

George Stewardson Brady (1832-1921) and his collections at the Hancock Museum, Newcastle-upon-Tyne

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ABSTRACT – A synopsis of the life and work of G. S. Brady is given. The curation and computer-cataloguing of the Brady slide collections is described and the subsequent benefits to researchers outlined. Much work remains to be carried out on the collection – an attempt to demonstrate the type of research needed focuses on the species of Ostracoda described by Brady in two of his early papers.

GEORGE STEWARDSON BRADY (1832-1921)

George Stewardson Brady and Henry Bowman Brady (1835-1891) were sons of Henry Brady, a surgeon of Gateshead, County Durham. Both were influenced by the interest in natural history shown by Tuffen West (1823-1914), who was apprenticed to their father and a student at the Newcastle College of Medicine. West was involved in the early dredging expeditions supported by the British Association in the 1860's which were carried out off the Northumberland and Durham coast. He eventually achieved fame, not as a doctor, but as an illustrator of zoological monographs. A further influence on the young Bradys was John Storey, who ran a school in Gateshead which they attended. Storey (d. 1859) was an expert botanist, and acted as secretary to the Tyneside Naturalists' Field Club from 1849 to 1857.

Following private schooling in Lancashire, the brothers were both to return to Newcastle and the College of Medicine, Henry to pursue a successful career in pharmacy and to devote his attention to the study of Foraminifera, George to follow in his father's footsteps, practising as a doctor in Sunderland from 1857.

George S. Brady became a member of the Tyneside Naturalists' Field Club in 1848, acting as local secretary in Sunderland from 1860-1863 and then as general secretary from 1863-1865. He became a vice-president in 1869 and was elected president in 1870. It is interesting to note Brady's early involvement in northern natural history circles at a time when great advances were being made, particularly in marine biology, and this involvement was to prove fortuitous. He quickly won the friendship of many of the Club's respected members, including John Hancock (1808-1890) and his brother Albany (1806-1873), and was later to become a member of an enthusiastic band of Northumbrian dredgers. Prominent amongst this team was Dennis Embleton (1810-1900), Richard Howse (1821-1901), Alfred Merle Norman (1831-1918) and George Hodge (1833-1871). There

can be little doubt that involvement with these personalities and the excitement of the dredging expeditions fired Brady's imagination and lead to a life-long dedication to the investigation of the marine environment.

A paper in the Transactions of the Tyneside Naturalists' Field Club, "A catalogue of the marine algae of Northumberland and Durham", in 1860 marked the start of a stream of publications which would continue for 55 years. His attention soon began to be focussed on microscopy and the study of the Entomostraca, especially the Copepoda and Ostracoda, and his first paper devoted to Crustacea, "On Entomostraca", was published in the Intellectual Observer in 1862. Further publications (in this journal, the Transactions of the Tyneside Naturalists' Field Club, the Transactions of the Natural History Society of Northumberland, Durham and Newcastle-upon-Tyne, and the Annals and Magazine of Natural History) about microcrustacea established his reputation, which was enhanced by the appearance of his "Monograph of the Recent British Ostracoda" in the Journal of the Linnean Society in 1868.

The 1870's brought greater demands – he prepared his "Monograph of the free and semi-parasitic Copepoda of the British Islands", published in three volumes by the Ray Society from 1876-1880. Brady's interest in microfossils increased during this period, marked by the publication of "A Monograph of the Post-Tertiary Entomostraca of Scotland including species from England and Ireland" (with H. W. Crosskey & D. Robertson) by the Palaeontographical Society in 1874, and "A Monograph of the fossil Ostracoda of the Antwerp Crag" in the Transactions of the Zoological Society for 1878. He undertook the examination of the Ostracoda and Copepoda from the Challenger expedition, and his reports appeared in 1880 (The Ostracoda, vol. 1) and in 1884 (The Copepoda, vol 8).

In 1875 Brady succeeded Professor H. Alleyne Nicholson as Professor of Natural History in the Newcastle College of Physical Science, although still continu-

ing to act as a consultant physician in Sunderland. Brady held the Chair of Natural History until his retirement in 1906, and despite considerable demands imposed by his academic, medical and social duties, continued his research on the Crustacea, which now involved the examination of specimens from throughout the world. His contributions to science were recognised by the many honours which were conferred upon him. He was elected a Fellow of the Royal Society, a corresponding member of the Zoological Society and of foreign societies. His name was used by fellow crustacean workers to erect new genera and species.

It is interesting to note that in spite of his involvement with international matters, Brady's influence upon the local scene was considerable. His friendship with naturalists in northern England was particularly fruitful, and there can be little doubt that his presence in the region inspired many to pursue the natural sciences. His involvement with the Tyneside Naturalists' Field Club has already been referred to, but Brady was also an active member of the Natural History Society of Northumberland, Durham and Newcastle-upon-Tyne, serving as president in 1875, 1892, 1893 and 1906. A close friend and collaborator was A. M. Norman, a local clergyman, described by E. Ray Lankester as "the greatest naturalist-dredger of his day" (Mills, 1980). Norman's tireless field-collecting – some 40 major trips in 38 years – resulted in the formation of extensive collections and an encyclopaedic knowledge of European marine invertebrates. The team of Brady & Norman published two important works. "A Monograph of the marine and freshwater Ostracoda of the North Atlantic and of North Western Europe" was published in two parts in 1889 and 1896 in the transactions of the Royal Dublin Society, and their "Catalogue of the Crustacea of Northumberland and Durham" appeared in the transactions of the Natural History Society of Northumberland, Durham and Newcastle-upon-Tyne in 1909.

