

Type and Figured Palaeontological Specimens in the Tasmanian Museum and Art Gallery

A CATALOGUE

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cover image: *Trigonotreta stokesi* Koenig 1825, the first described Australian fossil taxon occurs abundantly in its type locality in the Tamar Valley, Tasmania as external and internal moulds. The holotype, a wax cast, is housed at the British Museum (Natural History). (Clarke, 1979)

Tasmanian Museum & Art Gallery



Hobart, Tasmania May, 2012

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Introduction

This is the second comprehensive catalogue of the type and figured specimens held in the Tasmanian Museum and Art Gallery (TMAG). The first, prepared by Irene Crespin in 1964¹, included types and figured specimens of all ages housed in the TMAG as well as those in the collections of the Geology Department, University of Tasmania, the Geological Survey of Tasmania of the Department of Mineral Resources Tasmania and the Queen Victoria Museum and Art Gallery, Launceston. Three years later Nelly H. Ludbrook compiled a listing of the Tertiary molluscan types from Table Cape, Tasmania that included the first photographs of many of the Table Cape species². In the interim between these, Ross A. Both, Keeper of Geology 1961–66, made an internal listing of corrections and additions to Crespin's list³. Crespin listed 94 primary or supplementary type specimens among the Tasmanian Museum collections she reviewed, a number which seemed to her to be disappointingly small. Both reported about 118 primary types including some not available to Crespin. Ludbrook listed and photographed 51 molluscan types from the Tasmanian Table Cape strata, 11 of which had not been seen by Crespin or Both.

The Royal Society of Tasmania, founded in 1843 and the first to be established outside the United Kingdom, was created initially to administer the Colonial Gardens. It soon broadened its focus by establishing a Museum and Library. In 1852 the Royal Society Museum in Hobart was formalised to hold the society's growing collections and to permit public viewing of those treasures. It was the second museum to be created in Australia but its first curator was not appointed until 1861. In 1885 the Parliament acted to vest the Tasmanian Museum and Botanical Gardens as public institutions with both becoming agencies of the State. In 1950 The Tasmanian Museum Act separated the Museum and Botanical Gardens by which time the Tasmanian Museum and Art Gallery had come to occupy a complex of buildings in central Hobart. In 2002 the over-crowded collection storage facilities in Hobart City were relieved by their movement to their present quarters in the Collections and Research Facility in Rosny, a suburb of Hobart.⁴

The early collections of the Tasmanian Museum were largely the product of the efforts of the members of the Royal Society in their explorations of the island and their travels. Absent institutions of higher education, its members were self-taught and benefitted from the regular meetings of the Society where discussions of scientific matters occurred. Papers prepared by members were read at those meetings and published in the *Papers and Proceedings of the Royal Society*, a continuing series commenced in 1849. Through the distribution of the *Papers and Proceedings*, the Society gained awareness throughout the western world and the Museum expanded its collections of Tasmanian natural history to include materials from other parts of the world. Large private collections of Royal Society stalwarts such as Dr. Joseph Milligan (a private physician and long-time Secretary of the Royal Society), Robert M. Johnston (State Statistician

- 1 Crespin, I. 1964. Catalogue of fossil type and figured specimens in Tasmania. Bureau of Mineral Resources, Geology and Geophysics Report no. 69, 30 pp.
- 2 Ludbrook, NH 1967. Tertiary molluscan types from Table Cape in the Tasmanian Museum, Hobart. Papers and Proceedings of the Royal Society Tasmania, vol. 101, pp. 65–69, 4 pls.
- 3 Both, RA 1966. Fossil type and figured specimens in Tasmanian Museum. 8 page typescript prepared March, 1966. Typed version dated April, 1966. Both also wrote the first modern Museum labels easily identified by his use of blue ink.
- 4 I am indebted to Ms. Jo Huxley, TMAG for her knowledge of the history of the institution and its documents and documentation. See *History of the Museum* in *Collection: Tasmanian Museum and Art Gallery* 2007. For information on the Royal Society of Tasmania see "The Foundation Years of the Royal Society of Tasmania, 1843–86" by Gillian Winter, 1993, Papers and Proceedings of the Royal Society of Tasmania, v. 127 pp. 61–66.

and prodigious author of geological and paleontological subjects) Thomas A. Atkinson and others formed the core of the paleontological holdings of the museum. The Johnston collection was particularly massive, ranging through invertebrate, vertebrate and plant fossils of all ages.

Twentieth Century investigations of Tasmanian palaeontology were greatly expanded by staff of the variously named Mineral Resources Tasmania and by students and faculty of the Geology Department, University of Tasmania. Collections made by those geologists have been deposited in both the TMAG and the University of Tasmania's Department of Geology. Further growth of TMAG paleontological collections has been made by contributions of investigators from institutions outside Tasmania. This has resulted in a substantial increase in the numbers of types and figured specimens since the earlier catalogues.

For Australia and especially Tasmania, the early nineteenth century was one of a virtual outpouring of natural history writings as naturalists sought to bring order to a systematically virgin flora and fauna and its fossil counterparts. Much of the earliest technical literature of these floras and faunas was produced in England by taxonomists at the Natural History Museum in London and other museums who made identifications and described new taxa. Crespin (1964) prepared the comprehensive listing of those earlier studies as quoted here:

"Amongst the early described species from Tasmania housed in the British Museum (Nat. History) are Palaeozoic brachiopods (Koenig, 1825), Tertiary corals from Table Cape (Duncan,1875) and freshwater mollusca (Etheridge, 1881). Also in that institution are fossil types collected by Darwin's party during the voyage of the *Beagle* ...and by Strzelecki (1845). These included Palaeozoic bryozoa (Lonsdale, 1844, 1845), Neogene mollusca (Sowerby, 1845) and Palaeozoic marine fossils (Morris, 1845, 1845a).

"The majority of Tertiary fossils from Table Cape (Fossil Bluff, Wynyard) were described by Tate (1885–93) and the type and figured specimens are in the Tate Museum, Geology Department, University of Adelaide...The majority of species described by R. Etheridge Jnr (1883, 1888, 1897) are in the Australian Museum, Sydney. The repository of the plant fossils described by Feistmantel (1881, 1890) is not known; Mr. H.O. Fletcher of the Australian Museum suggests they may be in a museum in Europe..." (Crespin, 1964, p. 5)

Specimens sent to those museums were usually described and retained by those institutions. As Australian naturalists gained confidence and expertise, large collections were assembled and described by local naturalists and deposited in Australian museums. In Tasmania, the bulk of that early literature was published in the *Papers and Proceedings of the Royal Society of Tasmania*. Collections made by those naturalists, numbering over 15,000 specimens deposited in the Royal Society's Museum, were not curated in any modern sense but were largely placed on display mounted on plaquettes with only rudimentary labelling.

Efforts by museum staff in the early decades of the 20th Century to catalogue the collections, now removed from their display function, resulted in a number of handwritten ledgers providing newly assigned registration numbers and provided an important measure of continuity between the Royal Society Museum and the TMAG. Between 1890 and 1913 those data were recorded in the Tasmanian Museum Register numerically, prefixed by the letters 'TM'. From 1913 until 1929 a handwritten "geological register" was used, the numeric assignment prefaced by a 'B' with other zoological collections having other letters as prefixes. The geological collections of the 'B' series included fossils, minerals, rocks and other geological materials. Curatorial notations, usually

undated, appearing in this register record the first attempts to identify type specimens, especially those contained in the R.M. Johnston collection. Catalogue notations such as "TYPE" appear at this period. The basis for the entry is not always obvious.⁵

In 1935 a further series of collection registers were established museum-wide, again in a numerical sequence prefaced with collection area denominators. From 1935 to 1952 the 'N' series included Geology and mineralogy collections. The former 'B' series of numbers was continued for special paleontological collections. About 1952, the 'N' register was discontinued and replaced by the tripartite: X- mineralogy, Y- Petrology and Z- palaeontology registers.⁶

Commencing in the late 1990's, the ledger catalogues of the Tasmanian Museum were abandoned with the deployment of an electronic data file using the Filemaker Program. To an unknown extent the "Z" files have captured data from numerous independently developed card files and earlier handwritten registers. However, the advent of electronic data processing failed to quell the originality in its application by various staff, mostly through the efforts of volunteers working under staff direction. A formal protocol for data entry into this system was not introduced until 2009 under the direction of the Deputy Director for Collections and Research, Andrew Rozefelds. With implementation of that protocol many prior entries have been corrected often resulting in a re-registration of specimens. Such alterations are duly noted in the Registration and in the section "Remarks" of this catalogue.

In the introduction to her 1964 catalogue of types and figured specimens Crespin noted that type names "appear to have been attached to many of the early specimens by museum authorities rather than by authors...." Such indeed was the practice for few of the early authors designated types themselves a practice possibly unknown to those collectors. The addition of the word 'type' to a label or a bit of paper attached or associated with a specimen has caused problems for today's systematists evidenced by the inclusion in the International codes of nomenclature of rules on designation of lectotypes.

The International Code of Zoological Nomenclature deals with this in:

Article 74. Name-bearing types fixed subsequently from the type series (lectotypes from syntypes).8

- "74.1. **Designation of a lectotype**. A lectotype may be designated from syntypes to become the unique bearer of the name of a nominal species-group taxon and the standard for its application...
- "74.2 Lectotype found not to have been a syntype. If it is demonstrated that a specimen designated as a lectotype was not a syntype, it loses its status of lectotype.
- "74.3 . **Designation to be individual**. Lectotypes must not be designated collectively by a general statement; each designation must be made specifically for one nominal taxon and must have as its object the definition of that taxon.
- "74.4. Designation by means of an illustration or description. Designation of an illustration or description of a syntype as a lectotype is to be treated as designation of the specimen illustrated or described, the fact that the specimen no longer exists or cannot be traced does not of itself invalidate the designation.
- 5 The "B" numbers identified in this catalogue are referred to in 'Remarks' as the '1913 TMAG register'.
- 6 See Huxley, J. January 2010. Guide to the Collection Registers. Internal TMAG Document.
- 7 The first published edition of the International Code of Zoological Nomenclature was in 1961.
- 8 International Code of Zoological Nomenclature, 4th Ed. [Online edition] 1999. Intern. Comm. Zool. Nomen.. The Intern. Trust for Zool. Nomen.

"74.5. Lectotype designations before 2000. In a lectotype designation made before 2000, either the term "lectotype", or an exact translation or equivalent expression (e.g. "the type"), must have been used or the author must have unambiguously selected a particular syntype to act as the unique name-bearing type of the taxon. When the original work reveals that the taxon had been based on more than one specimen, a subsequent use of the term "holotype" does not constitute a valid lectotype designation unless the author, when wrongly using that term, explicitly indicated that he or she was selecting from the type series that particular specimen to serve as the name-bearing type.

"74.6. Fixation of lectotype by inference of "holotype" or "the type" before 2000. When it has been accepted that a nominal species-group taxon was based on a single specimen and the original description neither implies nor requires that there were syntypes, and if it was considered subsequently that the original description was based upon more than one specimen, the first author to have published before 2000 the assumption that the species-group taxon was based upon a single type specimen is deemed to have designated that specimen as the lectotype.

74.6.1 The inference that the specimen is a "holotype" or the "type"

74.6.1.1. may be by reference to an illustration or description of a specimen [Art. 74.4]; 74.6.1.2. must be in accordance with Article 74.3.

In the previous catalogues of type specimens in the paleontological collection of the TMAG the conundrum presented by "curatorial designation" of types has been dealt with in two ways. Crespin (1964) stated: "Type names appear to have been addressed to many of the early specimens by museum authorities rather than authors: they are reproduced in the catalogue...as they appear on the specimen labels, but the author takes no responsibility for their authenticity." Crespin thus followed curatorial selection of a type further adding a query to the term "holotype" when the original author had not illustrated the specimen. Those designations of holotypes are not always here considered as lectotype designation as there is usually insufficient evidence or discussion in her listing for Rule 74.5 or 74.6 to apply. Ludbrook, in her 1967 study of the molluscan types from the Tasmanian Table Cape Early Miocene strata dealt more boldly with the issue of "authority for type designation" with the assertion: "All types [listed] are holotypes unless otherwise stated." (Ludbrook, 1967, p. 65). It cannot be argued that she was unaware of lectotype designations for on p.67 of her catalogue she designates the lectotype for Polinices (Conumber) vixumbilicata (Tenison-Woods) with the phrase "This is here designated lectotype..." Therefore she too was accepting of curatorial labelling and /or monotypy. The latter is treacherous ground for type designation for unless one is dealing with a well-curated collection syntypes may appear at a later time. Other problems with older collections result from poor record keeping and absence of quality images.

Neither Crespin's or Ludbrook's actions followed the strictures of Article 74: Crespin by her not accepting responsibility and only "quoting" presumed curatorial actions; Ludbrook by in effect selecting lectotypes, but doing so by a general statement. In this catalogue, however, we have followed Ludbrook's assertion of a type except when new evidence suggests that action unwise, basing our decision on Recommendations 74A and 74B of Article 74, International Code of Zoological Nomenclature:

"Recommendation 74A. Agreements with previous restriction. In designating a lectotype, in order to preserve stability of nomenclature an author should act consistently with, and in any event should give great weight to, previously accepted taxonomic restrictions of the application of the name.

