina corrugata</i>	Bantry Bay, S. W. Ireland RECENT	37.5 fms		Williamson Selected by Charles Elcock	22.2.12.a 22.2.13	NC C	2 7
<i>Pavonina flabelliformis</i>	RECENT			Selected by Charles Elcock	7.1.5	C	2
<i>Pavonina flabelliformis</i> d'Orbigny	Raine Isl., Torres Sts	155 fms	Coral sand	Arthur Earland	7.1.2	NC	1
<i>Peneroplis (Spirulina) cylindracea</i>	RECENT			Selected by Charles Elcock	2.2.6	C	4
<i>Peneroplis arietinus</i>	RECENT			Selected by Charles Elcock	2.2.7	C	4
<i>Peneroplis lituus</i>	RECENT			Selected by Charles Elcock	2.2.8	C	3
<i>Peneroplis pertusus</i> Forskal	Perim Isl., Red Sea		Coral mud	Arthur Earland	2.2.9	NC	35
<i>Peneroplis pertusus</i> var. <i>arietinus</i> Fichtel and Moll	Perim Harbour, Red Sea			Text, wood slide	2.2.10	NC	3
<i>Peneroplis pertusus</i> var. <i>planatus</i> Fichtel and Moll	Perim, Red Sea			Text, wood slide	2.2.4	NC	3
<i>Peneroplis pertusus</i> var. <i>planatus</i> Fichtel and Moll	Off Delos	10 fms		G. W. Chaster	2.2.11	NC	2
<i>Placopsilina cenomana</i> d'Orbigny	Ch. Stn, Raine Isl., Torres Sts	155 fms		No text, wood slide	5.1.1	NC	2
<i>Placopsilina cenomana</i> d'Orbigny	Java Sea	45 fms	Coral sand	Arthur Earland	5.1.2	NC	5
<i>Planispira celata</i>	RECENT			Selected by Charles Elcock	2.3.7	C	2
<i>Planispira exigua</i>	RECENT			Selected by Charles Elcock	2.1.9	C	4
<i>Planispira exigua</i> H. B. Brady	Straits of Sunda	5 fms	Coral sand	Arthur Earland	2.1.7	NC	4
<i>Planorbulina mediterraneensis</i>	RECENT			Selected by Charles Elcock	22.2.10	C	7
<i>Planorbulina parvata</i>	Off Malta	10 fms		d'Orbigny	22.2.15	NC	5
<i>Planorbulina parvata</i>	Java Sea, Challenger Stn and Raine Isl., Torres Sts	45 fms & 155 fms		Parker & Jones	14	NC	5
<i>Polymorphina elegantissima</i>	Macassar Sts	45 fms		Parker & Jones	12	NC	3
<i>Polymorphina gibba</i>	St Ouens Bay, Jersey		Shore sand	d'Orbigny	12	NC	7