On his retirement in 1906, Brady moved to Parkhurst, Endcliffe, Sheffield, having been made Honorary Professor of Natural History in the renamed Armstrong College of Newcastle-upon-Tyne. He was still actively carrying out research, and during this time he described collections from several expeditions including the German South Polar expedition and the Australian Antarctic expedition. Publications on the latter (Brady, 1918a, 1918b) were to be his final contributions to science, and according to Meek (1923), the work was carried out with some reluctance. Brady felt he was losing touch with the rapid developments of his subject and understandably could no longer cope with long hours at the microscope. Brady died on 25 December 1921.

The extent of G. S. Brady's contribution to marine biology and micropalaeontology can be appreciated by

scanning the list of publications given in his obituary by his successor at Armstrong College, Alexander Meek (1923). These publications, 118 in total, along with his extensive collections, serve as testimony to his endeavours. Meek summarises his career as follows: "G. S. Brady will ever be remembered as a pioneer in a path of natural history not used by many investigators. His monographs and papers bear testimony to the arduous work he performed, and they will be consulted for guidance by all those who seek to traverse the same road. They amount together to a very complete account of freshwater and marine Entomostraca from many different parts of the globe. Brady used to remark on the relative sameness of the plankton, freshwater and marine, from widely remote regions. His work paved the way, with that of G. O. Sars and others, for a better understanding of the wide distribution of species and the factors that promote it".

THE BRADY COLLECTIONS

Brady's own field collecting in N.E. England, his excursions to Scotland and Ireland (frequently in the company of David Robertson), and the receipt of specimens from numerous scientific expeditions resulted in the formation of large collections of considerable taxonomic significance. These were donated to the Hancock Museum in 1917 and 1920.

The principal collection of 3471 microscope slides is composed of the following groups:

Ostracoda	2470	slides
Copepoda	577	„
Amphipoda	167	„
Cladocera	16	„
Collembola	21	„
Cumacea	67	„
Euphausiacea	9	„
Isopoda	65	„
Myriapoda	18	„
Mysidacea	57	„
Pseudoscorpionida	2	„
Thysanura	2	„

In addition, there are some 362 slides which at present remain unsorted and uncatalogued.

The ostracod and copepod collections represent a considerable resource, and a large number of specimens have some form of type status. Examination of current labels would indicate that 318 ostracod slides and 48 copepod slides bear the word "type", and many more are marked "nov. sp." or "n.sp.". It is clear that considerable research will be necessary to determine their exact status. Brady's manuscript notebook of his slide collection (see Pl. 2), also held at the Hancock Museum, is an invaluable reference source containing lists of species to be found on the faunal slides in the collection, which unlike the rest of the slides bear only locality data and not species names.