"Recomendation 74B. Preference for an illustrated specimen. Other things being equal, an author who designates a lectotype should give preference to a syntype of which an illustration has been published."

If, however, there is evidence contrary to that available to Ludbrook, her designation of holotype may be rejected. The argument for this is presented in comments in the section "Remarks" in this catalogue. Where possible we have herein attempted a best judgement of the size of the syntypic series when one has been discovered. If no such specimens have been discovered and/or if there is authorial indication that only a single specimen has been viewed or early registrations suggest only a single specimen was present in the collection, the phrase "by monotypy" has been added. These issues arise primarily with taxa described before 1920, especially in regard to the very large collection of early Tasmanian fossils amassed by Johnston and described by him, Tenison-Woods, Tate, May and others. While in the early 20th Century the Johnston collection formed the heart of the TMAG palaeontological holdings for a variety of reasons the collection had been neglected and still remains in a condition best described as "poorly curated." The efforts of past curatorial staff including Both and Banks and others in the mid-20th Century resulted in the identification of many Johnston types or figured specimens. Those efforts are documented in the "B' register Geological: [1913 series of Tasmanian Museum collection registers]" referred to in the following as the "1913 TMAG register".

Assertions appearing in various publications that the Johnston collection, in whole or in part, having been lost are incorrect with the exception of the palaeobotanical (see statement in introduction of plant fossils). Current curation has revealed a greater proportion of the "Johnston" types than previously identified despite the problems of lack or inadequacy of figures, brief descriptions and an absence of a record of the numbers of specimens available for study being rarely given. Pre-photography illustrations of fossil specimens are suspect. While some are exquisite renderings in great detail, others are artistically creative and inaccurate/cannot be matched with specimen. This is particularly vexing especially with regard to fossil plants where the tendency for illustrators to combine specimens to provide greater scope. In this catalogue the validity of drawings taken in is discussed under "Remarks".

The collection of primary types and figured specimens held by the TMAG is separated from the general collection and housed in locked cabinets. Invertebrate, vertebrate and plant fossils are housed separately for convenience of location. Specimens are contained in one or more trays as required, each labelled by author and date of publication. Trays are sequentially arranged by stratigraphic age.

In this catalogue species within major zoological or botanical groups are listed alphabetically and with present generic assignment with the generic and specific name in bold face type. This is followed by the original generic assignment and species, author and date of publication. If there has been a revisionary work, the author and date of that publication is cited. Museum numbers, locality, stratigraphic formation and age follow. Localities and the horizon from which collected are recorded herein as given by the author or earliest Museum label. All locations are in Tasmania unless otherwise stated. Age attributed to the specimen is based upon current knowledge of the geology and stratigraphy of the locality/formation. Subjective junior synonyms are separately listed in regular type face following the the senior name together with information about them. Synonymies are not comprehensive but intended to provide an understanding of the taxonomic currents through which the species has passed.

The section "Remarks" contains information on identifying markings on the specimens themselves and curatorial history. Specimens transferred from the Geological Survey or other institutions were often registered utilizing their own registration system. All and any of such numbers are included and cross-referenced with the TMAG registration. As these transfers of specimens may have occurred post-publication, the registration numbers cited in text or illustrations are further cross-referenced to the TMAG registration.

Type Collections held in whole or in part by TMAG listed by Author

INVERTEBRATES

Bao and Jago, 2000

Clarke, 1969, 1979, 1987, 1990, 1991, 1992a,

1992b

DeDecker, 1982

Etheridge, jr. 1883, 1905, 1919

Holloway & Sandford, 1993

Jago, 1991

Jago & Brown, 1992

Jell & Baillie, 1984

Jell, Burrett and Banks, 1985

Jell, Hughes and Brown, 1991

Jell & Stait, 1985a, 1985b

Johnston, R.M. 1877, 1880, 1885b, 1885d,

1885e, 1887, 1888

Kobayashi, 1940a, 1940b

May, 1922

Parfray, 1982, 1983

Rickards in Rickards, Baillie & Jago, 1990

Runnegar, 1970

Tate, 1885a, 1885b, 1889a

Teichert and Glenister, 1953

Tenison-Woods, 1876, 1877

Waterhouse, 1969

Webster and Jell, 1999

Wright and Garratt, 1990

VERTEBRATES

Akerman and Rozefelds, 2011

Bender, 2008

Dziewa, 1980

Cosgriff, 1965, 1969, 1974

Johnston & Morton, 1890, 1891

Johnston, 1885d, 1902

Murray, 1978

Rozefelds et al, 2011a, 2011b

Spencer, 1900

Tedford & Kemp, 1998

Twelvetrees & Pettard, 1900

Warren et al, 2011

PLANTS

Gibson, Kiernan & Macphail 1987

Johnston, 1885d, 1886b, 1887b, 1887d,

1888, 1894, 1896

Lewis, 1940

Tidwell, 1987, 1991, 1994

Tidwell, Kim & Kimura, 1987

Tidwell, Munzing & Banks, 1991

Tidwell, Nashida & Webster, 1989

Tidwell & Jones, 1987

Tidwell & Pigg, 1993

Tidwell & Skog, 1992

Townrow 1962c

Walkom, 1925, 1926

Acknowledgements

Andrew C. Rozefelds, then Deputy Director for Collections and Research, TMAG, provided continual collegial and critical support throughout the creation of this catalogue. To the many colleagues who have read and contributed to the scope and accuracy of the catalogue I am grateful for their expertise and thoughts: Heidi Anderson, Michael J. Clarke, Jim Jago and Andrew Rozefelds read major sections; their comments and suggestions have been incorporated. My TMAG associates Clifford Davy, provided computer guidance and support while Jo Huxley TMAG historian led me through the intracies of TMAG registration processes. Design by Hannah Gamble.

Invertebrate Palaeontology

Neogene

PLEISTOCENE

Gastropoda

Austropyrgus nitida (Johnston)

Bithynella nitida Johnston 1879a

Z198

Lectotype (by Clark, Miller and Ponder, 2003)

Z3724-Z3744

22 Paratypes

Locality: Thunder and Lightning Bay, Barren Island, Flinders Group

Formation:

Age: Pleistocene

1879a. Bithynella nitida Johnston, p. 25.

1879b. Bithynella nitida Johnston, p. 45.

1891. Bithynella (Potomapyrgus ?) nitida Johnston, p. 138.2003.

2003. Austropyrgus nitidus (Johnston), Clark, Miller and Ponder, p. 79, figs. 25G. 46C, 47E, 48B.

Remarks: The specimens of this species are contained in four phials. The lectotype designated by Clark *et al* 2003 is in a glass phial contained within a larger phial previously marked as "Holotype" by the TMAG. The largest phial has one shell fragment partially embedded in substrate, a second phial contains six large specimens and the third, 15 small specimens. The two smaller phials are contained in a glass phial containing a label, possibly in Johnston's hand: "*Bithynella nitida/*R.M (unreadable)/fossil, Barren Island". In pencil is the word "Type" and the inked number Z198. Johnston (1879a) expressed doubts on the classification of *Bithynella* spp. and later (1879b) raised further doubts about the difference between his species and the existing forms. Early curatorial notes refer the species to *Fluvidona* and to *Hydrobia buccinoides*.

Coxiella badgerensis (Johnston)

Pomatiopsis badgerensis Johnston 1879a

Z171, Z4509–Z4513

Syntypes

Locality: Badger Island, Furneaux Group of Islands

Formation:

Age: Pleistocene?

1879a. Pomotiopsis badgerensis Johnston, p. 26.

1879b. Pomatiopsis badgerensis Johnston, p. 45.

1880. Pomatiopsis badgerensis Johnston, pp. 322, 324.

1889. Pomatiopsis badgerensis Johnston, p. 86.

1891. Pomatiopsis badgerensis Johnston, p. 138.

1957. Coxiella badgerensis (Johnston) McPherson, p.197

Remarks: Johnston describes this species noting that it may only be a variety of existing species.

No description or illustration of the species exists. Six specimens are enclosed in a glass phial with a formerly adherent label which, in ink and possibly in R.M. Johnston's hand, reads "Potomiopsis/ Badgerensis/ R.M Johnston/ Badger Is./ Fossil". In pencil has been added "Type" and in ink "Z171". An associated small box contains over 100 small specimens of a variety of species. The box contains a label reading: "Z171(a)/ R.M. Johnston/material/ some on loun [sic]/ in Launceston". No record has been found in the 1913 TMAG register of these nor does present Registration shed light. It is here concluded that the six specimens, now registered as Z171, Z4509–Z4513 are possible syntypes. The box of mixed Badger Island specimens are probably R.M. Johnston's collection of unidentified materials incorrectly registered and have been reregistered as Z4514. A curatorial note suggests that the six specimens are Coxiella (Coxiella) striata (Reeve, 1842) which they closely resemble but McPherson disagrees.

Ostracoda

N.B. Because these specimens are loosely contained within 'cavity' slides, contrary to registration procedures, individual specimens are not numbered, but each slide carries a Registration. Several specimens may therefore be included with each 'Z' number.

Candona tecta De Deckker

Candona tecta De Deckker 1982

Z2091

Holotype

Z2092

Paratype

Locality: Pulbeena Swamp, nr. Smithton

Formation:

Age: Quaternary

1982. Candona tecta De Deckker, p. 254, fig. 5A,B, C.

Remarks: The holotype is figured as 5B, the paratype is figured as 5A and 5C. De Deckker writes of "paratypes", but only one specimen is present.

Candonopsis tenuis (Brady)

Candonopsis tenuis (Brady); De Deckker 1982 Z2089 (three specimens), Z2090 (two juveniles)

Figured Specimens

Locality: Pulbeena Swamp nr. Smithton

Formation:

Age: Quaternary

1886. Candona tenuis Brady, p. 92.

1896. Candonopsis tenuis; Sars, p. 62.

1982. Candonopsis tenuis; De Deckker, p. 254, fig. 6.

Remarks: Z2089 is figured as 6 A-C; Z2090 as figures 6 D-F.

Cypretta viridis (Thomson)

Cypretta viridis (Thomson); De Deckker 1982

Z2098 (two adults, one juvenile), Z2099 (two adults, two juveniles)

Figured Specimens

Locality: Pulbeena Swamp nr. Smithton

Formation:

Age: Quaternary

1878, Cypris viridis Thomson, p. 253

1894. Cypridopsis viridis; Sars, p. 32

1912. Cypretta viridis; Muller, p. 206

1955. Cypridopsis viridis; Hornibrook, p. 273

1982. Cypretta viridis; De Deckker, p. 258, fig. 9A-J

Remarks: Z2098 specimens are at figures 10C, D, E; Z2099 are at figures 10A, B, C, F, G.

Darwinula sp.

Darwinula sp in De Deckker 1982

Z2107 (six adults), Z2108, Z2110

Figured Specimens

Locality: Pulbeena Swamp nr. Smithton

Formation:

Age: Quaternary

1914. Candona lutea King; Chapman, p. 59, pl. 2, fig. 7 only.

1982. Darwinula sp. De Deckker, p. 251, fig. 2.

Remarks: Z2107 appears as figure 2 F, G.; Z2108 on figure 2 E; and, Z2110 on figures 2

A,B,C,D.

Gomphodella australica (Hussainy)

Gomphodella australica (Hussainy); De Deckker 1982

Z2074 (two adults) Figured Specimen

Locality: Pulbeena Swamp nr. Smithton

Formation:

Age: Quaternary

1969. Gomphocythere australica Hussainy, p. 299.

1981c. Gomphodella australica; De Deckker, p. 132.

1982 Gomphodella australica; De Deckker, p. 253, fig. 4.

Remarks: Z2074 appears on figure 4 A-C.

Gomphodella maia De Deckker

Gomphodella maia De Deckker 1982

Z2075 (eight adults and juveniles), Z2076 (five adults and juveniles), Z2077 (three adults and juveniles)

Figured Specimens

Locality: Pulbeena Swamp nr. Smithton

Formation:
Age: Quaternary

1981. Gomphodella maia De Deckker,

1982. Gomphodella maia; De Deckker, p.261, fig. 12A-R

Remarks: The species is not described but it is discussed and figured. Specimens Z2075 are illustrated as Figure 12A, B, D, G, J, M, O; Z2076 at figure 12C, D, F, H, L and Z2077 at figure 12E, I, K, N, P,Q, R.

Ilyodromus multifarius De Deckker

Ilyodromus multifarius De Deckker 1982

Z2093

Holotype

Z2094, Z2095 (two adults)

Paratypes

Locality: Pulbeena Swamp, nr. Smithton

Formation:

Age: Quaternary

1982. Ilyodromus multifarius De Deckker, p. 257, fig. 8A-F.

Remarks: The holotype (Z2093) appears as figure 8A; paratype (Z2094) as figure 8B, E; paratype (Z2095) as figure 8C, D, F. The slide (Z2094) containing two specimens is labelled "Paratype" crossed out with pencil. The text states them to be paratypes.