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Polymorphina lactea</i>	RECENT			Selected by Charles Elcock	12	NC	3
<i>Polymorphina myristiformis</i>	Bantry Bay, Ireland	37.5 fms		Williamson	12	NC	2
<i>Polymorphina myristiformis</i> Williamson	<i>Lord Bandon</i> , log 16, off Ft SKillig	120 fms		Joseph Wright's Collection	18.1.7	NC	5
<i>Polymorphina problema</i>	Challenger Stn 185, Rain Isl., Torres Sts	155 fms		d'Orbigny	12	NC	3
<i>Polymorphina regina</i>	St Vincents Gulf, S. Australia		Shore sand	Brady, Parker & Jones	12	NC	5
<i>Polymorphina regina</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Brady, Parker & Jones	12	NC	5
<i>Polymorphina rotundata</i>	Mid Channel, between Belfast and Port Patrick			Born, Joseph Wrights Coll	12	NC	3
<i>Polystomella eraticulata</i>	Java Sea	45 fms	Coral sand	Fichrel & Moll	13	NC	Empty
<i>Polystomella crispa</i>	Dogs Bay	Recent		Card slide	9.1.8	NC	3
<i>Polystomella crispa</i>	Off Malta	10 fms		Linne	17	NC	1
<i>Polystomella crispa</i> Linne	Island off Delos, Greece	10 fms		No text, wood slide	18.2.7	NC	Empty
<i>Polystomella subnodosa</i>	<i>Lord Bandon</i> , log 16, off Ft SKillig	120 fms		Joseph Wright's Collection	18.1.8	NC	Empty
<i>Polytrema miniaceum</i>	Off Delos	10 fms		Linne, G. W. Chaster	17	NC	2
<i>Polytrema miniaceum</i>	RECENT			Selected by Charles Elcock	17	C	2
<i>Psannosphaera Bowmani</i>	Haul 7791, Burohead, & Moray Firth S x E2'	55 m		H.A. & E.	20	C	4
<i>Psannosphaera fusca</i> H. B. Brady	Off Valentia	370 fms		G. W. Chaster	3.2.3	NC	3
<i>Psannosphaera parva</i>	Haul 228, station 57°59'N 10°34'W	1600 m	Flint var		20	C	7
<i>Psannosphaera rustica</i>	Haul 145 station 1 x B	330 m		H.A. & E.	20	C	6
<i>Psannosphaera fusca</i>	RECENT			Selected by Charles Elcock	3.2.7	C	1
<i>Pshaeogoum punctatum</i>				M. CIALONA	13		7?
<i>Pullemia obliquiloculata</i>	Challenger Stn 224, N. Pacific	1850 fms	Globbig ooze	prepared Messina Parker & Jones	13	NC	5
<i>Pullemia sphaeroides</i>	Pacific Ocean, Challenger	1850 fms			13	NC	5
<i>Pulvinulina auricula</i>	Bantry Bay, Ireland	37.5 fms		Fichtel & Moll	16	NC	4
<i>Pulvinulina auricula</i>	<i>Lord Bandon</i> log 17, off Ft SKillig	110 fms		Fichtel & Moll, Joseph Wrights Collection	16	NC	5
<i>Pulvinulina auricula</i>	Lerwick VIII-98	370 fms		Fichtel & Moll	16	NC	3
<i>Pulvinulina elegans</i>	Off Valentia			d'Orbigny, G. W. Chaster	16	NC	5
<i>Pulvinulina elegans</i>	Albatross Stn 2106	1497 fms		d'Orbigny	16	NC	8
<i>Pulvinulina elegans</i>	<i>Lord Bandon</i> log 16, off Ft SKillig	120 fms		d'Orbigny, Joseph Wrights Coll.	16	NC	5