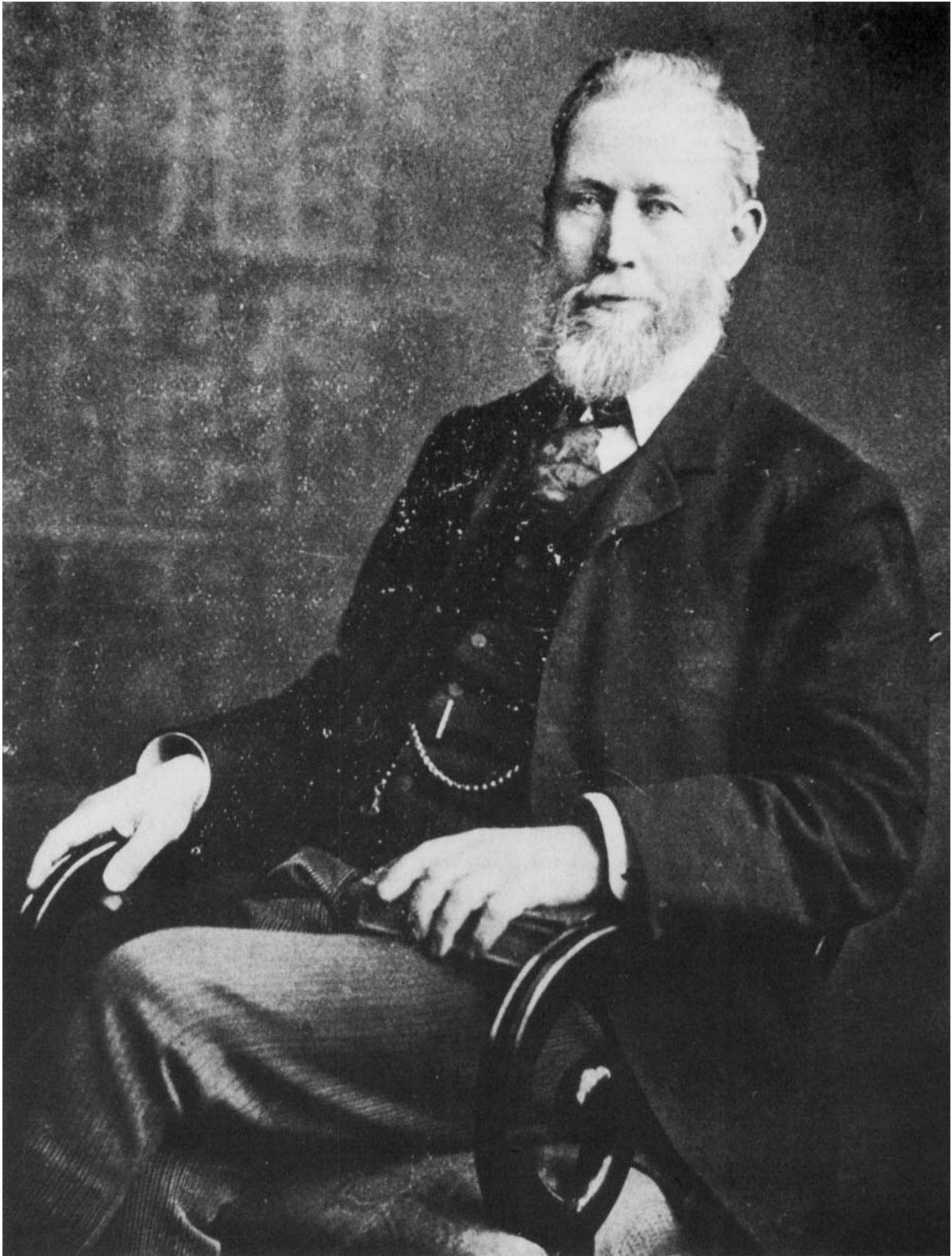


Plate 1. George Stewardson Brady (1832-1921).

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MSIG HMA3 -----> sign on.
#Enter user password.
?XXXXXX
#Charging Rate = University, Terminal
#Last signon was at 15:24:31 Thu 14-Apr-83
# User "HMA3" signed on at 17:04:09 on Fri 15-Apr-83
WR *SPIRES -----> run SPIRES
#Execution begins
-SPIRES 82.06
-?) SET NOTRACE
-?) SET LEN 255
* SELECT YOUR SUBFILE
-?SEL BRADY SLIDE COLLECTION -----> selecting the BRADY subfile

Abandon Hope All Ye Who Enter Here

-The Subfile has 3471 Records.
-?SHO SEARCH TERMS -----> Possible searches?
Goal Records: SLIDE
Simple Index: BRADY, BRADY-NUM, GSB
Simple Index: GEOL, GEOL-NUM
Simple Index: LAT-NAME, LN, SCI-NAME, SN
Simple Index: STAT, STATUS
Simple Index: A, AUTH, AUTHOR
Simple Index: DATE, DATE-OF-PUB, DP
Simple Index: L, LOC, LOCATION
Simple Index: CN, COLL-NAME, COLLECTOR
Sub-Index: NULL
Simple Index: CD, COLL-D, COLLECT-DATE
Simple Index: BN, BORR-NAME, BORROWER-NAME
Sub-Index: NULL
Simple Index: DATE-OF-LOAN, DL
Simple Index: C, CAT, CATALOGUE
-?FIND BN STR HORNE -----> Find Borrower-name Horne
-RESULT: 30 SLIDE(S) -----> search result
-?TYPE -----> listing the search result

SLIDE-NUMBER = 1.22.08;
CATALOGUE = OSTRACODA;
CONDITION = RECENT;
TYPE-OF-SLIDE = CARD;
SPECIMEN-DET;
SCIENTIFIC-NAME = BAFFINICYTHERE HOWEI HAZEL;
STATUS = PARALECTOTYPE;
SEX = MALE;
PART-OF-BODY = LEFT VALVE;
LOCATION-DET;
LOCATION = MUNDE ISLANDS;
MISCELLANEOUS = ORIGINALLY ON BRADY SLIDE 1.10.36, REMOVED D. HORNE, 1982;
RECORDER = P.S. DAVIS;
LOAN-DETAILS;
BORROWER-NAME = DR. D. HORNE;
BORRO-ADDRESS = DEPT. GEOLOGY, CITY OF LONDON POLYTECHNIC, WALBURGH HOUSE, BIGLAND ST, LONDON;
DATE-OF-LOAN = 1982;

SLIDE-NUMBER = 1.22.09;
CATALOGUE = OSTRACODA;
CONDITION = RECENT;
TYPE-OF-SLIDE = CARD;
SPECIMEN-DET;
SCIENTIFIC-NAME = BAFFINICYTHERE HOWEI HAZEL;
STATUS = LECTOTYPE;
SEX = FEMALE;
PART-OF-BODY = LEFT VALVE;
LOCATION-DET;
LOCATION = MUNDE ISLANDS;
MISCELLANEOUS = ORIGINALLY ON BRADY SLIDE 1.10.36, REMOVED D. HORNE, 1982;
RECORDER = P.S. DAVIS;
LOAN-DETAILS;
BORROWER-NAME = DR. D. HORNE;
BORRO-ADDRESS = DEPT. GEOLOGY, CITY OF LONDON POLYTECHNIC, WALBURGH HOUSE, BIGLAND ST, LONDON;
DATE-OF-LOAN = 1982;

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Fig. 1. A typical session at the terminal – a search for slides on loan to D. Horne.