Ilyodromus smaragdinus Sars

Ilyodromus smaragdinus Sars; De Deckker 1982

Z2085 (four adults), Z2086 (one adult), Z2087 (one deformed adult)

Figured Specimens

Locality: Pulbeena Swamp, nr. Smithton

Formation:

Age: Quaternary

1894. Ilyodromus smaragdinus Sars, p. 43.

1982. Ilyodromus smaragdinus; De Decker, p. 257, fig. 9A-J.

Remarks: Z2085 appear as figures 9A, B, C, D, E; Z2086 as figure 9G; specimen Z2087 as figure 9F, H, I, J.

Limnocythere sp.

Limnocythere sp. in De Decker 1982

Z2105 (four adults)

Figured Specimen

Locality: Pulbeena Swamp, nr. Smithton

Formation:

Age: Quaternary

1982. Limnocythere sp. De Deckker, p. 253, fig. 3.

Remarks: Z2105 appear as figure 3 A, B, C, D.

Mesocypris sp.

Mesocypris sp. In De Deckker 1982

Z2078 (six adults and juveniles), Z2079 (two adults), Z2080 (ten adults and Juveniles)

Figured Specimens

Locality: Pulbeena Swamp, nr. Smithton

Formation:

Age: Quaternary

1982. Mesocypris sp. in De Deckker, p. 255, fig, 7A-G

Remarks: Z2078 is figured as 7A, B, D; Z2079 is figured as 7F, G; Z2080 as figure 7C.

Sarscypridopsis proxila De Deckker

Sarscypridopsis proxila De Deckker 1982

Z2111

Holotype

Z2112 (four specimens), Z2113 (four specimens), Z2114

Paratypes

Locality: Pulbeena Swamp. nr. Smithton

Formation:

Age: Quaternary

1982. Sarscypridopsis proxila De Deckker, p. 259, fig. 11A-I.

Remarks: The holotype, Z2111, appears as figure 11D, paratypes Z2112 as figure 11A, B, E, I, Z2113 as figure 11F, G, H and Z2114 as figure 11C.

MIOCENE

Bivalvia

Callanaitis allporti (Tenison-Woods)

Venus allporti Tenison-Woods 1876 Z3853, Z3854 Syntypes ?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Venus allporti Tenison-Woods, p. 26, fig. 10.

1888. Venus allporti; Johnston, pl. 32, fig. 2.

1970. Calanaitis allporti; Darragh, p.130.

Remarks: A single specimen was previously registered in ink as B-26 also bears a sticky label reading "TYPE". The 1913 TMAG register lists this among the previously unregistered fossils found marked as types of the Tenison-Woods 1876 and notes two specimens. However, Tenison-Woods states: "There is but one specimen of this fossil in the Museum, and that very much damaged". Specimen Z3853 matches the measurements given by Tenison-Woods. The second specimen, now Z3854, is slightly smaller and somewhat worn. As neither specimen was seen by Ludbrook (1967) they are here considered syntypes.

Chama lamellifera Tenison-Woods

Chama lamellifera Tenison-Woods 1877 Z193, Z3745, Z3746

Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Chama lamellifera Tenison-Woods, p. 114.

1887. Chama lamellifera; Tate, p. 149, pl. 14, figs. 5a,5b.

1967. Chama lamellifera; Ludbrook, p. 66, pl.1, fig. 2.

1970. Chama lamellifera; Darragh, p. 140.

Remarks: Three specimens were previously numbered as B-37. The oldest label reads: "Chama lamellifera/Table Cape" to which has been added B-37 and Z193. A larger label indicates that these specimen(s) are the holotype. Ludbrook figures specimens Z193 (pl. 1, fig. 2 right) and Z3745 (pl. 1, fig. 2 left). Because there are three specimens and Ludbrook failed to designate a lectotype, the three are here considered syntypes.

Ethminolia crassigranosa (Tenison-Woods)

Gibbula crassigranosa Tenison-Woods 1877

Z958

Lectotype (by Ludbrook, 1967)

Z3747

Paratype

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Gibbula crassigranosa Tenison-Woods, p. 98.

1919a. Gibbula crassigranosa; May, p. 70, pl. 8, fig. 4.

1964. Gibbula crassigranosa; Crespin, p. 18.

1967. Gibbula (?) crassigranosa; Ludbrook, p. 66.

1970. Ethminolia crassigranosa; Darragh, p. 164.

Remarks: The lectotype is in a glass phial together with a formerly adherent stellate label bearing the following: "Gibbula/crassigranosa/ Ten. Woods/ Table Cape/ R. M. J.". A more recent label reads: "TYPE or cotype" and the specimen was previously registered as number B59. A third, still more recent, label proclaims; "HOLOTYPE (measurements near enough for jazz)". A previous curator (Noel Kemp) inscribed on the back of a large label: "specimen attached to card has come to light (25-1-74) also bearing Regd. No. B 59. However, the dimensions of this shell are very different from those of the original description. NKemp." Inasmuch as the previous information is correct, the smaller specimen may be considered a paratype (Z3747). Tenison-Woods clearly indicates that he examined more than one specimen. Crespin incorrectly gave the registration number as Z185. Ludbrook (1967) apparently saw only the single specimen (Z958) but having illustrated it, is here accepted as the lectotype.

Eucrassatella oblonga (Tenison-Woods)

Crassatella oblonga Tenison-Woods 1876

Z174

Lectotype (by Ludbrook, 1967) Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Crassatella oblonga Tenison-Woods, p. 25, fig. 11...

1876. Crassatella aphrodina Tenison-Woods, p, 24, fig. 12.

1888. Crassatella oblonga; Johnston, pl. 29, fig. 1,1a, 2.

1896. Crassatella oblonga; Pritchard, p. 131.

1896. Crassatella aphrodina; Pritchard, p.131.

1964. Crassatella oblonga; Crespin, p. 15.

1964. Crassatella aphrodina; Crespin, p. 15.

1965. Eucrassatella oblonga (Tenison-Woods); Darragh, p. 99, pl. 12, figs. 4,9,10.

1967. Eucrassatella oblonga (Tenison-Woods); Ludbrook, p. 66, pl. 1, figs.1, 3.

1967. Eucrassatella aphrodina (Tenison-Woods); Ludbook, p.66, pl. 1, figs. 4, 5.

1970. Eucrassatella oblonga (Tenison-Woods); Darragh, p.143.

1970. Eucrassatella aphrodina (Tenison-Woods; Darragh, p. 131.

Remarks: Ludbrook (1967, p. 66) accepts Darragh's argument (1965, p. 101) for the synonymy of *C. oblonga and C. aphrodina* and the retention of the name 'oblonga' because the figure of *C. oblonga* appears before the text of *C. aphrodina*. The type specimen of *C. oblonga* bears a printed paper label with the numbers B-42 and Z174 written on it. The 1913 TMAG register gives B-42 as "1 spm marked type plus one other." Later emendation identifies Z174 as the type and the "other" as Z271 with that reference crossed out.

Crassatella aphrodina Tenison-Woods 1876

Z199

Holotype (by monotypy)

Locality: Table Cape near Wynyard

Formation:

Age: Early Miocene

1876. Crassatella aphrodina Tenison-Woods, p. 24, fig. 12.

1888. Crassatella oblonga; Johnston, pl. 29, fig. 1, 1a.

1888. Crassatella aphrodina; Johnston, pl. 29, fig. 2.

1896. Crassatella oblonga; Pritchard, p. 131.

1896. Crassatella aphrodina; Pritchard, p. 131.

1964. Crassatella oblonga; Crespin, p. 15.

1964. Crassatella aphrodina; Crespin, p. 15.

1965. Eucrassatella oblonga; Darragh, p. 99, pl. 12, figs. 4, 9, 10.

1967. Eucrassatella oblonga; Ludbrook, p. 66, pl. 1, figs.1, 3.

1967. Eucrassatella aphrodina; Ludbook, p. 66, pl. 1, figs. 4, 5.

1970. Eucrassatella oblonga; Darragh, p. 143.

1970. Eucrassarella aphrodina; Darragh, p. 131.

Remarks: The specimen here identified as the type of *C. aphrodina* bears a paper label reading: "TYPE [in pencil]/ *Crassatella aphrodina*". The 1913 TMAG register lists this single specimen as B-27. See Remarks for *Crassatela oblonga*.

Glans gracilocostata (Tenison-Woods)

Cardita gracilicostata Tenison-Woods 1877

Z177

? Holotype

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Cardita gracilicostata Tenison-Woods, p. 112.

1886. Cardita gracilicostata; Tate, p. 152, pl. 2, figs. 6, 8.

1927. Venericardia gracilicostata (Tenison-Woods); Chapman and Singleton, p. 118, pl. 9, figs. 20, 21.

1964. Cardita gracilicostata; Crespin, p. 15.

1967. Glans gracilicostata (Tenison-Woods); Ludbrook, p. 66, pl. 2, figs. 46, 47.

1970. Glans gracilicostata; Darragh, p. 138.

Remarks: The specimen has been previously registered as B-34. An unidentified and undated curatorial note remarks that the dimensions of the specimen differ considerably from those given

by Tenison-Woods. This has been verified. The 1913 TMAG register lists the single specimen as "Type?". Tenison-Woods clearly indicates that the specimen he examined was complete i.e. both valves. Ludbrook's figure is of a single valve but was accepted by Ludbrook without comment. One must conclude that either the second valve has been lost or that the specimen in hand is not that examined by Tenison-Woods as indicated by the different measurements. It is here concluded that the specimen is unlikely to be the type.

Glycymeris cainoizoica (Tenison-Woods)

Cucullaea cainoizoica Tenison-Woods 1877 Z204

Lectotype (by Chapman and Singleton, 1925)

Z3787.1, Z3787.2

Lectoparatypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Cucullaea cainoizoica Tenison-Woods, p. 111.

1886. Pectunculus cainozoicus (Tenison-Woods); Tate, p. 136, pl. 10, figs. 8a, 8b; p. 137 (in part).

1888. Pectunculus cainozoicus (Tenison-Woods); Johnston, pl. 31, figs. 13, 13a, 13b.

1925. *Glycymeris cainozoicus* (Tenison-Woods); Chapman and Singleton, p. 20, pl. 1, figs. 1a,b; 2+66a,b; 3, 4.

1964. Cucullaea cainozoica; Crespin, p. 15.

1965. Glycymeris (Glycymeris) cainozoica (Tenison-Woods); Ludbrook, p.87, pl. 1, figs. 28-34.

1967. Glycymeris (Glycymeris) cainozoica; Ludbrook, p. 65, pl. 1, figs. 7–12.

1970. Glycymeris cainoizoica (Tenison-Woods); Darragh, p. 132.

Remarks: There are three specimens that have been considered as the type series. The largest, a single valve, has been designated by Chapman and Singleton, 1925 as the lectotype. Two smaller specimens that may or may not be a single individual, are the lectoparatypes (it is here considered as a single specimen). These specimens bear the inked numbers Z204 and B-29 of the TMAG to which have been added subscripts Z204.1, 2, 3. Numerous labels identify the specimens as "Holotype/T-Woods" and "B-29 (penciled)"; "fig'd as a plesiotype in Chapman and Singleton"; " Z204.2 paratype, Z204.3 plesiotype". The 1913 TMAG register listed B-29 as "1 spm & 1 half spm". This is notated by an unintelligible reference to correspondence with the "Museum of Melbourne" dated "Feb. 1923". That is followed below by: "B29A type. Holotype Ten. Woods- B29B - B29C fig. as Plesiotype by Chapman and Singleton." A separate note by M. R. Banks, linked graphically to the half specimen, reads: "Not Cucullaea MRB 1952". The lectotype was designated by Chapman and Singleton as the largest specimen (Z204). It and one of "the smaller but better preserved specimens" (Z3787.1) were figured on their plate 1, figs. 1a, b and 2a and 2b respectively. Ludbrook figured all specimens on pl. 1, figs. 7-12. The corrected registration is the lectotype as Z204, the paratype figured by Chapman and Singleton Z3787.1 and the third paratype as Z3787.2. Ludbrook illustrated Z204 (pl. 1, figs. 11, 12), Z3787.1 (pl. 1, figs. 8, 10) and Z3787.2 (pl. 1, figs. 7, 9). As interpreted here, the paratype (Z3787.1) is figured in Johnston (1888, pl. 31, figs. 13, 13a, 13b). Tate was the first to fully describe the species but his figured specimens are from Muddy Creek, Victoria, not Tasmania. Many authors have apparently

treated the Tenison-Woods spelling "cainozoicus" as a typographical error except for Darragh. Crespin (p. 15) errs in the page citation of "T. Woods, 1877 (1876), p. 11" which, correctly, is p. 111. She cites the holotype as Z204A and the paratype as Z204B. Because of the various Registration notations used, the following is offered as clarification:

TMAG REC	SISTRATIONS	FIGURED BY
NEW	OLD	
Z204	Z204.a Z204.1	Chapman & Singleton, pl. 1, figs. 1a, 1b; Ludbrook, pl. 1, figs. 11,12
Z3787.1	Z204.b Z204.2	Johnston, pl. 31, figs. 13, 13a, 13b; Chapman & Singleton, pl. 1, figs. 2a, 2b; Ludbrook, pl. 1, figs. 8,10
Z3787.2	Z204.c Z204.3	Ludbrook, pl. 1, figs. 7,9.