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Pulvinulina elegans</i>	Challenger Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	d'Orbigny	16	NC	6
<i>Pulvinulina menardii</i>	Albatross Station 2400	169 fms		d'Orbigny	16	NC	5
<i>Pulvinulina menardii</i> variety <i>fimbriata</i>	Albatross Stn 3228	1813 fms		d'Orbigny, Brady	16	NC	2
<i>Pulvinulina micheliniana</i>	Dingle Bay, Ireland			d'Orbigny, G. W. Chaster	16	NC	8
<i>Pulvinulina pauperata</i>	Challenger Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Parker & Jones	16	NC	3
<i>Pulvinulina schreibersii</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		d'Orbigny	16	NC	4
<i>Pulvinulina tumida</i>	Challenger Stn 224, North Pacific	1850 fms		Brady	16	NC	5
<i>Ramulina globulifera</i>	Cebu, Philippine Isl.	120 fms	Volcanic mud	Brady	12	NC	2
<i>Reophax diffugiiformis</i> Brady	Albatross Stn 2217	924 fms		No text, wood slide	4.1.5	NC	6
<i>Reophax nodulosa</i> Brady	East La.			Glass slide	4.1.7	C	1
<i>Reophax scoriarius</i> Mont.	Irish Sea	60 fms		Text, wood slide	4.1.2	NC	4
<i>Reophax scoriarius</i> Montfort	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	4.1.3	NC	4
<i>Reophax scoriarius</i> Montfort	Albatross Stn 2106	1497 fms		No text, wood slide	4.1.4	NC	2
<i>Reophax scoriarius</i> Montfort	<i>Lord Brandon</i> , log 17, off Ft SKilling	110 fms		Joseph Wright's Collection	4.1.6	NC	5
<i>Reophax scoriarius</i> Montfort	Andaman Isl.	40 fms		Arthur Earland	4.1.9	NC	7
<i>Rhabdogonium</i> <i>tricarinatum</i>	S. W. Ireland	390 fms	Grey mud	d'Orbigny	11	NC	7
<i>Rotalia papillosa</i>	Java Sea	45 fms	Coral sand	Brady	16	NC	5
<i>Rotalia pulchella</i>	Bird Isl., Torres Sts	8 fms	Coral sand	d'Orbigny	16	NC	4
<i>Rotalia schroeteriana</i>	Java Sea	45 fms		Parker & Jones	16	NC	3
<i>Rotaliidae?</i> aff. <i>Ammonia</i> <i>beccarii</i>	Zoology St Andrews University				14		2
<i>Rotalina soldanii</i>	Challenger Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	d'Orbigny	14	NC	3
<i>Rotalina solidanii</i>	Albatross Stn 2570	1813 fms		d'Orbigny	14	NC	5
<i>Saccamina sphaerica</i> N. Sars	Stn 39B, Haul 6830, Fry Net, <i>Goldseeker</i>	152 m		No text, wood slide	3.1.7	NC	2
<i>Sagrina bifrons</i>	RECENT			Selected by Charles Elcock	12	NC	2
<i>Sagrina columellaris</i>	RECENT			Selected by Charles Elcock	12	NC	1
<i>Sagrina raphanus</i>	Off Zebu, Philippine Isl.	120 fms		Parker & Jones, G. W. Chaster	12	NC	4
<i>Sagrina raphanus</i>	Raine Isl., Torres Sts	155 fms	Coral sand	Parker & Jones	13	NC	11
<i>Sagrina virgula</i>	RECENT			Selected by Charles Elcock	12	NC	5

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Sagrina virgula</i>	Straits of Sunda	5 fms	Coral sand	H. B. Brady	12	NC	2
<i>Sigmoilina celata</i> Costa	Off Valentia	370 fms		G. W. Chaster	1.3.4	NC	3
<i>Sphaeroidina bulloides</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		d'Orbigny	13	NC	3
<i>Sphaeroidina bulloides</i>	Cebu, Phillippe Isl.	120 fms	Volcanic mud	d'Orbigny	13	NC	Empty
<i>Sphaeroidina bulloides</i>	<i>Lord Bandon</i> log 16, off Ft SKilling	120 fms		d'Orbigny	13	NC	2
<i>Sphaeroidina bulloides</i>	RECENT			Selected by Charles Elcock	19.3.2	C	2
<i>Sphaeroidina bulloides</i>	Cebu, Phillipine Isl.	120 fms	Volcanic mud	Arthur Earland	9.2.7	NC	7
d'Orbigny				Parker & Jones	13	NC	4
<i>Sphaeroidina dehiszens</i>	Challenger Stn 24.	390 fms	Pteropod ooze				
<i>Sphaeroidina dehiszens</i>	Culebra Isl., W. Indies			Selected by Charles Elcock	19.3.1	C	5
<i>Sphaeroidina dehiszens</i>	RECENT			Selected by Charles Elcock	13	NC	3
<i>Sphaeroidina bulloides</i>	RECENT			Elcock			
<i>Spirillum decorata</i>	Challenger Stn 24,	390 fms	Pteropod ooze	Brady	14	NC	1
<i>Spirillum margaritifera</i>	Culebra Isl, W. Indies			Williamson	14	NC	5
<i>Spirillum ornatissimum</i>	Macallar Sts	45 fms	Coral sand	Selected by Charles Elcock	22.2.11	C	1
<i>Spirilloculina crenata</i>	Macassar Straits	45 fms	Coral sand	Arthur Earland	1.1.7	NC	4
Karver							
<i>Spirilloculina excavata</i>	Montrose			Foraminifera	1.1.5	NC	1
<i>Spirilloculina gyata</i>	Bermuda		Shore sand	Arthur Earland	1.1.6	NC	5
Terquem							
<i>Spirilloculina impressa</i>	Java Sea	45 fms	Coral sand	Arthur Earland	1.1.9	NC	4
Terquem							
<i>Spirilloculina limbata</i>	Zoology			Mounted under glass	18.3.4	C	4
<i>Spirilloculina limbata</i> typ.	RECENT			Selected by Charles Elcock	1.3.9	C	3
<i>Spirilloculina nitida</i>	RECENT			Selected by Charles Elcock	18.2.9	C	3
<i>Spirilloculina tenuis</i> Czizek	Cebu, Phillipine Isls	120 fms					
<i>Spiroplecta annexens</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms	Volcanic mud	Arthur Earland	1.1.8	NC	3
Parker and Jones				No text, wood slide	7.1.1	NC	7
<i>Spiroplecta annexens</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms	Coral sand	Arthur Earland	7.1.4	NC	3
Parker and Jones							
<i>Spiroplecta bififormis</i>	RECENT			Selected by Charles Elcock	7.1.3	C	3
<i>Technitella legumen</i>	Haul 145, sattion i x B	330 m		Norman	20	C	2
<i>Technitella Thompsoni</i>	<i>Goldseeker</i> Station 8, Moray Firth 57°55'N, 3°20'W	33 fms		H.A. & E.	20	C	Broken
<i>Textularia?</i> sp. undescribed	RECENT			Selected by Charles Elcock	6.2.10	C	3