The significance of Brady's spirit-preserved collection is less easily assessed. It comprises some 1000 glass tubes, each labelled in Brady's hand. Like its counterpart in the Norman collection at the British Museum (Natural History), it probably represents, at least in part, a duplication of the "dry" slide collection, and as such it is deserving of much greater attention than it has hitherto received by those seeking type material. Again a number of groups are present, but it is particularly rich in copepods; as with the slide collection, considerable further research is indicated.

In 1982 the Hancock Museum acquired a collection of 1275 bound reprints relating mainly to microcrustacea, formerly in Brady's possession, from the library of the University of Newcastle-upon-Tyne. The "Brady Library" is another valuable source of information for research workers which complements the collections.

In addition to these major items, the Hancock Museum also houses the Brady collection of marine and freshwater algae, donated in 1866, which comprises some 600 specimens.

In 1981 a re-assessment of the Brady collections was made, following which work began on the curation and documentation of the slide collections. An attempt was made to trace all outstanding loans and to recall all slides in order to give each one a unique identification number, to record the information associated with each slide and to prepare an inventory of the collection on the Newcastle University computer. The large number of specimens which have now been returned to the museum includes many which had previously been presumed lost. The "rediscovery" of type specimens in this way has invalidated the establishment of neotypes by at least one author (see Athersuch, 1982), and research is now being undertaken to determine the status and condition of type specimens of all the ostracod species (more than 600 in all) described as new by Brady. Cataloguing of the collection was carried out as part of a large scale documentation exercise within the museum, described in detail by Davis & Hebron (1982). The transfer of data from slides to computer, plus basic curatorial work on the slides themselves, took 12 months in all and was completed by October 1982. It is important to remember that the file is basically a transcription of what is written on the slides or in Brady's notebook; as such it includes manuscript names which were never published as well as spelling mistakes (both original ones by Brady and subsequent ones by the transcriber – Brady's handwriting is not always easy to decipher), and as yet takes no account of the actual specimens contained in the slides. Despite these deficiencies, the file may now be considered a valuable research tool, in addition to its obvious functions as a secure data-storage system and curatorial aid. The data base management system used is known as SPIRES, which is a sophisticated text-handling package based on a hierarchical system of data

structuring, with extensive facilities for constructing indexes, developing formats for data presentation and manipulating and transforming data. The system is interactive, that is all data is immediately accessible and can be interrogated in a number of ways from a terminal. For example, the system will respond quickly to a single search (How many specimens has D. Horne on loan?) and list the slides concerned at the prompt "Type" (see Fig. 1). A similar search could be carried out to locate a particular genus or species within the slide collection, to determine how many slides come from a named locality, or to find how many slides contain material from a known collecting expedition. In addition to this, compound searches can be made of the file, asking for combinations of information. For example, "How many specimens of *Potamocypris fulva* from Loch Ascog collected by the collector Scott occur in the slide collection?" (see Fig. 2). Most searches of this nature are carried out at a terminal, but if hard copy output is required (to forward to a researcher or for curatorial purposes, say) then this can be obtained in a variety of forms – as default print-out, in specially devised formats, or as attractive listings in tabular form (see Figs. 3a & 3b). The system is flexible enough to take additional data as it is discovered in the light of future research, and existing information can be amended as necessary.

The Brady Library has also been fully computer-catalogued and attractive listings (author indexes or subject indexes for example) can be obtained (see Fig. 4). The main outstanding task is the curation and documentation of the spirit collection. The procedure for cataloguing will undoubtedly remain the same and the end-product should make the collection more accessible and increase its potential as a research source. Practical work on the collections is a pre-requisite to cataloguing, however, and a number of difficult curatorial decisions have to be made regarding future storage and maintenance.

Type-specimens of ostracod species described by Brady

As we have already made clear, the computer catalogue of Brady's ostracod collection is based on the information written on the slides or in Brady's notebook, and makes no reference to the number or condition of the specimens on the slides. Further research is needed, particularly to determine whether or not valid type-specimens of the 600 or so new species described by Brady are present in the collection. To demonstrate the kind of work remaining to be done, we have utilised the computer file, in conjunction with the slide collection and Brady's notebook, to determine the condition and status of the type specimens of the species which Brady described as new in the third and fourth publications in his series: "Contributions to the study of the Entomotraca". For each species we have sought to provide the following information: a brief synonymy comprising the

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-FIND SN STR POTAMOCYPRIS
-RESULT: 23 SLIDE(S)
-?AND SN STR FULVA
-RESULT: 23 SLIDE(S)
-?AND LOC STR ASCOG
-RESULT: 5 SLIDE(S)
-?AND CN STR SCOTT
-RESULT: 2 SLIDE(S)
-?TYPE