Ledella rhomboidea (May)

Nuculana rhomboidea May 1922

Z182

Lectotype (by Ludbrook, 1967)

Z3798, Z3799 Lectoparatypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Nuculana rhomboidea May, p. 12, pl. 4, fig. 9.

1964. Nuculana rhomboidea; Crespin, p. 16.

1967. Ledella rhomboidea (May); Ludbrook, p. 65, pl. 2, fig. 41.

1970. Ledella rhomboidea (May); Darragh, p. 146.

Remarks: Three specimens are fixed to a plaquette. One single valve is identified as the type, the other two specimens seem to be complete. The card bears the following: "C1681/Z182/ TYPE [with arrow directed at the half specimen]/Tas. Museum/ *Nuculana rhomboidea*/ May/ Table Cape/ TYPE." The specimen figured by May and Ludbrook is of the interior of a shell.

Myadora aequilateralis Johnston

Myadora aequilateralis Johnston 1880

Z4549

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Myodora aequilateralis Johnston, p. 40.

1887. Myodora aequilateralis; Tate, p. 176, pl. 17, fig. 8.

1970. Myadora aequilateralis; Darragh, p.130.

Remarks: Neither Crespin (1964) nor Ludbrook (1967) had seen this specimen, recently located in the Johnston collection. Johnston noted its rarity at Table Cape and described the species from a right valve only. It was housed in a round container whose glass lid had an affixed label

reading "TYPE". The bottom of the container is missing so the specimen may have been so contained or accidentally so located, but the specimen exactly matches the figure in Tate.

Myadora australis Johnston

Myodora australis Johnston 1880 Z219, Z3768—Z3781

14 Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Myodora australis Johnston, p. 40.

1887. Myodora australis; Tate, p.174, pl. 17, figs. 10a,b.

1970. Myadora australis; Darragh, p. 112.

Remarks: The holotype attributed to this species, Z219, is represented only by fragments of shell contained in a glass phial. A printed label accompanying the specimen reads: "100. *Myodora Australis* R. M. Johnston. (P.) Table Cape/ Tas. R.J.". A TMAG label declares: "(?) HOLOTYPE (broken)" and recites the name, locality and reference. A search for additional material in the Johnston collection yielded a covered container of the type used by Johnston with a handwritten identification and locality in pencil and "Type Lot" in ink in R.M. Johnston's hand. It contains 14 valves (5 left, 9 right) plus fragments. These specimens (Z3768—Z3781) are considered to be syntypes.

Panopea agnewi (Tenison-Woods)

Lyonsia agnewi Tenison-Woods 1876

Z190

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Lyonsia agnewi Tenison-Woods, p. 25, fig. 13

1887. Lyonsia agnewi; Tate, p. 179.

1888. Panopaea agnewi (Tenison-Woods); Johnston, pl. 29, fig. 3.

1964. Panopaea agnewi; Crespin, p. 16

1967. Panopaea agnewi; Ludbrook, p. 66, pl. 1, fig. 6.

1970. Panopaea agnewi; Darragh, p. 130.

Remarks: The type specimen bears two adherent paper labels. The top, reading: "TYPE". The lower (obscured) "Lyonsia" and "No. 13". The 1913 TMAG register lists this specimen as B-25.

Scaeoleda crebrecostata (Tenison-Woods)

Leda crebrecostata Tenison-Woods 1877

Z178.1, Z178.2

? Holotype

Z3786

Paratype

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Leda crebrecostata Tenison-Woods, p. 112.

1886. Leda crebrecostata; Tate, p. 133, pl. 5, figs 5a-b.

1955. Nuculana (Scaeoleda) crebrecostata (Tenison-Woods); Ludbrook, p. 20, pl. 1, fig. 6.

1964. Leda crebrecostata; Crespin, p. 16.

1967. Nuculana (Scaeoleda) crebrecostata (Tenison-Woods); Ludbrook, p. 65, pl. 2, fig. 40.

1970. Scaeoleda crebrecostata(Tenison-Woods); Darragh, p. 134.

Remarks: There are two specimens, one entire (both valves) and a fragment of another. The 1913 TMAG register B-32 entry states "1 spm & a half spm broken". The entire specimen (Z178.1, Z178.2) is attached to a black cardboard fragment torn from a display card (?) bearing on its back the number B-32. A glue mark on the cardboard suggests a second specimen (now Z3786?) had been attached. The complete specimen differs slightly from the measurements (given in "French millimetres") by Tenison-Woods: "Transverse long 5, lat. 8, thickness of both valves joined 3". Our measurements: transverse long. 4 mm, lat. 6.5 mm, thickness of both valves joined 2 mm. The specimen is, however, that figured by Ludbrook (1967, fig. 40). A printed paper label bears the inked numbers Z178 and B-32. The printed portion reads: "97. Leda crebrecostata Ten. Woods (P). Table Cape, Tas./(Nuculana) T.W. 60, R.Jb. 90, T. 5.5.". A more recent label questions the status of the specimen as the holotype and bears the notation: "The dimensions of the specimen to hand do not coincide with those given by TW (1877, p. 112): ? holotype". The fragment is in a capsule with the entire specimen in a glass phial.

Solecurtus legrandi Tenison-Woods

Solecurtus legrandi Tenison-Woods 1876

Z176

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Solecurtus legrandi Tenison-Woods, p. 25, fig. 14.

1887. Solecurtus legrandi; Tate, p. 181, pl. 17, fig. 15.

1888. Solecurtus legrandi; Johnston, pl. 32, fig. 18.

1964. Solecustus legrandi; Crespin, p. 16.

1967. Solecustus legrandi; Ludbrook, p. 66, pl. 2, fig. 45.

1970. Solecustus legrandi; Darragh, p. 140.

Remarks: The specimen was previously registered as B-38 and the 1913 TMAG register lists one specimen under this number.

Tawera propingua (Tenison-Woods)

Chione propinqua Tenison-Woods, 1877

Z1904

Holotype? Syntype?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Chione propinqua Tenison-Woods, p. 113.

1888. Chione propinqua; Johnston, pl. 32, figs. 12, 12a.

1970. Tawera propingua (Tenison-Woods); Darragh, p. 145.

Remarks: A single valve of the size given by Tenison-Woods and as figured by Johnston was previously registered as B-69 (now Z1904). The label accompanying the specimens reads: "B-69 [added]/ *Venus* (*Chione*)/ *propinqua* T-W/ Table Cape/ R.M. Johnston". Because specimen Z1904 was at one time mounted on cardboard much of the exterior of the valve is covered by glue and the exterior features are not discernable. The preceding entry in the 1913 register, B-68 lists two specimens of *C. propinqua*, only one of which has been located Until the additional specimen is located it is not possible to determine if the specimen is the holotype by monotypy, or one of three syntypes.

Gastropoda

Acteon scrobiculatus Tenison-Woods

Acteon scrobiculatus Tenison Woods 1877

Z211

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Actaeon scrobiculatus Tenison-Woods, p. 102.

1897. Acteon scrobiculatus; Cossman, p. 1, pl. 1 figs. 1–3.

1958. Acteon scrobiculatus; Ludbrook, p. 101, pl. 6, fig. 11.

1964. Actaeon scrobiculatus; Crespin, p. 17.

1967. Acteon scrobiculatus; Ludbrook, p. 69, pl. 2, fig. 43.

Remarks: The specimen had been affixed to a exhibit plaque bearing the following: "B-47/Z211 [in ink] TYPE [in pencil]/ Z211 [in ink] / *Actaeon/ scrobiculatus* T. Wds./ Table Cape/ R.M. Johnston". The 1913 TMAG register lists only one specimen.

Alcithoe (Waihaoia) tateana (Johnston)

Voluta tateana Johnston 1880

Z187

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Voluta tateana Johnston, p. 37.

1888. Voluta tateana; Johnston, pl. 30, figs. 3, 3a.

1889a. Voluta tateana; Tate, p. 132, pl. 2, fig. 5.

1949a. Notovoluta tateana (Johnston); Cotton, p. 194, pl. 14 fig. 'tateana'.

1964. Voluta tateana; Crespin, p. 20.

1967. Notovoluta tateana; Ludbrook, p. 68, pl. 4. figs.1, 2.

1970. Notovoluta tateana; Darragh, p. 199.

1988. Alcithoe (Waihaoia) tateana Johnston); Darragh, p. 242, pl. 14, figs. 6,7.

Remarks: The registration number Z187 appears in black ink on white paint on the specimen. An unreadable number has been partially obscured. Under the text heading 'Location of types:" Darragh (1988) incorrectly cites the registration of the holotype as Z127. He notes that the preservation of the type indicates it comes from the lower bed...in cliff between Fossil Bluff and 1.5 km towards Table Cape, Wynyard, Tas..." Pritchard (1913. p. 195) observed that specimens of *V. tateana* were "on view at the Hobart Museum" but that the type was not among them and that it was presumably in Johnston's collection (now part of TMAG collection but accessioned only about 1912.). He incorrectly cites Johnston's original publication as being 1879.

Antephalium sufflatus (Tenison-Woods)

Cassis sufflatus Tenison-Woods 1877

Z201

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Cassis sufflatus Tenison-Woods, p. 93.

1889a. Semicassis sufflatus (Tenison-Woods); Tate, p. 165.

1896. Semicassis sufflatus; Pritchard, p. 106.

1964. Cassis sufflatus; Crespin, p. 17.

1967. Semicassis (Antephalium) sufflata (Tenison-Woods); Ludbrook, p. 67, pl. 2, figs. 9,10.

1970. Antephalium sufflatus (Tenison-Woods); Darragh, p. 198.

Remarks: The specimen is accompanied by a printed label bearing the following information: "B-50 [in ink]/ 177. *Cassis sufflatus*. Ten. Woods/41, R.J. 6-90, R.E. 160./Z201 [in ink] TYPE [in pencil]". The 1913 TMAG register lists only one specimen under B-50.

Antisolarium gibbuloides (Tenison-Woods)

Solarium (Torinia) gibbuloides, Tenison-Woods 1877

Z1009

Figured Syntype

Z3782

Syntype

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Solarium (Torinia) gibbuloides Tenison-Woods, p. 97.

1896. Delphinula gibbuloides (Tenison-Woods); Pritchard, p. 122.

1919a. Solarium (Torinia) gibbuloides (Tenison-Woods); May, p.70, pl. 8, fig. 5.

1967. Antisolarium gibbuloides (Tenison-Woods); Ludbrook, p. 66, pl. 2. fig. 17.

1970. Antisolarium gibbuloides; Darragh, p. 171.

Remarks: These specimens were recovered from the general collection in the mid-1960s. May (1919a) reported them as being "From one of Johnston's co-types". Crespin did not list them and Ludbrook states only that the specimen was unnumbered. There are two specimens in a glass phial labelled Z1009. The better preserved of the two was figured by Ludbrook (Z1009), the other (Z3782) is somewhat more worn. The oldest label reads: "Solarium/gibbuloides/ Ten. Woods/ fossil - Table Cape/R.M.J." The number Z1009 was added later. A registration number, Z3782, is allocated for the second syntype.

Apiotoma altispira (May)

Turris altispira May 1922

Z963

Syntype?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Turris altispira May, p. 12, pl. 4, fig. 8.

1967. Apiotoma altispira; Ludbrook, p. 69, pl. 4, figs. 7, 8.

1970. Apiotoma altispira; Darragh, p. 154.

Remarks: The specimen, previously registered as B-772, fits the description and measurements given by May except for being about 2 mm longer. However, the specimen was broken and poorly repaired, at sometime, and the apparent greater length may be attributed to the repair. As May stated that there were two specimens, this one can only be considered a syntype until the second specimen is located.

Astraea hudsoniana (Johnston)

Imperator hudsoniana Johnston 1877

Z167

Holotype? (by monotypy) or Figured Specimen?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Imperator (Astralium) imperiale Johnston p. 90c.

1888. Imperator hudsoniana Johnston, pl. 29, figs. 12, 12a.

1888. Imperator tasmanica (mss.) Johnston, p. 239 [nomen nudum ?].

1896. Astralium (Imperator) johnstoni; Pritchard, p. 116.

1964. Imperator hudsoniana (Johnston); Crespin, p. 18.

1967. Astralium hudsonianum (Johnston); Ludbrook, p. 66, pl. 2, figs. 7, 8.

1970. Astraea hudsoniana (Johnston); Darragh, p. 174.

Remarks: The specimen figured by Johnston and by Ludbrook apparently now consists of three fragments and a portion of an internal cast of the final whorl. These fragments are thought to be parts of the original which had been broken prior to 1888. Pritchard (1896, p. 118) discusses the synonymy stating "I have taken the liberty of describing and renaming this species owing to the very unsatisfactory and unrecognisable condition in which I find it." Johnston's use of 'imperiale' (incorrect identification fide Pritchard), 'hudsoniana' (figured only, no description) and 'tasmanica' (a nomen nudum) would seem to open the taxon for Pritchard. Crespin, Ludbrook and Darragh seem not to agree. However, if Astraea hudsoniana prevails, then specimen Z167 is the holotype by monotypy. If Pritchard prevails, then the holotype is still to be found in his collection and specimen Z167 is a figured specimen. Recently located in the TMAG Johnston Collection are a number of specimens of this species in excellent condition possibly representing a syntypic series.

