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THE CEPHALOPOD COLLECTIONS OF THE AUSTRALIAN MUSEUM

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The Australian Museum has large collections of cephalopods from Australian waters, some material dating back to the early part of this century. Former curators C. Hedley, T. Iredale, and J. Allan published papers on Australian cephalopods and their material including type material is available for study. S. S. Berry studied collections made in South Australia by F. I. S. *Endeavour* 1909-14 and the Mawson Australian Antarctic Expedition 1911-14, and the type material is held at The Australian Museum. Over the last decade the collections have been enlarged greatly and one major source of material has been Mr. K. Graham and his colleagues of the New South Wales State Fisheries Research Vessel *Kapala*.

Neither of the present scientists in the Department of Malacology has a research interest in cephalopods. However, it is a general policy of the department to build up our collections in all areas of molluscs and we actively encourage outside workers to use our material.

The following lists of type holdings and general holdings has been prepared as a guide to the nature of the collections.

Type Material

Cephalopod type material of species described by Allan, Berry, and Iredale and held in The Australian Museum are listed below. As only three authors are involved the holdings are listed under each author.

J. ALLAN, 1945—TYPE MATERIAL

serventyi (Heteroteuthis); Allan, J., 1945: pp. 340-341, pl 27, figs 22, 23. C126033, HOLOTYPE.

sheardi (Eledonella); Allan, J., 1945: pp. 345-6, pl 26, figs 22-7. C126032, HOLOTYPE.

S. S. BERRY, 1917.—TYPE MATERIAL

adeliana (Moschites); Berry, 1917: pp. 17-20, pl XI, XII. C40889, HOLOTYPE.

albida (Moschites); Berry, 1917: pp. 15-16, pl X, XI. C40888, HOLOTYPE.

aurorae (Moschites); Berry, 1917: pp. 20-24, pl XII, XIII. C40891, HOLOTYPE.

harrisoni (Moschites); Berry, 1917: pp. 24-27, pl XIII, XIV. C40892, HOLOTYPE, C40893, PARATYPE.

mawsoni (Stauroteuthis); Berry, 1917: pp. 8-11, pl X. C40886, HOLOTYPE.

S. S. BERRY, 1918—TYPE MATERIAL

australis (Rossia); Berry, 1918: pp. 253-258, pl 69, 70. E3636, HOLOTYPE.

dannevigi (Sepia); Berry, 1918: pp. 264-268, pl 73, 74. E2466, HOLOTYPE.

etheridgei (Loligo); Berry, 1918: pp. 243-249, pl 67, 69. E6068, HOLOTYPE.

galaxias (Enoploteuthis); Berry, 1918: pp. 211-221, pl 59, 60. E5723, HOLOTYPE.

hedleyi (Sepia); Berry, 1918: pp. 258-264, pl 71, 72. E2464, HOLOTYPE.

persephone (Opisthoteuthis); Berry, 1918: pp. 290-294, pl 81, 82, 85-88. E5718, HOLOTYPE.

Apparently missing

chirotrema (Sepia); Berry, 1918: pp. 268-276, pl 74, 78. E2459, HOLOTYPE. E2454, E2460, E3621, E3622, PARATYPES.

miranda (Calliteuthis); Berry, 1918: pp. 221-228, pl 61, 62. E5605, HOLOTYPE.

pluto (Opisthoteuthis); Berry, 1918: pp. 284-290, pl 81, 84. E3638, HOLOTYPE.

According to Berry the type material of the above three species should be in the museum's collections, but I am unable to find them. Apparently during World War II the wet collections were stored underground and were inaccessible for some years (W. F. Ponder—pers. comm.). During this period many specimens dried out and some were destroyed or lost. It would seem that the type material of these three species held at The Australian Museum were lost during this period.

However, as was the custom at that time Berry retained paratype material for his own collection of *Opisthoteuthis pluto* and one juvenile specimen E4375 of the material studied by Berry still survives. Unfortunately, the holotype of *Calliteuthis miranda* was a unique specimen and the material of *Sepia chirotrema*, consisting of the holotype and four other specimens cannot be found.