SLIDE-NUMBER = 1.18.04;
CATALOGUE = OSTRACODA;
CONDITION = RECENT;
TYPE-OF-SLIDE = CARD;
SPECIMEN-DET;
  SCIENTIFIC-NAME = POTAMOCYPRIS FULVA;
  REFERENCE-LAB;
  AUTHOR = BRADY, G.S.;
  DATE = 1870;
  PUBLICATION = NAT. HIST. SOC. NORTHUMBERLAND AND DURHAM. TRANS. 3:361-373;
  TITLE = NOTES ON ENTOMOSTRACA TAKEN CHIEFLY IN THE NORTHUMBERLAND AND DURHAM (DISTRICT).;
  PAGE = P. 366 PL. 14 FIG. 4;
  REFERENCE-LAB;
  AUTHOR = BRADY, G.S. AND NORMAN, A.M.;
  DATE = 1889;
  PUBLICATION = ROY. DUBLIN SOC. SCI. TRANS. SER 2 VOL. 4:63-270;
  TITLE = A MONOGRAPH OF THE MARINE AND FRESH-WATER OSTRACODA OF THE NORTH ATLANTIC AND OF NORTH WESTERN EUROPE;
  TITLE = SECTION I PODOCOPA.;
  PAGE = P. 93 PL. 22 FIG. 13-17;
SYNONYM-DETAILS;
SCIENTIFIC-NAME = BAIRDIA FULVA;
REFERENCE-SYN;
  AUTHOR = BRADY, G.S.;
  DATE = 1868;
  PUBLICATION = LINNEAN SOC. LOND. TRANS., 26:353-495;
  TITLE = A MONOGRAPH OF THE RECENT BRITISH OSTRACODA.;
  PAGE = P. 474 PL. 28 FIG. 21;
LOCATION-DET;
LOCATION = SIDE OF LOCH ASCOG;
COLLECTION-DET;
COLLECTOR = T. SCOTT;
NOTE-ON-SLIDE = 'THE ONLY 'LIVING' SPECIMEN I HAVE SEEN';
RECORDER = B.L. HUDSON;

SLIDE-NUMBER = 1.18.05;
CATALOGUE = OSTRACODA;
CONDITION = RECENT;
TYPE-OF-SLIDE = CARD;
SPECIMEN-DET;
  SCIENTIFIC-NAME = POTAMOCYPRIS FULVA BRADY;
  REFERENCE-LAB;
  AUTHOR = BRADY, G.S.;
  DATE = 1870;
  PUBLICATION = NAT. HIST. SOC. NORTHUMBERLAND AND DURHAM. TRANS. 3:361-373;
  TITLE = NOTES ON ENTOMOSTRACA TAKEN CHIEFLY IN THE NORTHUMBERLAND AND DURHAM (DISTRICT).;
  PAGE = P. 366 PL. 14 FIG. 4;
  REFERENCE-LAB;
  AUTHOR = BRADY, G.S. AND NORMAN, A.M.;
  DATE = 1889;
  PUBLICATION = ROY. DUBLIN SOC. SCI. TRANS. SER 2 VOL. 4:63-270;
  TITLE = A MONOGRAPH OF THE MARINE AND FRESH-WATER OSTRACODA OF THE NORTH ATLANTIC AND OF NORTH WESTERN EUROPE;
  TITLE = SECTION I PODOCOPA.;
  PAGE = P. 93 PL. 22 FIG. 13-17;
SYNONYM-DETAILS;
SCIENTIFIC-NAME = BAIRDIA FULVA;
REFERENCE-SYN;
  AUTHOR = BRADY, G.S.;
  DATE = 1868;
  PUBLICATION = LINNEAN SOC. LOND. TRANS., 26:353-495;
  TITLE = A MONOGRAPH OF THE RECENT BRITISH OSTRACODA.;
  PAGE = P. 474 PL. 28 FIG. 21;
LOCATION-DET;
LOCATION = SIDE OF LOCH ASCOG;
LOCATION-DET;
LOCATION = DITCH, INVERKYLE ROAD, GREENOCK.;
LOCATION-DET;
LOCATION = W. AND S. SIDES OF LOCH FADD;
COLLECTION-DET;
COLLECTOR = T. SCOTT;
RECORDER = B.L. HUDSON;
-?

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Fig. 2. A compound search in the Brady subfile, identifying the presence of two slides of specimens of *Potamocypriis fulva* collected by T. Scott from Loch Ascog. Slide details are printed out in a 'default' format unless a special format is selected.