Austrolithes tateana (Tenison-Woods)

Fusus tateana Tenison-Woods 1877

Z209

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Fusus tateana Tenison-Woods, p. 94

1888. Fusus tateana; Johnston, pl. 29, fig. 6.

1888. Fusus tateanus; Tate, 1888, p. 141. pl. 13, fig. 5.

1970. Austrolithes tateana (Tenison-Woods); Darragh, p. 199.

Remarks: The specimen bears a paper label marked "TYPE" and, in ink, "B. 51". As noted by Tenison-Woods, the anterior canal has been broken. The figured specimen (Johnston, 1888) has a lengthened canal and the apex appears not slightly bent as in the specimen, Z209. While specimen Z209 appears to be the one Tenison-Woods described, he notes the species as being common at Table Cape. The 1913 TMAG register lists only a single specimen.

Austrosassia abboti (Tenison-Woods)

Triton abboti Tenison-Woods 1876

Z188

Lectotype (by Ludbrook, 1967)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Triton abboti Tenison-Woods, p. 24, fig. 8.

1888. Triton abbotti; Johnston, pl. 29, fig. 13.

1888. Triton abbotti; Tate, p. 117.

1903. Tritonium (Austrotriton) abbotti (Tenison-Woods); Cossmann, p. 99.

1931. Austrosassia abbotti (Tenison-Woods); Finlay, p. 9.

1964. Triton abbotti; Crespin, p.19.

1967. Charonia (Austrosassia) abbotti (Tenison-Woods); Ludbrook, p. 67. pl. 2, figs. 1, 2.

1970. Austrosassia abboti [sic] (Tenison-Woods); Darragh, p. 151.

Remarks: The specimen bears the number B-22 in pencil, and the he 1913 register lists one single specimen. Tenison-Woods spelled the specific name 'abboti' but states in the text that he is dedicating it to Mr. Frank Abbott. The usuage 'abbotti' is a justified correction under Rule 30 of the ICZN. Ludbrook's citation of Johnston's (1888) figures of the species erroneously includes pl. 1, fig. 8.

Austrosassia tortirostris (Tate)

Triton minimum Tenison-Woods 1877

Z189

? Lectotype (by Ludbrook, 1967)

Z3788, Z3789

Paratypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Triton minimum Tenison-Woods, p. 107. (non Hutton 1873).

1888. Triton tortirostris Tate, p. 123, pl. 5, fig. 7.

1903. Tritonium (Sassia) tortirostris (Tate); Cossmann, p. 95.

1931. Austrosassia tortirostris (Tate); Finlay, p. 10.

1964. Triton minimum; Crespin, p. 20.

1967. Charonia (Austrosassia) tortirostris (Tate); Ludbrook, p. 67, pl. 2, fig. 26.

1970. Austrosassia tortirostris; Darragh, p. 181.

Remarks: There are three specimens of varying size [10, 11, 17 mm] contained in two glass phials with a variety of associated labels. These specimens are now registered in order of increasing size as Z189 [10 mm], Z3788 (formerly Z189b) [11mm] and Z3789 (formerly Z189c) [17mm]. The oldest label, a plaquette having glue mark from a single specimen once mounted thereon, gives the origin as the Johnston collection and has the old number B-41; and Z189. An old paper label (possibly not correctly placed with these specimens) reads: "T. tortirostris/Tate/non minimum of Hutton." A curatorial note by Noel Kemp on the back of one large label states:

[in red] "See letter from T.A. Darragh 21-12-1973 ..." [Z3788] specimen too wide, <code>sans_dentate</code> inner surface of outer lip of Holotype (in description). Phial note 1. small spm. Z189 has this feature but is only 10 mm long (cf 11 mm)—perhaps description was based on both specimens = 2 syntypes." This correspondence has not been located. Ludbrook (1967) makes no mention of there being more than one specimen and apparently therefore considered the single specimen (Z189, figured) as the lectotype. The 1913 TMAG register also lists a single specimen but questions it's status by citing it as "Type?". That specimen (Z189) is now housed in a glass phial bearing a red adherent label. The specimen figured by Tate is not one of the paratypes.

Belatomina tenuisculpta (Tenison-Woods)

Daphnella tenuisculpta Tenison-Woods 1877 Z3844, Z3845

Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Daphnella tenuisculpta Tenison-Woods, p. 106.

1970. Belatomina tenuisculpta (Tenison-Woods); Darragh, p. 201.

Remarks: Two specimens are mounted on plaquette with a label reading: "Daphnella/ tenuisculpta, T-W/Table Cape/R.M. Johnston". The number B-73 has been inked on the cardboard. The 1913 TMAG register lists two specimens under the heading of possible types of Tenison-Woods. The larger of the two specimens matches the dimensions and description of ornamentation given by Tenison-Woods, the second being slightly smaller and worn.

Bellastrea ornatissimum (Tenison-Woods)

Astralium (Calcar) ornatissimum Tenison-Woods 1877

Z194

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Astralium (Calcar) ornatissimumTenison, -Woods, p. 96.

1964. Astralium (Calcar) ornatissimum; Crespin, p. 17.

1967. Astralium (Bellastraea) ornatissimum (Tenison-Woods); Ludbrook, p. 66, pl. 2, fig. 16.

1970. Bellastrea ornatissimum; Darragh, p. 184.

Remarks: The specimen was originally attached, as evidenced by glue marks on specimen, to a plaquette on which appears B-43 and Z194 (in ink) and TYPE (in pencil). The 1913 TMAG register lists only a single specimen.

Belophos cancellata (Tenison-Woods)

Cominella cancellata Tenison-Woods 1877

Z192

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Cominella cancellata Tenison-Woods, p. 107.

1888. Bela woodsii Tate, p. 147, 173, pl. 4, fig. 3.

1901. Belophos woodsi (Tate); Cossmann, p. 163.

1944. Belophos woodsi; Powell, p. 25.

1964. Cominella cancellata; Crespin, p. 17.

1967. Belophos woodsi (Tate); Ludbrook, p. 68, pl. 2, fig.21, 22.

1970. Belophos cancellata; Darragh, p. 159.

Remarks: An older paper label associated with the specimen reads: "Cominella/B-30// cancellata/Z192/Table Cape". The single specimen presented had been attached to a display card as the glue remains on the specimen. The 1913 TMAG register lists the single specimen as B-30. Ludbrook (1967, p. 68) notes that she had not at that date confirmed homonymy of C. cancellata. Tate (1888, p. 147) simply states "C. cancellata, T. Woods, is transferred to Bela as B. woodsii".

Brocchitas johnstonii (Tenison-Woods)

Fusus johnstonii Tenison-Woods 1877

Z173

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Fusus johnstonii Tenison-Woods, p. 94.

1888. Fusus johnstonii; Johnston, pl. 29, fig. 9.

1888. Fusus johnstoni; Tate, p. 136, pl. 12, figs. 4a, 4b.

1964. Fusus johnstoni; Crespin, p. 18.

1967. Latirus (Brocchitas) johnstoni (Tenison-Woods); Ludbrook, p. 68, pl. 4, fig. 5,6.

1970. Brocchitas johnstonii (Tenison-Woods); Darragh, p. 176.

Remarks: A formerly adherent circular label reads in faded ink, now brown: "Fusus/ No./ Table Cape [unreadable/unreadable/Ai(?)W]". Across that in black ink "C12/- johnstoni/ Z173". The specimen does not appear in the 1913 TMAG register but is listed by Both (1966) as a single specimen, (?) Holotype.

Calliostoma blaxlandii (Tenison-Woods)

Zizyphinus blaxlandii Tenison-Woods 1877

Z1911

Doubtful Type

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Zizyphinus blaxlandii Tenison-Woods, p. 9.

1919a. Zizyphinus blaxlandii; May, p. 71.

1970. Calliostoma blaxlandii; Darragh, p. 158.

Remarks: There is, at present a single specimen although the associated label reads "possibly cotype". An original label reads: "Zizyphinus/blaxlandii/Ten.Woods/Table Cape/R.M.J." A notation on a primary label reads "n.b. Cotype = Syntype [in this case presumably]". May (1919a) states "This species remains unidentified. A small specimen so named in the Johnston collection, must, I think, be an error, as I cannot in any way fit it to the description." Because of May's doubts and that the specimen fails to match Tenison-Woods description of the species, the status of the specimen as a type is doubtful.

Calyptropsis umbilicata (Johnston)

Crepidula umbilicata Johnston 1885d

Z170

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1885e. Crepidula umbilicata Johnston, p. 232-233, fig.

1888. Crepidula umbilicata; Johnston, pl. 32, figs. 10, 10a.

1893. Calyptropsis umbilicata; Tate, p. 333.

1964. Crepidula umbilicata; Crespin, p. 17.

1967. Calyptropsis umbilicata (Johnston); Ludbrook, p. 67, pl. 2, figs. 38, 39.

1970. Calyptropsis umbilicata; Darragh, p. 204,

Remarks: The specimen is housed in a phial with labelling associated with R.A. Both (Keeper 1961–1966) when the Johnston types were first being identified.

Chavanicerithium pritchardi (Harris)

Potamides semicostatumate Tate 1885b

Z959

Syntype

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1885b. Potamides semicostatum Tate, p. 226 (non DesHayes).

1897. Cerithium pritchardi Harris, p. 225, pl. 7, fig. 3. (nom. nov.)

1957. Thericium (Chavanicerithium) pritchardi, (Harris); Ludbrook, p. 30, pl. 4, fig. 15.

1967. Thericium (Chavanicerithium) pritchardi; Ludbrook, p. 67.

1970. Chavanicerithium pritchardi; Darragh, p. 189.

Remarks: Tate states that there were six examples in the Johnston Collection but only one has been located to date. The specimen, housed in a glass phial bears both the numbers B-83 and Z959, was previously registered as B-83 and Z959.

Cirsonella laevis (Johnston

Adeorbis laevis Johnston 1880

Z874

Holotype?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Adeorbis laevis Johnston, p. 33.

1919a. Adeorbis laevis; May, p. 71, pl. 9, fig. 9.

1927. Cirsonella laevis (Johnston); Finlay, p. 493. (nomen nov.).

1970. Cirsonella laevis (Johnston); Darragh, p. 177.

Remarks: This minute specimen is enclosed in a gel phial, within another phial which has been registered as, Z874, in ink. Associated with it are older labels including a round, formerly adherent label reading: "Liolia (?)[crossed out], Adeorbis/Table Cape fossil/ col. (?)/R.M. Johnston". To that has been later added the registration number Z874. A second is a simple paper label reading: "TYPE of Adeorbis laevis John." This also has the registration number added later. More modern labels have "probable Holotype". It is probable that this specimen was apparently not retrieved from the general collection until after 1967 as neither Crespin (1964), Both (1966) nor Ludbrook (1967) list it.

Conuber vixumbilicata (Tenison-Woods)

Natica vixumbilicata Tenison-Woods 1877

Z179

Lectotype (designated by Ludbrook, 1967)

Z3783, Z3784, Z3785

Paratypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Natica vixumbilicata Tenison-Woods, p. 111.

1893. Natica vixumbilicata; Tate, p. 320, pl. 10, fig. 9.

1967. Polinices (Conuber) vixumbilicatus, (Tenison-Woods); Ludbrook, p. 67. pl. 2, figs.11, 12.

1970. Conuber vixumbilicata (Tenison-Woods); Darragh, p. 205.

Remarks: There are four specimens bearing the numbers Z179 and B-52. The 1913 TMAG register lists four specimens numbered Z179 and B-52. Ludbrook stated: "Two specimens bear the number Z179, the smaller of which has the dimensions cited in the original description. That specimen is here given as the lectotype as it was figured by Ludbrook (1967, pl. 2, figs. 11, 12)". The three lectoparatypes are registered as Z3783–Z3785.

Ctenocolpus warburtoni (Tenison-Woods)

Turritella warburtoni Tenison-Woods 1877

Z1909, Z3449-Z3752

Five Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Turritella warburtonii Tenison-Woods, p. 99.

1877. Turritella sturtii Tenison-Woods, p. 99.

1893. Turritella warburtoni; Tate, p. 337, pl. 8, fig. 2.

1893. Turritella sturtii; Tate, p. 338, pl. 8. fig. 6.

1896. Turritella warburtoni; Pritchard, p. 113.

1935. Turritella warburtoni; Cotton and Woods, p. 377, figs. 8, 9.

1970. Ctenocolpus warburtonii (Tenison-Woods); Darragh, p. 205.

1972. Ctenocolpus (Platycolpus) warburtonii (Tenison-Woods) Garrard, p. 301, pl. 27, figs. 15–17, pl. 30, fig. 9.

Remarks: Five specimens are attached to a cardboard R.M. Johnston printed label reading "Turritella/ warburtoni/Table Cape/37" The number B-76 in ink has been added. This group of syntypes was discovered recently as neither Crespin (1964) nor Ludbrook (1967) cited them. Garrard (1972) states that the holotypes of the two species supposedly at the Tasmanian Museum were reported as lost.