T. IREDALE—TYPE MATERIAL

F. Sepiidae.

bartletti (Blandosepia); Iredale, 1954: p. 67, pl 5, figs 15, 16. C133318, HOLOTYPE.

baxteri (Blandosepia); Iredale, 1940: p. 442. C133317, HOLOTYPE.

braggi xera (Arctosepia); Iredale, 1954: p. 74, pl 5, figs 19-21. C133310, HOLOTYPE; C102192, PARATYPES (5).

eclogaria (Ponderosepia); Iredale, 1926: p. 239, pl 35, figs 7-8. C19085, HOLOTYPE.

ellipticum adjacens (Acanthosepion (Fiscisepia)); Iredale, 1926: p. 239, pl 35, figs 5, 6. C133302, HOLOTYPE; C133303, PARATYPES (4).

gemellus (Glyptosepia); Iredale, 1926: p. 192, pl 22, figs 1, 2. C133306, HOLOTYPE.

genista (Solitosepia); Iredale, 1954: p. 66, pl 5, figs 17, 18. C133309, HOLOTYPE.

hulliana (Crumenasepia); Iredale, 1926: p. 239, pl 35, figs 1, 2. C133333, HOLOTYPE.

lana (Solitosepia); Iredale, 1954: p. 66. C133301, HOLOTYPE.

liliana (Solitosepia); Iredale, 1926: p. 188, pl 21, figs 1-3. C133300, HOLOTYPE. C133327, PARATYPE?

limata (Arctosepia); Iredale, 1926: p. 193, pl 23, figs 7, 8. C133316, HOLOTYPE.

macandrewi (Mesembrisepia); Iredale, 1926: pp. 190-1, pl 21, figs 8, 9. C133328, HOLOTYPE.

macilenta (Glyptosepia); Iredale, 1926: p. 192, pl 22, figs 3, 4. C133305, HOLOTYPE.

melwardi (Sepiella); Iredale, 1954: p. 78, pl 5, figs 1-6. C133320, HOLOTYPE; C133321, PARATYPE.

opipara (Glyptosepia); Iredale, 1926: p. 191, pl 22, figs 7, 8. C133330, HOLOTYPE.

ostanes (Mesembrisepia); Iredale, 1954: p. 69, pl 4, figs 5, 6. C133311, HOLOTYPE.

pageorum (Acanthosepion); Iredale, 1954: p. 76, pl 4, figs 7-9. C133315, HOLOTYPE.

parysatis (Amplisepia); Iredale, 1954: p. 71, pl 4, figs 1-2. C133307, HOLOTYPE.

plangon adhaesa (Solitosepia); Iredale, 1926: p. 238. C133304, HOLOTYPE.

rozella peregrina (Solitosepia); Iredale, 1926: p. 238. C133322, HOLOTYPE; C133323, PARATYPE.

pfefferi laxior (Metasepia); Iredale, 1926: p. 240, pl 35, figs 9, 10. C133326, HOLOTYPE; C19084, PARATYPES (2).

pfefferi wanda (Metasepia); Iredale, 1954: p. 78, pl 5, figs 9-11. C133314, HOLOTYPE.

rhoda (Arctosepia); Iredale, 1954: p. 75, pl 4, figs 10-12. C133319, HOLOTYPE.

rex (Decorisepia); Iredale, 1926: p. 193, pl 22, figs 9, 10. C127593, HOLOTYPE.

rozella (Solitosepia); Iredale, 1926: p. 190, pl 21, figs 6, 7. C133336, HOLOTYPE.

submestus (Solitosepia); Iredale, 1926: p. 238, pl 35, figs 3, 4. C133325, HOLOTYPE.

treba (Arctosepia); Iredale, 1954: p. 75. C133324, SYNTYPES.

versuta (Arctosepia); Iredale, 1926: p. 194, pl 23, figs 5, 6. C133313, HOLOTYPE.

whitleyanum (Acanthosepion); Iredale, 1926: p. 195, pl 23, figs 9, 10. C133331, HOLOTYPE.

F. Nautilidae

repertus (Nautilus); Iredale, 1944: pp. 295-6. C63202, HOLOTYPE.

Non-Type Material

In addition to the type material the Australian Museum holds a large collection of non-type cephalopod material. Apart from the sepiid collection which, due to its large number and importance, will be listed separately, the general collection consists of over 1000 lots of specimens. Sepiolidae, Loliginidae, Enoploteuthidae, Ommastrephidae, Cranchiidae and Octopodidae are well represented in the collection. The collection is Australia-wide in coverage with emphasis on the material from the east coast particularly the waters off New South Wales.