George Stewardson Brady and his collections

TYPE			

POTANOCYPRIS FULVA			1.18.04

NOTE: 'THE ONLY 'LIVING' SPECIMEN I HAVE SEEN'			OSTRACODA
		LOCATION:	
		SIDE OF LOCH ASCOG	
		COLLECTOR:	
		T. SCOTT	

POTANOCYPRIS FULVA BRADY			1.18.05

			OSTRACODA
		LOCATION:	
		SIDE OF LOCH ASCOG	
		COLLECTOR:	
		T. SCOTT	
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.05
AMPHIASCUS GLACIALIS	ST. PAUL	DEUTSCHE SUDPOLAR EXPEDITION	2.37.06
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.07
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.08
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.10
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.12
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.13
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.14
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.15
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.16
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.17
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.18
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.19
AMPHIASCUS GLACIALIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.20
AMPHIASCUS GLACIALIS G.S. BRADY		DEUTSCHE SUDPOLAR EXPEDITION	2.37.09
AMPHIASCUS GRACILIS		DEUTSCHE SUDPOLAR EXPEDITION	2.37.11
AMPHIASCUS LAUS BRADY	JFF HARTLEPOOL, CO. DURHAM		2.38.37
AMPHIASCUS INTERMEDIUS SCOTT	JFF HARTLEPOOL, CLEVELAND		2.38.44
AMPHIASCUS MINUTUS CLAUS	SOUTHPOLAR REGION	'DEUTSCHE SUDPOLAR EXPEDITION'	2.39.45
AMPHIASCUS MUCRONATUS	SOUTHPOLAR REGION	'DEUTSCHE SUDPOLAR EXPEDITION'	2.40.01

Fig. 3. Examples of (a) format and (b) tabulated listings. The latter lists name, locality, expedition and slide number.

DATA FROM THE SUBFILE BRADY BOUND VOLUMES

ENTOMOSTRACA 5		
BRADY, G.S. AND ROBERTSON, D. 1869		
NOTES ON A WEEKS'S DREDGING IN THE WEST OF IRELAND		
ANN. MAG. NAT. HIST. VOL. 2 SER. 4	PP 220-225	PLATES 2
ENGLISH		
ENTOMOSTRACA 6		
BRADY, G.S. AND ROBERTSON, D. 1870		
THE OSTRACODA AND FORAMINIFERA OF TIDAL RIVERS WITH AN ANALYSIS AND DESCRIPTIONS OF THE FORAMINIFERA BY H.S. BRADY.		
ANN. MAG. NAT. HIST. VOL. 6 SER. 4	PP 1-70	PLATES 9
ENGLISH		
ENTOMOSTRACA 6		
BRADY, G.S. AND ROBERTSON, D. 1871		
DESCRIPTIONS OF TWO NEW SPECIES OF BRITISH HOLOTHURJIDEA		
PROC. ZOOL. SOC. LONDON	PP 690-692	PLATES 2
ENGLISH		
ENTOMOSTRACA 6		
BRADY, G.S. AND ROBERTSON, D. 1872		
CONTRIBUTIONS TO THE STUDY OF THE ENTOMOSTRACA. NO. VI ON THE DISTRIBUTION OF THE BRITISH OSTRACODA.		
ANN. MAG. NAT. HIST. VOL. 9 SER. 4	PP 48-70	PLATES 2
ENGLISH		
1		

Fig. 4. Sample printout from the catalogue of the Brady Library.

reference to Brady's original description and illustrations plus (where possible) a recent reference giving a modern name for the species, details of the type locality and details of the type specimens. Of the large numbers of specimens which have recently been returned to the Hancock Museum, many had been placed on new slides bearing the words "syntype" or "holotype", and it is usually possible to identify the original slide from which such specimens were taken. In some instances, the removal of type specimens has left an empty slide in the collection, to the confusion of other workers (see Athersuch, 1982) who naturally assumed the types to be lost until they re-appeared on a new slide.

In the following section, our reference to the return of a "new slide" indicates that the material in question was not on its original slide when received by the museum.

Brady (1868c): "Marine Ostracoda from Tenedos". (Now called Bozcaada, W. coast of Turkey, 39° 49'N, 26° 03'E).

Pontocypris intermedia

1868c *Pontocypris intermedia* sp. nov. G. S. Brady: 220-221, pl. 14, figs. 1-2.

Type locality. Tenedos.

Type specimens. New slide no. 1.24.29, labelled "syntype, Tenedos" contains a single carapace. This specimen was presumably removed from Brady's original slide (2.05.27) which is now empty.

Bairdia formosa

1868c *Bairdia formosa* sp. nov. G. S. Brady: 221, p. 14, figs. 5-7.

Type locality. Tenedos.

7

R
 River Maas, near Schiedam

1. *Pentacypris acuminata*
 2. *Cardania caesia*
 3. *Cythereis acuminata*
 4. *Cythereis acuminata*
 5. *Cythereis acuminata*
 6. *Cythereis acuminata*
 7. *Cythereis acuminata*
 8. *Cythereis acuminata*
 9. *Cythereis acuminata*
 10. *Cythereis acuminata*
 11. *Cythereis acuminata*
 12. *Cythereis acuminata*
 13. *Cythereis acuminata*
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 59. *Cythereis acuminata*
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Plate 2. Pages from Brady's notebook, held in the Hancock Museum.

Type specimens. Slide no. 1.17.17 contains syntypes, fourteen carapaces and four valves. A new slide labelled "syntype" (now numbered 1.17.19A) was empty when returned to the museum.

Cythere crispata

1868c *Cythere crispata* sp. nov. G. S. Brady: 221, pl. 14, figs. 14-15.

1980 *Callistocythere crispata* (Brady); J. Athersuch & J. E. Whittaker: 67-72.

Type locality. Tenedos.

Type specimens. Athersuch & Whittaker designated a neotype, a female left valve from Besika Bay, NW Turkey, slide no. 1.10.42; this was invalidated by the subsequent rediscovery of the Holotype, now returned to the Hancock Museum and numbered 1.54.16 (see Athersuch, 1982).