Turritella sturtii Tenison-Woods 1877

Z1907

? Holotype

Z3753-Z3767

Fifteen Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Turritella sturtii Tenison-Woods, p. 99.

1893. Turritella sturtii; Tate, p. 338, pl. 8 fig. 6.

1970. Ctenocolpus sturtii (Tenison-Woods); Darragh, p. 196

Remarks: A presumed holotype, the largest of the 16 specimens, is in a glass phial and closely approximates the measurements given by Tenison-Woods but In other ways differs from the description. This leads to questioning its selection as the holotype. Four of the syntypes are affixed to a plaquette having the notation: "No. 1 too worn for determination/ B.70/ No. 1. *Turritella sturtii*" [all in ink]. A pencil notation is illegible. The card is a printed label which has R.M. Johnston in the lower right corner. The 1913 TMAG register lists 15 specimens.

Dentimargo altispira (May)

Marginella altispira May 1922

Z162

Lectotype (by Ludbrook, 1967) Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Marginella altispira May, p. 10. pl. 4, fig.5.

1949b. Marginella altispira; Cotton, p. 219, pl. 17, fig. "altispira".

1964. Marginella altispira; Crespin, p. 18.

1967. Marginella (Dentimargo) altispira (May); Ludbrook, p. 68, pl. 12 fig. 31.

1970. Dentimargo altispira; Darragh, p. 153.

Remarks: The specimen is affixed to a cardboard square bearing the following: "Type/Z162...7139/E8/Tas. Museum/C1677/Marginella altispira/May/Table Cape TYPE."

Eratoidea subquinquidens (May)

Marginella subquinquidens May 1922

Z161

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Marginella subquinquidens May, p. 10, pl. 4, fig. 3.

1949b. Marginella subquinquidens; Cotton, p. 218, pl. 17, fig. "subquinquidens".

1964. Marginella subquinquidens; Crespin, p. 19.

1967. Marginella (Eratoidea) subquinquidens (May); Ludbrook p. 68, pl, 2, fig. 28.

1970. Eratoidea subquinquidens (May); Darragh, p. 198.

Remarks: The specimen is affixed to a thick cardboard square bearing the following information: "Type /7138/E7/ Z161/ C1675/ Tasmanian Museum/ *Marginella/subquinquidens* /May/TYPE."

Ericusa sowerbyi pellita (Johnston)

Voluta pellita Johnston 1880

Z156

Lectotype (by Ludbrook)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Voluta pellita Johnston, p. 36.

1880. ? Voluta allporti Johnston, p. 35.

1888. Voluta pellita; Johnston, pl. 30, fig. 2.

1896. Voluta halli Pritchard, p. 101, pl. 2, figs. 1-3.

1913. Voluta pellita; Pritchard, p. 198.

1964. Voluta pellita; Crespin, p. 20.

1949a. Ericusa pellita (Johnston); Cotton, p. 186.

1967. Ericusa (Mersericusa) pellita; Ludbrook, p. 67, pl. Fig. 9.

1970. Mesericusa pellita (Johnston); Darragh, p. 186.

1988. Ericusa sowerbyi pellita (Johnston); Darragh, p. 244, pl. 18, figs. 4,5.

Remarks: The specimen bears adherent paper label: "Voluta pellita John./TYPE" to which the registration number Z156 was later added. It is probable that the paper label was attached after Johnston's figure 2 was drawn. The 1913 TMAG register lists, as B-26, two specimens of which only one has been located. Pritchard (1896) described V. halli, based on Spring Creek, Geelong specimens. In his 1913 paper Pritchard argued the seperateness of V. halli and V allporti, not mentioning V. pellita. Pritchard (1913) stated that the type is not in the Hobart Museum but is probably still in the Johnston collection (now the TMAG collection). Darragh (1988) suggests that Johnston's (1888) statement that Voluta allporti was the largest volute from Table Cape could apply to V. pellita. Further, as V. allporti was not figured by Johnston and as subsequent authors have not used the name, Darragh placed it in synonymy with E. pellita in accordance with Rule 24(a) and Recommendation 24A of the Code of Zoological Nomenclature despite the page priority of V. allporti. Darragh (1988) lists Z156 as the holotype of V. pellita apparently accepting curatorial labelling as did Crespin and Ludbrook.

Friginatica polita (Tenison-Woods)

Natica polita Tenison-Woods 1876

Z206

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Natica polita Tenison-Woods, p. 23, fig. 4.

1893. Natica polita; Tate, p. 325.

1919b. Fraginatica polita (Tenison-Woods); May, p. 111.

1964. Natica polita; Crespin, p.19.

1967. Friginatica polita; Ludbrook, p. 67, pl. 2, figs. 5, 6.

1970. Friginatica polita; Darragh, p. 187.

Remarks: The specimen is in a gel phial inside a glass phial. An external label reads: "TYPE/B-45." The box is labelled Topotype?/ Holotype. The 1913 TMAG register gives a single specimen under B-45. The specimen is slightly smaller than the measurements given by Tenison-Woods but is exactly the size of the specimen illustrated.

Friginatica wintlei (Tenison-Woods)

Natica wintlei Tenison-Woods 1876

Z197

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Natica wintlei Tenison-Woods, p. 23, fig. 3.

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1888. Natica wintlei; Johnston, p. 238, pl. 29, fig.10.
1893. Natica wintlei; Tate, p. 322.
1919b. Natica wintlei; May, p. 11, No. 150.
1967. Friginatica wintlei (Tenison-Woods); Ludbrook, p. 67, pl. 2, figs. 13, 14.
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Remarks: The specimen bears the number (B54) and is glued to a paper label that reads: "B. 54/ *Natica/wintlei/*TYPE" to which the number Z197 has been added. The 1913 TMAG register lists only a single specimen as a Tenison-Woods type. Z197 matches the figure in Johnston, 1888, and the measurements of Tenison-Woods.

Hastula (Nototerebra) tenisoni, (Finlay)

1970. Friginatica wintlei; Darragh, p. 206.

Terebra simplex Tenison-Woods 1876 Z957 Holotype ?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Terebra simplex Tenison-Woods, p. 21, fig. 1, (non Conrad nec Carpenter).

1889a. Terebra simplex; Tate, p. 162.

1927. Terebra tenisoni Finlay, p. 520 (nom. nov.).

1947. Nototerebra simplex; Cotton, p. 667.

1958. Hastula (Nototerebra) tensioni (Finlay); Ludbrook, p, 100, pl. 6, fig. 9.

1970. gen. indet.; Darragh, p. 200.

Remarks: This specimen is in glass phial with label bearing: "B.48/ Terebra/simplex/Table Cape" and the later entry "Z957". The 1913 TMAG register lists a single specimen. Its listing there as "Type?" was later emended to "Holotype". An associated paper label of apparently more recent date reads: "TYPE/Z957". A curatorial note on a master label dated 17/8/90 with the initials NK [Curator Noel Kemp], states "n.b. dimensions do not quite tally with TW's description. Viz ht is 40 mm of 50 (but apex is broken off now), diam is 10 mm of TW's 11 mm." It is also noted by Kemp that the figure cited could not be found. However, the figures accompanying the text of Tenison-Woods (1876) paper were bound in the *Proceedings* volume before the text and escaped binding in many issued volumes. Specimen Z957 closely approximates the size of the specimen figured but differs importantly in lacking the strong vertical ribs, the specimen is smooth. The conspicuous brown mottling noted by Tenison-Woods is, however, present. For these reasons the specimen is only tentatively identified as the holotype.

Haurakia crassicosta May

Haurakia crassicosta May 1922 Z158

Syntype

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Haurakia crassicosta May, p. 11, pl. 4, fig. 6.

1964. Haurakia crassicosta; Crespin, p. 18.

1967. Haurakia crassicosta; Ludbrook, p. 67, pl. 2, fig. 27.

1970. Haurakia crassicosta; Darragh, p. 163

Remarks: The specimen is affixed to a cardboard square bearing the following; "Type/Z158...7140/E9/ Tas. Museum C.1678/Haurakia crassicosta/May/Table Cape/ TYPE." May cited two specimens in the description of the species.

Herpetopoma woodsii (Johnston)

Euchelus woodsii Johnston 1880

Z1010, Z4723

Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Euchelus woodsii Johnston, p. 38.

1919a. Euchelus woodsii; May, p.71, pl. 9 fig. 10.

1970. Herpetopoma woodsii (Johnston); Darragh, p. 206.

Remarks: Two specimens were noted by Johnston in his description. Here, two specimens, one larger and partially broken and a smaller specimen are contained in a gel capsule in a glass capsule. A formerly adherent label reads: "Z1010 (blue ink)/ [illegible] name crossed out/*Purinnia/Woodsii*/[illegible]/ Table Cape fossil/coll./RMJ?? "A paper label inserted in the glass phial reads: "Euchellus woodsii Johns./ probably TYPE/ Z1010". A more recent Tasmanian Museum label (probably written by Curator Both) suggests the specimens [are] is the "TYPE (?)". May indicates the type is broken which suggests that the type was the larger specimen (Z1010). The two specimens are quite unlike, the smaller lacking the prominently reticulated shell. The larger matches the description and approximates the measurements given by Johnston. Pending a revision the two specimens are considered possible syntypes.

Livonia mortoni mortoni (Tate)

Voluta mortoni Tate 1889a

Z208

Lectotype (by Darragh, 1988)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1889a. Voluta mortoni Tate, p. 124, pl.9, figs. 1.

1897. Voluta (Pterospira) mortoni (Tate); Harris, p. 100.

1949a Pterospira mortoni (Tate); Cotton, p. 187, pl. 15, fig.3.

1967. Pterospira morton; Ludbrook, p. 67, pl.3, figs. 6, 8.

1970. Pterospira mortoni; Darragh, p. 182.

1988. Livonia mortoni mortoni (Tate); Darragh, p. 252, pl. 22, figs. 3-4.

Remarks: The numbers B-81 and Z208 appear on the specimen. The label bears appropriate information but was written circa 1960s. A small slip of paper bears "TYPE B-81" in a fashion similar to R.M. Johnston collections. The 1913 TMAG register lists one specimen. Cotton's figured specimen is reportedly from Muddy Creek and closely resembles the lectotype. Tate knew of only two specimens, both figured in his 1889 paper. His figure 1, plate 9 is of the lectotype showing that the specimen was damaged in the lower portion of the columella. Ludbrook's figures of Z208 show that damage and reveal that the outer lip of the body whorl has also been broken away since 1967. Darragh's figures of Z208 are of the specimen in its present condition.

Livonia stephensi (Johnston)

Voluta stephensi Johnston 1880

Z183

Lectotype (by Ludbrook, 1967) Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Voluta stephensi Johnston, p. 35.

1888. Voluta stephensi; Johnston, pl. 30, fig. 1.

1889a. Voluta stephensi; Tate, p. 122.

1896. Voluta stephensi; Pritchard, p. 94.

1913. Voluta stephensi; Pritchard, p. 195.

1913. Voluta wynyardensis Pritchard, p. 200, pl. 21, figs. 1,2.

1964. Voluta stephensi; Crespin, p. 20.

1967. Alcithoe (Cottonia) stephensi Johnston); Ludbrook, p. 67, pl. 3, figs. 3,4.

1970. Pterospira stephensi (Johnston); Darragh, p. 196.

1988. Livonia stephensi (Johnston); Darragh, p. 251, pl. 23, figs. 3-4.

Remarks: The specimen bears two adherent labels: #1. "Voluta stephensi/Table Cape" #2. "TYPE" with later additions "N1 (?)/ (??)/ Z183". The registration number Z183 also appears in black ink on white paint. R.M. Johnston notes that the species is rare at Table Cape and that only one "perfect" specimen was found. Pritchard (1913) incorrectly stated that "the type of this species is apparently inaccessible..." Ludbrook (1967) and Darragh (1988) both figured the lectotype.

Marginella strombiformis Tenison-Woods

Marginella strombiformis Tenison Woods 1877

Z3852

Holotype? (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Marginella strombiformis Tenison-Woods, p. 109.

1888. Marginella strombiformis; Johnston, pl. 31, figs. 4,4a.

1949b. Marginella strombiformis; Cotton, p. 218. pl. 17.

1970. Marginella strombiformis; Darragh, p. 196.

Remarks: A single specimen is attached to a card bearing the label: "Marginella/ strombiformis/ Table Cape/R.M. Johnston" and the number B-71. The 1913 TMAG register lists a single specimen under the heading of "probable Tenison-Woods types".

Mauidrillia pullulascens (Tenison-Woods)

Pleurotoma pullulascens Tenison-Woods 1877 Z891

Holotype possibly Syntype (See Remarks)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Pleurotoma pullulascens Tenison-Woods, p. 104.

1919a. Pleurotoma pullulascens; May, p. 72, pl. 10, fig. 13.