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Textularia agglutinans</i>	RECENT			Selected by Charles Elcock	6.2.8	C	3
<i>Textularia agglutinans</i> d'Orbigny var. <i>porrecta</i> Brady	Ch. Stn 185, Raine Is., Torres SIs	155 fms		No text, wood slide	6.1.4	NC	3
<i>Textularia agglutinans</i> d'Orbigny variety <i>porrecta</i> Brady	Ch. Stn, Raine Is., Torres SIs	155 fms		No text, wood slide	2.3.8	NC	3
<i>Textularia agglutinans</i> var. <i>porrecta</i>	RECENT			Selected by Charles Elcock	6.2.7	C	3
<i>Textularia aspera</i>	RECENT			Selected by Charles Elcock	6.1.7	C	1
<i>Textularia carinata</i>	RECENT			Selected by Charles Elcock	6.2.2	C	2
<i>Textularia carinata</i> d'Orbigny	Albatross Stn 2400	169 fms		No text, wood slide	6.1.1	NC	6
<i>Textularia carinata</i> d'Orbigny	Off Zebu, Philippine Isl.	120 fms		G. W. Chaster	6.1.6	NC	3
<i>Textularia concava</i>	RECENT			Selected by Charles Elcock	6.2.11	C	1
<i>Textularia concava</i> Karver	Ch. Stn 185, Raine Isl., Torres SIs	155 fms		No text, wood slide	6.3.3	NC	4
<i>Textularia conica</i>	RECENT			Selected by Charles Elcock	6.2.6	C	4
<i>Textularia crispata</i> Brady	Ch. Stn 185, Raine Isl., Torres SIs	155 fms		No text, wood slide	6.3.1	NC	5
<i>Textularia crispata</i> Brady	Raine Isl., Torres SIs	155 fms	Coral sand	Arthur Earland	6.3.2	NC	3
<i>Textularia fistulosa</i>	RECENT			Selected by Charles Elcock	6.2.5	C	2
<i>Textularia folium</i>	RECENT			Selected by Charles Elcock	6.2.3	C	3
<i>Textularia jugosa</i>	RECENT			Selected by Charles Elcock	6.2.4	C	1
<i>Textularia jugosa</i> Brady	Ch. Stn, Raine Isl., Torres SIs	155 fms		No text, wood slide	6.1.3	NC	5
<i>Textularia luculenta</i>	RECENT			Selected by Charles Elcock	6.1.5	C	1
<i>Textularia luculenta</i> Brady	Albatross Stn 2668	294 fms		No text, wood slide	6.3.4	NC	5
<i>Textularia rugosa</i>	RECENT			Selected by Charles Elcock	6.2.9	C	2
<i>Textularia rugosa</i> Reuss	Andaman Isl.	40 fms	Coral sand	Arthur Earland	8.1.1	NC	5
<i>Textularia tenuis</i> d'Orbigny	Ch. Stn, Raine Isl., Torres SIs	155 fms		No text, wood slide	6.1.2	NC	1
<i>Textularia trochus</i>	RECENT, New Guinea			Selected by Charles Elcock	6.2.1	C	2