Cythere favoides

1868c *Cythere favoides* sp. nov. G. S. Brady: 222, pl. 15, figs. 5-7.

Type locality. Tenedos.

Type specimens. Slide no. 1.16.21 contains syntypes, nineteen carapaces and one right valve. Two additional new slides, recently returned to the museum and labelled syntypes, are now numbered 1.16.21A (one carapace and one left valve) and 1.16.21B (3 carapaces); these specimens were presumably removed from 1.16.21.

Cythere speyeri

1868c *Cythere Speyeri* sp. nov. G. S. Brady: 222, pl. 15, figs. 8-11.

1975 *Aurila speyeri* (Brady); G. Bonaduce *et al.*: 44, pl. 19, figs. 1-7, 10.

Type locality. Tenedos.

Type specimens. Slide no. 1.46.36 contains syntypes, seven carapaces and six valves. A new slide labelled "syntype" was empty when received by the museum; it is now numbered 1.46.36A.

Cythere dissimilis

1868c *Cythere dissimilis* sp. nov. G. S. Brady: 222-223, pl. 15, figs. 12-13.

Type locality. Tenedos.

Type specimens. Slide no. 2.05.24 should contain syntypic specimens (in company with *Loxoconcha affinis*) but does not now contain any material corresponding to Brady's description and illustrations of *C. dissimilis*. Two new slides were recently returned. One, labelled "non *dissimilis*, Tenedos" and now numbered 1.13.28, was empty when received by the museum; the other, labelled "*dissimilis*, syntype, Tenedos", contains a left valve and is now numbered 1.13.29. We presume that the material named on these slides originally came from slide no. 2.05.24.

Loxoconcha alata

1868c *Loxoconcha alata* sp. nov. G. S. Brady: 223, pl. 14, figs. 8-13.

1977 *Loxoconcha alata* Brady; J. Athersuch: 99-106.

Type locality. Tenedos.

Type specimens. Slide no. 1.02.11 contains the lectotype (a female right valve and left valve) designated by Athersuch (1977). A recently returned new slide labelled "syntypes", containing a carapace and a left valve, is now numbered 1.02.11A; these were presumably removed from Brady's original syntypic slide, no. 1.02.12, which still contains three carapaces and two right valves.

Cytherura acris

1868c *Cytherura acris* sp. nov. G. S. Brady: 224, pl. 15, figs. 3-4.

Type locality. Tenedos.

Type specimens. Slide no. 2.05.27 contains syntypes, 3 carapaces and 7 valves. Three recently returned new slides are presumed to refer to material originally on the above syntypic slide; They are now numbered 1.54.01 (labelled "syntypes" and containing two carapaces), 1.54.02 (labelled "non *acris*" – this slide was empty when received by the museum) and 1.54.03 (labelled "syntypes" and containing a left valve).

Sclerochilus (?) aegaeus

1868c *Sclerochilus (?) aegaeus* sp. nov. G. S. Brady: 224, pl. 14, figs. 3-4.

Type locality. Tenedos.

Type specimens. Slide no. 2.05.28 contains a single damaged valve (in company with *Aglaiia pulchella?* and *Paradoxostoma (?) reniforme*) which may be regarded as a syntype. A recently returned new slide labelled "syntype" contains a single carapace which is presumed to have come from slide no. 2.05.28; the new slide is now numbered 1.04.33.

Paradoxostoma (?) reniforme

1868c *Paradoxostoma (?) reniforme* sp. nov. G. S. Brady: 224, pl. 15, figs. 1-2.

Type locality. Tenedos.

Type specimens. Slide no. 2.05.28 contains a syntypic right valve (in company with *Sclerochilus (?) aegaeus* and *Aglaiia pulchella?*). A recently returned new slide labelled "syntype" contains a single carapace which was presumably removed from slide no. 2.05.28; it is now numbered 1.42.16.

Brady (1869): "Ostracoda from the River Scheldt and the Grecian Archipelago".

Pontocypris obtusata

1869 *Pontocypris obtusata* sp. nov. G. S. Brady: 47, pl. 8, figs. 7-8.

Type locality. Piraeus (37° 57'N, 23° 42'E).

Type specimens. Slide no. 2.05.15 should contain type material (in company with *Cytheridea castanea?* and *Loxoconcha tamarindus?*), but does not now contain any specimens corresponding to Brady's description and illustrations of *P. obtusata*. A recently returned new slide labelled "Holotype" contains a single carapace which is presumed to have been removed from slide no. 2.05.15; the new slide is now numbered 1.35.34.

Cythere porcellanea

1869 *Cythere porcellanea* sp. nov. G. S. Brady: 47, pl. 7, figs. 1-4.

1869 *Cythere porcellanea* Brady: G. S. Brady & D. Robertson; 366-367. pl. 19, figs. 1-4.

1982 *Leptocythere porcellanea* (Brady & Robertson) (*sic*): D. Horne: 673, pl. 1, fig. 10.

Type locality. R. Scheldt, near Antwerp (51° 15'N, 4° 16'E).