1970. Mauidrillia pullulascens (Tenison-Woods); Darragh, p. 190.

Remarks: A detached phial label reads: "Z891/Pleurotoma/pullulascens/Ten. Woods/ Table Cape/ Coll. R.M. Johnston". May (1919a) speaks of Johnston's co-type suggesting there may have been two specimens but there is no record of a second specimen in the TMAG collection. Pleurotomaria pullulascens was not listed in the 1913 TMAG register and was apparently not seen by Crespin or Ludbrook.

Microcolus transenna (Tenison-Woods)

Fusus transenna Tenison-Woods 1877

Z172

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Fusus transenna Tenison-Woods, p. 94.

1888. Fusus transenna; Tate p. 157, pl. 10, fig,. 10.

1919a. Emarginula transenna (Tenison-Woods); May, p. 70, pl.8, fig. 1.

1964. Fusus transenna; Crespin, p. 18.

1967. Fusinus (Microcolus) transenna (Tenison-Woods); Ludbrook, p. 68, pl. 2, figs. 33, 34.

1970. Microcolus transenna (Tenison-Woods); Darragh, p. 202.

Remarks: The specimen is stored in glass phial. A paper label, originally affixed to the phial, records: "Z172 [added later]/Fusus/transenna/Ten. Woods/Table Cape fossil/ coll./ R.M.J.". Crespin (1964) questions the assignment of holotype. However, the specimen closely corresponds to the description and measurements given by Tenison-Woods and Ludbrook (1967) accepted the single specimen as the holotype.

Morchiella johnstoni (Tenison-Woods)

Rissoina johnstoni Tenison-Woods 1877

Z180

Lectotype (by Ludbrook, 1967)

Z3796, Z3797

Paratypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Rissoina johnstoni Tenison-Woods, p. 101.

1919a. Brittium johnstoni (Tenison-Woods); May, p. 73, pl. 11, fig. 19.

1964. Rissoina johnstoni; Crespin, p. 19.

1967. Rissoina johnstoni; Ludbrook, p. 67, pl. 2, fig. 32.

1970. Morchiella johnstoni (Tenison-Woods); Darragh, p. 176.

Remarks: Three specimens were originally mounted on a plaquette bearing: "B-36/ TYPE [in red ink]/Z180c/ *Rissoina/ johnstoni* T.W./ R.M. Johnston". In pencil is "Type" with an arrow to a pencilled circle surrounding a glue mark. Of the three specimens, only the lectotype, remains mounted. The other two specimens are in separate capsules labelled Z3796 (the smaller) and Z3797 in a capsule labelled paratype. The 1913 register lists "1 spm marked type & 3 others" suggesting that one of the paratypes has not been located.

Nannamoria stolida (Johnston)

Voluta stolida Johnston 1880

Z186

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Voluta stolida Johnston, p. 36.

1888. Voluta stolida; Johnston, pl. 30, figs. 4, 4a.

1896. Voluta stolida var. stolida; Pritchard, p. 94.

1913. Voluta strophodon var. stolida (Johnston); Pritchard, p. 194.

1919b. Voluta strophodon var. stolida; May, p. 112, #176.

1949a. Cymbiola stolida (Johnston); Cotton, p. 189.

1964. Voluta stolida; Crespin, p. 20.

1967. Paramoria stolida (Johnston); Ludbook, p. 68, pl. 3, figs. 9, 10.

1970. Pseudocymbiola stolida (Johnston); Darragh, p. 196.

1988. Nannamoria stolida (Johnston); Darragh, p. 230, pl. 7, figs. 14, 15.

Remarks: The number Z186 in black ink is written on white paint on the shell. Pritchard (1913) erroneously noted that the type of *V. stolida* was probably in Johnston's private collection as "There is no representative of this species in the Hobart Museum."

Nannamoria weldii (Tenison-Woods)

Voluta weldii Tenison-Woods, 1876

Z191

Holotype (by monotypy)

Locality: Table Cape near Wynyard

Formation:

Age: Early Miocene

1876. Voluta weldii Tenison-Woods p. 24, fig. 2.

1888. Voluta weldii; Johnston, pl. 30, figs. 6b. non fig. 7.

1889a. Voluta weldii; Tate, p. 134 not pl. 30, fig. 7 of Johnston.

1896. Voluta weldii; Pritchard, p. 93.

1897. Voluta (Aulica) weldi (Tenison-Woods); Harris, p. 102.

1913. Voluta weldii; Pritchard, p. 193, pl. 1, fig. 2.

1949. Cymbiola weldi (Tenison-Woods); Cotton, p. 189.

1964. Voluta weldii; Crespin, p. 20.

1967. Paramoria weldii (Tenison-Woods); Ludbrook, p. 68,pl. 3, figs. 1, 2.

1970. Pseudocymbiola weldii (Tenison-Woods); Darragh, p. 206.

1988. Nannamoria weldii (Tenison-Woods); Darragh, p. 232, pl. 7, figs. 5,7.

Remarks: A paper label associated with the specimen reads: "B.53/Voluta weldii/TWoods/TYPE)". Pritchard (1913) notes the "type" as being in the Tasmanian Museum. Ludbrook includes in her synonymy only figure 6b of Johnston 1888 excluding figures 6, 6a and 7 from this species. However, Darragh (1988) includes Johnston's (1888) pl. 30, figs. 6, 6a, 6b, 7. The 1913 TMAG register lists only one specimen.

Notogibbula aequisulcata (Tenison-Woods)

Gibbula aequisulcata, Tenison-Woods 1877

Z175

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Gibbula aequisulcata Tenison-Woods, p. 98.

1919a. Gibbula aequisulcata; May, p. 70, pl. 8, fig. 3.

1967. Gibbula (Notogibbula) aequisulcata (Tenison-Woods); Ludbrook, p. 66, pl. 2, figs. 19, 20.

1970. Notogibbula aequisulcata (Tenison-Woods); Darragh, p. 153.

Remarks: The holotype is stored in a glass phial. An associated older label reads: "Gibbula B-24/ aequisulcata/ Z175 Table Cape". The 1913 TMAG register lists one specimen. Crespin (1964) did not list this specimen.

Notovoluta saginata (Finlay)

Voluta lirata Johnston 1880

Z185

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Voluta lirata Johnston, p. 37 (non Brocchi, nec Sowerby).

1888. Voluta allporti; Johnston, pl. 30, fig. 10 (non Johnston 1880).

1927 Notopeplum lirata; Finlay, p. 514 (nomen nov.).

1913. Voluta lirata; Pritchard, p. 197, pl. 20, figs. 7, 8.

1930. Notopeplum saginatum; Finlay, p.45 (non Voluta lirata Tate, 1889, p. 130, pl.2. fig. 4) non Voluta (Aulica) lirata Harris, 1897, p. 103, pl. 4, fig. 12).

1949a. Notopeplum saginatum (Finlay); Cotton, p. 191.

1949a. Nannamoria lirata (Johnston); Cotton, p. 192.

1967. Notopeplum saginatum (Finlay); Ludbrook, 1967, p. 67, pl. 3, figs. 5, 7.

1970. Notopeplum saginatum; Darragh, p. 178.

1988. Notovoluta saginata (Finlay); Darragh, p.223, pl. 2, fig. 2.

Remarks: The single specimen has one adherent label that reads: "Voluta /Table Cape/n". Johnston lists "Voluta allporti" on p. 237 and figures V. allporti (pl. 30, fig 10). The specimen declared as type of V. lirata (Z185) closely matches that illustration (fig. 10) of V. allporti, but not the description. It does, however, match the description of V. lirata (Johnston, 1880, p. 37). Although Pritchard (1913) observed that the type of this species is not in the "Hobart Museum" and is probably in Johnston's collection (now in the TMAG), he suggested that Johnson incorrectly labelled his (1888) pl. 30, fig. 10 as V. allporti. That conclusion is also reached by Darragh. Neither Crespin (1964) nor Ludbrook (1967) list V. allporti. Darragh (1970) lists V. allporti with the generic name Ericusa, but in 1988 states: "The specimen figured by Johnston (1888) as Voluta allporti is probably the the holotype of Voluta lirata." Darragh (1988) discusses this on p. 223 (Notovoluta saginata) and p. 245 (Ericusa sowerbyi pellita).

Optoturris paracantha (Tenison-Woods)

Pleurotoma paracantha Tenison-Woods 1877

Z205

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Pleurotoma paracantha Tenison-Woods p. 105.

1898. Bathytoma paracantha (Tenison-Woods); Tate, p. 398.

1944. Optoturris paracantha (Tenison-Woods); Powell, p. 12.

1964. Optoturris paracantha; Powell, p. 296.

1967. Optoturris paracantha; Ludbrook, p. 68, pl. 4, fig. 3, 4.

1970. Optoturris paracantha; Darragh, p. 185.

Remarks: The specimen, in a glass phial, bears the numbers B-44 and Z205 in ink. The 1913 TMAG register lists only a single specimen.

Penion roblini roblini (Tenison-Woods)

Fusus roblini Tenison-Woods 1876

Z1905

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Fusus roblini Tenison-Woods, p. 22, fig. 7.

1888. Fusus roblini; Johnston, pl. 29, fig. 8.

1888. Siphonalia roblini (Tenison-Woods); Tate, p. 143.

1919b. Verconella roblini (Tenison-Woods); May, p. 114, 213.

1970. Austrosipho roblini (Tenison-Woods); Darragh, p. 192.

1973. Penion roblini roblini (Tenison-Woods) Ponder, p. 418, text fig. 3.1, pl. 44, figs. 1, 2.

Remarks: The specimen bears the number B46 in ink, an adherent red dot and a fragment of tape. The measurements given by Tenison-Woods and by Tate approximate those of the actual specimen but neither agree. The specimen is clearly represented in Tenison-Wood's figure. Tate gives the specimen as "the type" and notes it being in the Tasmanian Museum. The 1913 TMAG register gives the species under the heading of types of Tenison-Woods species and lists a single specimen However, as the specimen was not seen by Ludbrook (1967), Crespin (1964), Ponder (1973) suggested incorrectly that the specimen was lost.

Pervicacia additoides (Tenison-Woods)

Terebra additoides Tenison-Woods 1876

Z200

Lectotype (by Ludbrook, 1967)

Z4720, Z4721, Z4722

Paratypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Terebra additoides Tenison-Woods, p. 95.

1888. Terebra additoides; Tate, p. 16.

1964. Terebra additoides; Crespin, p. 19.

1967. Strioterebra (Pervicacia), additoides (Tenison-Woods); Ludbrook, p. 68. pl. 2, fig. 44.

1970. Pervicacia additoides (Tenison-Woods); Darragh, p. 152.

Remarks: One specimen is marked by an adherent label marked TYPE [in pencil] and with the numbers B-23 and Z200 [in ink]. That specimen, figured by Ludbrook (1967), closely matches Tenison-Woods' description and measurements. The 1913 TMAG register lists "1 spm marked type & three others". The four specimens are now enclosed in a phial. Crespin erroneously gives the registration number as Z179.

Phos lyraecostata (Tenison-Woods)

Cominella lyraecostata Tenison-Woods 1877

Z203, Z3794, Z3795

Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Cominella lyraecostata Tenison-Woods, p. 108.

1888. Phos liraecostatus (Tenison-Woods); Tate, p. 167, pl. 11, Fig. 12.

1964. Cominella lyraecostata; Crespin, p. 17.

1967. Phos lyraecostatus; Ludbrook, p. 68, pl. 2, figs. 23, 24.

1970. Phos lyraecostata; Darragh, p. 179.

Remarks: There are three specimens. The largest , Z3794 [formerly Z203c] is broken , now housed in a gel phial. A second, Z203 [formerly Z203b], is also broken but has been in part repaired. The third, Z3795 (formerly Z203a) is intact and appears to have been figured by Ludbrook. An older associated printed paper label reads: (In ink) "Z203 B-39 [printed] Cominella lyraecostata. Ten. Woods. (P.) Table Cape, /Tas. T.W. 56, R.J. 6-90, R.E. 160". An old circular label once attached to a phial reads; "Cominella/ lyraecostata/ Ten. Woods//Table Cape fossils/coll./R.M.J." The 1913 TMAG register records a single specimen. In a note, bottom of page 69, Ludbrook records that the holotype of Cominella lyraecostatus Tenison-Woods, figured by Tate, had been located but none of these specimens closely matches that figured by Tate. Pending revision, the specimen figured by Ludbrook (pl. 2, figs. 23, 24) is a figured syntype and while it bears a label "Phos lyricostata" p. 11, fig. 12"and corresponds to the figured specimens in Tate, there is not a clear connection between label and specimen. More recent large labels give the three specimens status as holotype of Cominella lyraecostata with two paratypes. Given the uncertainties, I have listed the three specimens as syntypes pending revision.

Pileopsis navicelloides Johnston

Pileopsis navicelloides Johnston 1880

Z166

Holotype destroyed

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Pileopsis navicelloides Johnston, p.39.

1919a. Pileopsios navicelloides; May. p. 73.

1964. Pileopsis navicelloides; Crespin, p. 19.

1970. Nomen dubium; Darragh, p. 183.

Remarks: A note by an unknown curator states that the type had been "smashed". A note on the box containing the fragments states "fragments only now 10/78". A gel phial contains four very small fragments. A round label reads: "Pileopsis/ /no/Z166 (in black ink)/Table Cape fossil/coll./R.M.J.". May noted that the type was crushed.