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Tinoporus baculatus</i>	A. Funafuti atoll, Pacific and Challenger Stn Raine Isl., Torres Sts	155 fms		Carpenter	17	NC	8
<i>Tinoporus baculatus</i>	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		Glass slide	20.1.5	C	9
<i>Tritaxia indiscreta</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	7.1.8	NC	3
<i>Tritaxia lepida</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	7.1.6	NC	4
<i>Tritaxia tricarinata</i> Reuss	Ch. Stn, Raine Isl., Torres Sts	155 fms		No text, wood slide	7.1.7	NC	2
<i>Tritaxia tricarinata</i> Reuss	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	8.2.3	NC	3
<i>Trochammina robertsoni</i> Brady	Oban, W. Scotland	15-30 fms		Arthur Earland	5.2.1	NC	7
<i>Truncatulina echinata</i>	Perim Isl., Red Sea		Anchor mud, coral	Brady	15	NC	2
<i>Truncatulina echinata</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Brady	15	NC	3
<i>Truncatulina hardingerii</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		d'Orbigny	15	NC	5
<i>Truncatulina hardingerii</i>	Java Sea	45 fms	Coral sand	d'Orbigny	15	NC	4
<i>Truncatulina lobatula</i>	Foraminifera			Montrose	22.1.1	NC	5
<i>Truncatulina lobatula</i>	Foraminifera			Montrose	22.1.2	NC	5
<i>Truncatulina lobatula</i>	RECENT			Selected by Charles Elcock	22.1.8	C	8
<i>Truncatulina rosea</i>	Port Royal, Jamaica		Shore sand	d'Orbigny	22.1.4	NC	9
<i>Truncatulina rostrata</i>	Macaur Sts	45 fms	Coral sand	Brady	22.1.3	NC	3
<i>Truncatulina ungeriana</i>	<i>Lord Bandon</i> log 16, off Ft SKillig	120 fms		Brady, Joseph Wrights Coll.	15	NC	4
<i>Truncatulina variabilis</i>	Off Malta	5 fms	Shell sand	d'Orbigny	22.1.5	NC	6
<i>Truncatulina wuellerstorfi</i>	Albatross Stn 2041	1608 fms		Schwager	15	NC	2
<i>Truncatulina wuellerstorfi</i>	RECENT			Selected by Charles Elcock	22.1.9	C	5
<i>Truncatulina wuellerstorfi</i>	North Atlantic	1700 fms	Globig. ooze	Schwager	22.2.14	NC	4
<i>Uvigerina angulosa</i>	Off Shetland	120 fms	Grey ooze	Williamson	12	NC	6
<i>Uvigerina porrecta</i>	Challenger Stn 185, Raine Isl., Torres Sts	155 fms		Brady	12	NC	6
<i>Uvigerina pygmaea</i>	<i>Lord Bandon</i> log 16, off Ft SKillig	120 fms		d'Orbigny	12	NC	Empty
<i>Uvigerina pygmaea</i>	RECENT			Selected by Charles Elcock	22.1.7	C	4
<i>Uvigerina pygmaea</i>	S. W. Ireland	110 fms	Grey mud	d'Orbigny	12	NC	12
<i>Uvigerina schwageri</i>	Off Zebu, Philippine Isl.	120 fms		Brady, G. W. Chaster	12	NC	3