Type specimens. Slide no. 2.04.02 contains two syntypic carapaces in company with several other species. Brady's original description refers to "one specimen only"; however, when Brady & Robertson (1869) published a redescription based on fresh material, stating "the Dutch specimens from which this species was originally described appear to be either young or stunted individuals", they certainly implied that Brady originally had more than one specimen. Slide no. 2.11.19 (Faunal slide 'S') from the type locality contains 11 carapaces which are listed in Brady's notebook as *Cythere porcellanea*. Some of these specimens closely resemble those on which the species was originally based, while others correspond well to Brady & Robertson's (1869) redescription and illustrations of male and female carapaces; this is undoubtedly the fresh material on which their redescription was based.

Cythere fuscata

1869 *Cythere fuscata* sp. nov. G. S. Brady: 47, pl. 7, figs. 5-8.

1957 *Cytheromorpha fuscata* (Brady); C. W. Wagner: 49-50, pl. 19.

Type locality. River Scheldt (as for *C. porcellanea*).

Type specimens. Fifteen syntypic carapaces are contained in slide no. 2.11.19 (Faunal slide S) in company with many other species. Slide no. 2.04.02 contains further syntypes, four carapaces (three male and one female), in company with several other species.

Cythere affinis

1869 *Cythere affinis* sp. nov. G. S. Brady: 47-48, pl. 7, figs. 13-14.

Type locality. Besika Bay, 14 fathoms (N. of Tenedos, 39° 49'N, 26° 03'E).

Type specimens. Slide no. 2.05.03 should contain syntypes (in company with specimens of *Loxoconcha*

angustata and *Paradoxostoma ensiforme*), but does not now contain any specimens corresponding to Brady's description and illustrations of *C. affinis*. A recently returned new slide labelled "*Cythere affinis* syntype, Besika Bay" contains a right and left valve which were presumably removed from slide no. 2.05.03; the new slide is now numbered 1.04.34.

Loxoconcha tumida

1869 *Loxoconcha tumida* sp. nov. G. S. Brady: 48, pl. 8, figs. 11-12.

1979 *Loxoconcha ovulata* (Costa); J. Athersuch: 141-150.

Type locality. Brady (1869) recorded this species from both Besika Bay (as for *C. affinis*) and Piraeus (as for *P. obtusata*).

Type specimens. Slide no. 1.50.41 contains syntypes, 12 carapaces and 5 valves, from Piraeus; slide no. 1.50.42 contains syntypes, 6 carapaces and 18 valves, from Besika Bay. A recently returned new slide labelled "*Loxoconcha tumida* syntypes, Besika Bay" contains 2 carapaces which were presumably removed from slide no. 1.50.42; the new slide is now numbered 1.50.42A. A female carapace (valves now disarticulated) from Piraeus, taken from slide no. 1.50.41, is now on slide no. 1.50.40; although it is labelled "lectotype" on the slide it was never published as such; it is in fact the specimen figured by Athersuch (1979) who showed this species to be a junior synonym of *L. ovulata* (Costa).

Loxoconcha angustata

1869 *Loxoconcha angustata* sp. nov. G. S. Brady: 48, pl. 8, figs. 16-17.

Type locality. Besika Bay (as for *C. affinis*).

Type specimens. Athersuch (1976) suggested that *L. angustata* might be a senior synonym of *Loxoconcha rubritincta* Ruggieri, but stated: "The types are not known and are presumed lost, and the original illustrations and description are so poor that I regard *L. angustata* as a *nomen dubium*". Syntypic material has since come to light which demonstrates conclusively that *L. angustata* is not conspecific with *L. rubritincta*. Slide no. 2.05.03 contains a fragment of a left valve (in company with *Paradoxostoma ensiforme* and *Cythere affinis*) which may be regarded as syntypic; a carapace which was presumably removed from the above slide has recently been returned on a new slide labelled "*Loxoconcha angustata* syntype, Besika Bay" and now numbered 1.04.40.

Cytherura flavescens

1869 *Cytherura flavescens* sp. nov. G. S. Brady: 49, pl. 8, figs. 13-15.

Type locality. River Scheldt (as for *C. porcellanea*).

Type specimens. Slide no. 2.04.02 contains syntypes, 3 carapaces in company with several other species.

Cytheropteron acutum

1869 *Cytheropteron acutum* sp. nov. G. S. Brady: 49, pl. 8, figs. 1-4.

Type locality. Dardanelles, 17 fathoms (40° 00'N, 26° 00'E).

Type specimens. Slide no. 2.05.05 should contain type material in company with several other species, but does not now contain any specimens corresponding to Brady's description and illustrations of *C. acutum*. A single carapace recently returned on a new slide labelled "*Cytheropteron acutum* holotype, Dardanelles" was presumably removed from slide no. 2.05.05; it is now numbered 1.03.44.

Cytherideis teres

1869 *Cytherideis teres* sp. nov. G. S. Brady: 49, pl. 8, figs. 5-6.

Type locality. Besika Bay (as for *C. affinis*).

Type specimens. Slide no. 1.49.35 contains a single syntypic carapace; a second carapace which was presumably removed from the above slide has been recently returned on a new slide labelled "*Cytherideis teres* syntype, Besika Bay" and is now numbered 1.49.35A.

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