F. Sepiidae Keferstein, 1866.

The sepiid collections are large and impor-

tant, with 28 Iredale holotypes and 2 Berry holotypes, which are listed separately. The general collection contains in excess of 250 lots of preserved animals, usually each lot containing multiple specimens, and extensive holdings of cuttlebones, mainly from Australian waters. Most of the preserved material is unidentified but it is probably that specimens of most of Iredale's proposed species are present. The cuttlebone collection is of historical importance, containing all the comparative material Iredale worked with, and large ranges of specimens collected since Iredale's time. Even with Iredale's type material it is impossible to distinguish some of his species from each other, and it is obvious in other cases that older names have precedence. Unfortunately, Dr W. Adams, the most productive worker in recent years on the Indo-West Pacific Sepiidae, has been unable to study the large sepiid collections available at The Australian Museum. Until this is done, many problems will remain in the taxonomy of this group in the Indo-West Pacific. The cuttlebones in the collection have been identified by reference to Iredale's types, and the works of Adam and other authors. Possible synonyms are listed where it is impossible to sustain Iredale's species differences on examination of large series of cuttlebones. These suggested synonymies will only be verified when anatomical studies are undertaken and are only included to indicate the extent of the taxonomic confusion prevailing.

Following Adam & Rees (1966), Iredale's many generic and subgeneric names are considered superfluous.

Sepia apama Gray, 1849 = *Amplisepia verreauxi* Iredale, 1926 (non Rochebrune).
= *Amplisepia parysatis* Iredale, 1954: Many lots.

Sepia bartletti Iredale, 1954: One lot possibly PARATYPE material.

Sepia baxteri Iredale, 1940: 2 lots including large PARATYPE series.

Sepia braggi Verco, 1901: Iredale's *Arctosepia* group are difficult to distinguish externally. Lots belonging to this group include specimens identified in the past under the following names which may prove synonymous:

S. braggi Verco, 1901. PARATYPE.
S. braggi xera (Iredale, 1954). PARATYPE.
S. limata (Iredale, 1926).
S. mira Cotton, 1932.
S. rhoda (Iredale, 1954).
S. treba (Iredale, 1954).
S. versuta (Iredale, 1926).

Sepia chirotrema Berry, 1918: 7 lots.

Sepia cultrata Hoyle, 1885
= *Glyptosepia gemellus* Iredale, 1926.
= *Glyptosepia hedleyi* (Berry, 1918).
= *Glyptosepia hendryae* (Cotton, 1929). Many lots.
= *Glyptosepia macilenta* Iredale, 1926.

Sepia elliptica Hoyle, 1885 = *Acanthosepion ellipticum adjacens* Iredale, 1926. Many lots.

Sepia latimanus Quoy & Gaimard, 1832 = *Ponderosepia eclogaria* Iredale, 1926. Many lots.

Sepia mestus Gray, 1849 = *Solitosepia liliana* (Iredale, 1926). Not *S. mestus* Iredale, 1926. Many lots.

Sepia mestus Iredale, 1926: Many lots (not *S. mestus* Gray, 1849).

Sepia novaehollandiae Hoyle, 1909 = *Mesembrisepia irvingi* Meyer, 1909. Many lots.

Mesembrisepia macandrewi Iredale, 1926.
= *Mesembrisepia ostanes* Iredale, 1954.

Sepia opipara Iredale, 1926: Many lots.

Sepia papuensis Hoyle, 1885
= *Solitosepia galei* Meyer, 1909.
= *Solitosepia genista* Iredale, 1954.
= *Solitosepia glauerti* Cotton, 1929.
= *Solitosepia occidua* Cotton, 1929.
= *Solitosepia submestus* Iredale, 1926. Many lots.

Sepia pharaonis Ehrenberg, 1831
= *Crumenosepia hulliana* Iredale, 1926.
= *Crumenosepia ursulae* Cotton, 1929. Many lots.

Sepia plangon Gray, 1849: Many lots.

Sepia rex (Iredale, 1926): Many lots.

Sepia rozella (Iredale, 1926): Many lots.

Sepia smithi Hoyle, 1885 = *Acanthosepion pageorum* Iredale, 1954. Many lots.

Sepia whitleyana (Iredale, 1926): Many lots. (Adam & Rees, 1966, consider this close to *S. elliptica*, and the specimen they figure is *S. elliptica* not *S. whitleyana*).

Sepia (Metasepia) pfefferi Hoyle, 1855: 15 lots.

Sepiella melwardi Iredale, 1954: 3 large lots including possible PARATYPE series.

Editor's note: The "Bibliography" section of this article is incorporated with "Bibliography of Cephalopod Biology of the Australian-New Zealand Region". See Roper (1983), pages 23-27, this volume.