Table A1. Continued

Species	Locality	Water depth	Substrate	Notes	Tray, row, no.	State	Specimens
<i>Vaginulina bruckenthalii</i>	Challenger Stn, Raine Isl., Torres Sts	155 fms		Neugebahren	11	NC	2
<i>Vaginulina linearis</i>	Challenger Stn 24, Culebra Isl. North Atlantic	390 fms	Pteropod ooze	Montagu	11	NC	1
<i>Vavulinina fusca</i> Williamson	Bantry Bay, Ireland	1700 fms	Globig. ooze	Arthur Earland	7.1.9	NC	3
<i>Verneuilina polystropha</i> Reuss	10 fms			Arthur Earland	7.2.1	NC	6
<i>Verneuilina spinulosa</i> Reuss	Ch. Stn, Raine Isl., Torres Sts	155 fms		No text, wood slide	7.2.2	NC	2
<i>Verneuilina spinulosa</i> Reuss	Sts of Sunda	5 fms	Coral sand	Arthur Earland	7.2.4	NC	14
<i>Verneuilina triquetra</i> Munster	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	7.2.3	NC	3
<i>Vertebralina insignis</i> Brady	Ch. Stn 185, Raine Isl., Torres Sts	155 fms		No text, wood slide	2.1.6	NC	2
<i>Vertebralina striata</i> d'Orbigny	Off Delos	10 fms		G. W. Chaster	2.1.4	NC	1
<i>Vertebralina striata</i> d'Orbigny	Coast of Crete, Mediterranean	Shallow water		Arthur Earland	9.2.8	NC	6
<i>Webbina clavata</i> P. & J.	Off Valentia	370 fms		G. W. Chaster	5.1.3	NC	5
<i>Webbina clavata</i> Parker & Jones	Ch. Stn 24, Culebra Isl., W. Indies	390 fms	Pteropod ooze	Arthur Earland	5.2.4	NC	3
St Vincent Gulf, S. Australia		Shore sand	Williamson	22.2.12.b	NC	8	
Unidentified	Fishery Cruiser <i>Goldseeker</i> . International North Sea Commission. Haul 141, station Hilde Fjord, Norway and Haul 103, Kinnaird Deep Fossil Foraminifera from Deans Farm measure, Victoria B. C.	260 m			18.2.10	NC	2
Unidentified				O. C. Hastings, Victoria, B. C.	19.1.1	C	15
							1484

The foraminiferal species names are arranged alphabetically, but can be located on individual trays according to row (row 1 being furthest from reach when the tray is extended) and number (from left to right).

C refers to covered slides, NC refers to slides without a glass cover.

Inconsistencies in the text of this table should reflect the original labelling of the slides.

Table A1. *Continued*

Ref. no.	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
28021	11.06.1894	1	*			*						*					*								
28022	16.06.1894	1	*			*											*								
28023	5.07.1894	1	*												*	*	*								
28024	12.07.1894	1	*														*								
28025	16.07.1894	1	*														*								
28026	14.08.1894	1	*													*	*								
28027	27.10.1894	1	*												*		*	*						*	*
28028	31.10.1894	1	*									*			*		*	*							
28029	20.11.1894	1	*												*		*	*					*		
28030	17.10.1895	1	*								*	*			*		*	*						*	
28031	23.10.1895	1	*												*		*	*						*	*
28032	7.03.1896	1	*				*		*		*						*	*				*	*	*	*
28033	11.03.1896	1	*	1							*						*								*
28034	1.05.1896	1	*	1		*					*						*								
28035	10.04.1900	2	*								*				*		*	*							
28036	17.04.1900	2	*	1							*				*		*	*							
28037	25.04.1900	2	*																						
28038	12.05.1900	2	*	1		*																			*
28039	14.05.1900	2	*			*									*		*	*							
28040	5.06.1900	2	*			*									*	*	*						*		*
28041	20.09.1900	2	*															*							
28042	8.10.1900	2	*	*											*		*								
28043	11.10.1900	2	*			*																	*		
28044	30.01.1901	2	*	*											*										
28045	8.02.1901	2	*			*	*																		
28046	18.02.1901	2	*			*	*								*		*								
28047	14.01.1906	3	*			*		*													*		*		
28048	30.01.1906	3	*			*									*										*
28049	14.02.1906	3	*			*									*									*	
28050	24.09.1906	3	*			*	*	*							*		*								
28051	3.10.1906	3	*			*	*														*				
28052	30.04.1907	3	*			*	*																		
28053	21.05.1907	3	*			*											*								
28054	27.05.1907	3	*			*	*															*			
28055	24.05.1907	3	*																						
28056	31.05.1907	3	*																						
28057	19.06.1907	3	*			*		*									*								
28058	29.07.1907	3	*	2		*	*	*									*								
28059	1.08.1907	3	*				*																		
28060	19.08.1907	3	*																				*		
28061	26.08.1907	3	*				*																		*
28062	17.10.1907	3	*				*											*				*	*		
28063	1.01.1908	3	*	3		*	*	*									*	*				*	*		
28064	21.01.1908	4	*					*										*				*			
28065	25.01.1908	4	*															*				*			
28066	20.02.1908	3	*			*																			
28067	29.05.1908	3	*		*	*	*		*						*		*	*	*	*			*		
28068	4.06.1908	3	*			*	*		*															*	
28069	6.08.1908	3	*			*	*		*						*	*	*	*					*		
28070	23.10.1908	3	*			*		*	*						*	*	*	*							
28071	29.10.1908	4	*	4, 5, 6		*																			*
28072	13.11.1908	3	*	4, 7, 8		*	*											*					*	*	*
28073	17.11.1908	4	*	9, 10				*								*				*					
28074	21.12.1908	Christmas card (photograph of arrangement of Foraminifera)																							
28075	9.01.1909	3	*	4, 8														*							
28076	20.01.1909	3	*	8			*											*							
28077	20.03.1909	3	*	4	*	*	*	*							*		*	*			*		*		
28078	12.05.1909	3			*	*	*								*		*	*				*			
28079	23.05.1909	3				*	*																*		
28080	18.06.1909	4				*	*																*	*	*
28081	13.08.1909	3		8	*	*	*	*							*	*	*	*				*		*	*
28082	23.08.1909	3				*	*											*				*			
28083	30.08.1909	3																*				*			

Table A2. Summary table listing the Earland–D’Arcy Thompson correspondence between 11.6.1894 and 6.11.1946.

Ref. no.	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
28084	13.10.1909	3						*										*							
28085	29.01.1910	3	*	4		*										*	*								*
28086	1.02.1910	3	*			*		*							*	*	*	*							
28087	2.03.1910	3	*			*		*																	
28088	1.06.1910	3	*	8		*		*										*			*			*	*
28089	17.06.1910	3	*			*		*														*			
28090	22.06.1910	3						*													*				
28091	20.07.1910	3				*		*								*	*	*				*			*
28092	27.07.1910	3						*										*							
28093	3.09.1910	3				*	*	*	*								*	*							
28094	10.03.1911	3	*	*		*	*	*																	
28095	3.07.1911	3		4, 11				*			*					*	*	*							
28096	19.07.1911	3	*	4, 11		*		*								*	*	*				*			
28097	25.09.1911	3	*	4, 12				*							*	*	*					*			
28098	20.10.1911	4	*	13, 14		*										*						*			
28099	29.05.1912	5	*	15		*											*	*	*						
28100	2.06.1912	5	*																			*			
28101	25.09.1912	5				*											*	*	*						
28102	2.10.1912	5				*	*								*	*		*	*						
28103	23.10.1912	5															*	*				*			
28104	3.06.1914	5		16		*		*														*	*	*	
28105	15.06.1914	5						*																	
28106	7.03.1915	5				*									*	*	*					*			
28107	Mss. On the distribution of <i>Saccamina sphaerica</i> (M. Sars) and <i>Psammosphaera fusca</i> (Schulze) in the North Sea; particularly with reference to the suggested identity of the two species. By Edward Heron-Allen, F.L.S., F.G.S., F.R.M.S. and Arthur Earland, F.R.M.S.																								
28108	29.01.1917	5				*	*	*														*	*		
28109	10.10.1920	5				*		*						*								*	*		
28110	31.10.1920	5				*		*														*			
28111	2.07.1921	5	*															*							
28112	5.09.1933	6	*			*	*	*					*		*			*						*	*
28113	12.04.1934	6		17									*					*					*		*
28114	26.04.1934	6		17		*																			*
28115	8.09.1935	6		18		*									*	*	*								
28116	7.11.1935	6	*			*									*		*	*					*		
28117	10.01.1936																	*							
28118	20.11.1941	7		4																*					
28119	8.03.1942	7												*	*			*					*	*	*
28120	2.04.1943	7		19		*													*				*	*	*
28121	11.04.1943	7				*													*						
28122	3.06.1943	7				*													*						
28123	20.07.1943	7		22														*							
28124	24.10.1943	7				*													*						
28125	4.11.1943	7	*	20			*										*			*					
28126	17.12.1943	7				*													*	*			*		
28127	21.03.1944	7				*												*	*				*		
28128	31.03.1944	7				*							*							*		*		*	
28129	7 (after 17.04.1944)	Change-of-address card																							
28130	29.05.1944	8																*					*		
28131	7.06.1944	8																							
28132	10.10.1944	8																*							
28133	25.10.1944	8						*																	
28134	27.10.1944	8				*																			
28135	27.10.1945	8		4											*			*						*	*
28136	16.12.1945	8		22														*						*	*
28137	10.01.1946	8		4, 17, 21													*	*							
28138	17.01.1946	Postcard																							
28139	25.01.1946	8		22																					
28140	29.01.1946	8		23, 24												*		*					*		*
28141	11.06.1946	8											*			*	*						*		*
28142	20.06.1946	8																					*		*
28143	1.07.1946	8																					*		*
28144	16.07.1946	8		4										*											*
28145	6.11.1946	8		4		*									*							*	*	*	*

Table A2. Continued

Ref. no.	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Separate collections:																									
28202	13.08.1930	6		*									*												*
45960	12.05.1937		*																						
19998	1941	7			*															*					*
19997	14.12.1941	7		*															*						*
19996	3.03.1942	7																*	*						*
29046	13.06.1942	7	*																						*
44904	20.12.1947	8		4, 25													*			*					*
44752	25.02.1948	8																						*	*

Ref. no., St Andrews University Library catalogue reference number identifying each letter written by Earland to D'Arcy Thompson.

Column 1, address: 1, 10, Glenwood Road, Catford, (London) S.E; 2, 28, Glenwood Road, Catford, S.E; 3, Reading Villa, 31, Denmark Street, Watford; 4, P.O.S.B., West Kensington; 5, 34, Granville Road, Watford; 6, 23, Clive Avenue, Hastings, Sussex; 7, 7, Barony Terrace, Edinburgh 12; 8, 24, Kerrington Crescent, Broughty Ferry.

Column 2, reference to, or to work for, D'Arcy Thompson.

Column 3, reference to, or to work for, other scientists: 1, Dr Chaster; 2, Dr Scott; 3, Mr Joseph Wright; 4, Dr Colman; 5, Mill; 6, Fowler; 7, C. D. Sherborn; 8, W. Hill; 9, Tait; 10, H. S. Martin; 11, Borley; 12, A. Gibb; 13, Kirkpatrick; 14, J. N. Shoebotham; 15, Rhumbler; 16, J. J. Simpson; 17, Dr W. A. Macfadyen; 18, Bruce and Pearcey; 19, Millett; 20, Dr and Mrs Earle H. Myers; 21, M. Davies; 22, A. W. Dennis; 23, Dighton Thomas; 24, Mr E. G. Bailey; 25, Tierney, Peacock, Marie, John.

Column 4, reference to, or to work with, E. Heron-Allen.

Column 5, laboratory preparation and other techniques.

Column 6, *Goldseeker* and Fisheries Board.

Column 7, North Sea. Column 8, Shetland area. Column 9, St Kilda. Column 10, Greenland. Column 11, Arctic. Column 12, Antarctic. Column 13, St Andrews. Column 14, other places. Column 15, ecology. Column 16, named species. Column 17, general scientific interest. Column 18, Royal Microscopical Society. Column 19, Royal Society of Edinburgh. Column 20, Quekett Club duties. Column 21, GPO work. Column 22, home and family. Column 23, health: A. Earland. Column 24, health: D'Arcy Thompson.

Table A2. *Continued*