Potamides pyramidale Tate

Potamides pyramidale Tate 1885b

Z181

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1885b. Potamides pyramidale Tate, p. 226.

1970. ?; Darragh, p. 191.

Remarks: The specimen has a adherent tape label with the number B-82 and the word TYPE On the front, the registration number Z181 is in black ink on a white spot. Above it, in pencil, is the old number B-82. Tate's description includes the statement: "The generic position assigned to this very striking species, is not unassailable inasmuch as the aperture of the only specimen obtained is broken away..." He further states that the specimen is from the R.M. Johnston collection. Darragh also questions the generic assignment.

Cucullaea minuta Johnston 1880

Z169

preoccupied nomen dubium (no specimen)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1880. Cucullaea minuta Johnston, p. 39 non J. de C. Sowerby 1824

1919a. *Cucullaea minuta*; May, p. 73. 1927. *Cucullaea minuta*; Finlay, p. 524.

1970. Preoccupied nomen dubium; Darragh, p.142.

Remarks: The box containing the type specimen has the notice "no specimen herein". Inside is a glass phial containing an older glass phial, well corked, bearing an adherent label: "Cucullaea/minuta, n.s./Table Cape/ Coll. R.M. Johnston" the specimen number has been added to that label. There is no specimen in any of those containers. May noted that the type had been crushed. The status of this species cannot be assessed until topotypic material is available for study.

Protoginella atkinsoni (May)

Marginella atkinsoni May 1922

Z159

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Marginella atkinsoni May, p. 9, pl. 4, fig. 1.

1949b. Marginella atkinsoni; Cotton, p. 217, pl. 17, fig.

1964. Marginella atkinsoni; Crespin, p. 19.

1967. Marginella (Eratoidea) atkinsoni; Ludbrook, p. 68, pl. 2 fig. 30.

1970. Protoginella atkinsoni (May); Darragh, p. 156.

Remarks: The specimen is in a gel phial affixed to a plaquette on which is the following information: "Type 7136/E5/ Z159/ C 1673/ Tas Museum/ *Marginella/ atkinsoni* May/ TYPE." Ludbrook (1967) mistakenly gives date of May's publication as 1921.

Protoginella corpulenta (May)

Marginella corpulenta May 1922

Z160 (crushed specimen)

Holotype?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Marginella corpulenta May, p. 9, pl. 4, fig. 2.

1949b. Marginella corpulenta; Cotton, p. 217, pl. 17, figd.

1964. Marginella corpulenta; Crespin, p. 19.

1967. Marginella (Eratoidea) corpulenta; Ludbrook p. 68, pl, 2, fig. 28.

1970. Protoginella corpulenta (May); Darragh, p. 163.

Remarks: The specimen has been crushed. This was not recorded by Both (1966) or Crespin (1964) but was noted in Ludbrook (1967) and on a curatorial note in 1975. The specimen had been affixed to a heavy card on which is written: "Type 7137/E6/ Z160 1674/ Tas.Museum/ TYPE". May (1922, p. 10) remarks that there had been two examples, so a possible syntype may exist.

Protoginella wentworthi (Tenison-Woods)

Marginella wentworthi Tenison-Woods 1878

Z1910

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1878. Marginella wentworthi Tenison-Woods, p. 109.

1888. Marginella wentworthii; Johnston, pl. 31, fig. 5, 5a, 5b.

1970. Protoginella wentworthi (Tenison-Woods); Darragh, p. 206.

Remarks: The specimen is accompanied by a plaque of the R.M. Johnston collection with the numbers 18, B-77 and Z1910 inscribed. The 1913 TMAG register lists a single specimen. Neither Crespin (1964) nor Ludbrook (1967) examined this specimen.

Retizafra cainozoica (Tenison-Woods)

Columbella cainozoica Tenison-Woods 1877

Z1906

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Columbella cainozoica Tenison-Woods, p. 110.

1919a. Columbella cainozoica; May, p. 72, pl. 11, fig. 16. 1970. Retizafra cainozoica (Tenison-Woods); Darragh, p. 159.

Remarks: A Johnston collection label reads: "Columbella/ cainozoica T. Woods/ Table Cape/ R. M Johnston" and bears the number B-57. May states that the type "...which is a small broken specimen, and probably in a juvenile state." The minute specimen is now contained in a gel phial within a glass phial. The 1913 TMAG register for B-57 has a later notation "Appears to be the type of this species as fig.'d by May vide T.A.D. 12/1973 Z1906 NK 2.1.74" [T.A.D.=Thomas Darragh; NK=Noel Kemp] and lists a single specimen.

Syntomodrillia sandleroides (Tenison-Woods)

Pleurotoma sandleroides Tenison-Woods 1876

Z1908

Holotype?

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Pleurotoma sandleroides Tenison-Woods, p. 104.

1919a. Pleurotoma sandleroides; May, p. 72, pl. 10, fig. 13

1970. Syntomodrillia sandleroides (Tenison-Woods); Darragh, p. 193.

Remarks: The specimen is in a capsule attached by saccotine to a plaquette. The latter bears the following notations: "B72/Z1908/Holotype/*Pleurotoma* [crossed out] *Drillia* [inserted]/ sandleroides, T.W./ Table Cape/R.M. Johnston". May calls attention to "...the type, and co-types" suggesting that there are additional, as yet unlocated, specimens, however, the 1913 TMAG register lists only a single specimen. The designation of this specimen as the holotype is therefore uncertain.

Teleochilus gracillimus (Tenison-Woods)

Daphnella gracillima Tenison-Woods 1877

Z207

Lectotype (by Ludbrook, 1967)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Daphnella gracillima Tenison-Woods, p. 106.

1944. Teleochilus gracillimus (Tenison-Woods); Powell, p. 64.

1964. Daphnella gracillima; Crespin, p. 17.

1967. Teleochilus gracillimus (Tenison-Woods); Ludbrook, p. 69, pl. 4, figs. 11, 12.

1970. Teleochilus gracillimus; Darragh, p. 172.

Remarks: The specimen has an older label reading: "Daphnella B-35/ gracillimus/Z207 Table Cape". It is housed in a glass phial. The 1913 TMAG register lists a single specimen

Thalotia alternata Tenison-Woods

Thalotia alternata Tenison-Woods 1877

Z168

Figured Syntype

Z4715, Z4716, Z4717, Z4718, Z4719

Syntypes?

Locality: Table Cape, near Wynyard

Formation:

Age Early Miocene

1877. Thalotia alternata Tenison-Woods, p. 97.

1964. Thalotia alternata; Crespin, p. 66.

1967. Thalotia alternata; Ludbrook, p. 66, pl. 2, figs. 19,20.

1970. Thalotia alternata; Darragh, p. 153.

Remarks: The figured syntype is stored in a glass phial with a strip label "Holotype". Five specimens representing a growth series are contained in a separate phial. An older label (formerly affixed to a phial?) reads Z168 [in ink]/ Thalotia/alternata/, Ten. Woods/Table Cape/AWJ [older ink]". Ludbrook figured one specimen, making no comment on the presence of the others, nor any indication of why the specimen was selected. While previous curators have accepted Ludbrook's listing of the specimen in her catalogue as a lectotype, a more cautious approach is needed. The specimens fail to appear in the 1913 TMAG register in any of the entries that grouped Tenison-Woods types and indeed, in the absence of a "B" number, appear not to have been previously registered. Curator R.A. Both prepared a label in the 1960's that could suggest the specimens had been a part of the R.M. Johnston collection but even this is not certain. Therefore these six specimens are listed as possible syntypes.

Typhis maccoyi (Tenison-Woods)

Typhis m'coyi Tenison-Woods 1876

Z196

Lectotype (by Ludbrook, 1967)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1876. Typhis m'coyi Tenison-Woods, p. 22, fig. 5.

1888. Typhis m'Coyi; Johnston, pl. 29, fig. 11.

1888. Typhis mcCoyii; Tate, p. 91.

1888. Typhis hebetatus Hutton; Tate, p. 91

1903. Typhis (Typhina) m'Coyi (Tenison-Woods); Cossman, p. 58, pl. 2, fig. 16.

1961. Typhis (Typhis) maccoyi (Tenison-Woods); Vella p. 383, 47, fig. 25, text fig. 4 (10).

1964. Typhis mcCoyi; Crespin, p. 20.

1964. Typhis (Typhina) maccoyi; Keen & Campbell, p. 48, pl. 8, fig. 8.

1967. Typhis (Typhina) maccoyi; Ludbrook, p. 68, pl. 2, figs. 3, 4.

1970. Typhis maccoyi; Darragh, p. 179.

Remarks: The specimen bears the numbers Z196 and B-40. The 1913 TMAG register lists one specimen. The rendition of the specific name post-Crespin (1964) is in accordance with Recommendation D III 21(a) of the International Code.

Turbo (Euninella) tensioni Finlay

Turbo etheridgei Tenison-Woods 1877

Z202

Lectotype (by Ludbrook, 1967)

Z3793

Paratype

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Turbo etheridgei Tenison-Woods, p. 98 non Lycett 1857.

1927. Turbo tenisoni Finlay, p. 493 (nom. nov.).

1964. Turbo etheridgei; Crespin, p. 20.

1967. Turbo (Euninella) tenisoni (Tenison-Woods); Ludbrook, p. 66, pl. 2, fig. 15.

1970. ? tenisoni Darragh, p. 200.

Remarks: The lectotype remains attached to its original display board bearing the following: "B-33/TYPE [in pencil]/Z202 [in ink]/*Turbo/etheridgei*/ Table Cape/ R.M. Johnston." A glue mark on that board suggests that the loose, smaller specimen which also has a glue stain, had originally been attached. A printed paper label reads: "B33 [in ink]/203. *Turbo Etheridgei*. Ten. Woods (P.) Table Cape, Tas./T.W. 46, R.J. 6-90, R.E. 169." The 1913 TMAG register lists two specimens. Tenison-Woods does not state if both specimens were seen, but by implication suggests that more than one specimen was examined. Ludbrook, without comment on type designation, figured the larger of the two specimensóthereby making the single, smaller, specimen a paratype. Darragh was uncertain of the generic affinity of this species.

Turbonilla (Chemnitzia) liraecostata (Tenison-Woods)

Turbonilla liraecostata Tenison-Woods 1877

Z210, Z3792

Syntypes

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Turbonilla liraecostata Tenison-Woods, p. 101.

1964. Turbonilla liraecostata; Crespin, p. 20.

1967. Turbonilla (Chemnitzia) liraecostata (Tenison-Woods); Ludbrook, p. 69, pl. 2, fig. 42a,b.

Remarks: The smaller of the two syntypes (figure 42b of Ludbrook) meets the description of Tenison-Woods which seems to have been based upon a single specimen. The larger of the two specimens is worn and broken and is larger than the measurements given by Tenison-Woods.

Lilax conohelix (Tenison-Woods)

Vermetus conohelix Tenison-Woods 1877

Z3889

Holotype (by monotypy)

Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1877. Vermetus conohelix Tenison-Woods, p. 100.

1970. Lilax conohelix; Darragh, p. 162.

Remarks: This single specimen had been attached to a plaquette bearing the following: "TYPE [in pencil]/ B-31 [in ink]/ *Vermetus/conohelix* T-W/ Table Cape/ R.M. Johnston [printed label]. A small paper label bears: "*Vermetus/conohelix/* B-31/ Table Cape". The 1913 TMAG register gives B-31 in a listing headed "...The following fossil shells are found marked type, & are Tenison Woods species." A single specimen is listed.

Vitrina barnardii Johnston

Vitrina barnardii Johnston 1885b

Z1777

Holotype (by monotypy) Locality: Geilston Bay, Hobart Formation: Travertine Beds

Age: Early Tertiary

1885b. Vitrina barnardii Johnston, p. 219.

1888. Vitrina barnardii Johnston, pl. 34, figs. 8, 8a.

Remarks: The specimen bears the inked number Z1777. Curator Noel Kemp wrote on the reverse of the label: "Failing the appearance of the type of this species up until now it is assumed that this specimen is the holotype. [dated] 1-1974". The specimen is not listed in the 1913 TMAG register.

Zeacrypta hainsworthi (Johnston)

Crepidula hainsworthii Johnston 1885e

Z165

Lectotype (by Ludbrook, 1967)

Z3790, Z3791

Paratypes

Locality: Table Cape, near Wynyard.

Formation:

Age: Early Miocene

1885e. Crepidula hainsworthii Johnston, p. 233, fig. a-c.

1888. Crepidula hainsworthii; Johnston, pl. 32, figs. 13, 13a, 13b.

1957. Crepidula (Zeacrypta) hainsworthii (Johnston); Ludbrook, p. 53, pl. 4, figs. 13, 14.

1964. Crepidula hainsworthii; Crespin, p. 17.

1967. Crepidula (Zeacrypta) hainsworthi; Ludbrook, p. 67, pl. 2, figs. 35, 36, 37.

1970. Zeacrypta hainsworthii (Johnston); Darragh, p. 172.

Remarks: The specimens are in a glass vial containing a round label, formerly adherent, reading: "Crepidula/no/ Z165/Fossil Table Cape/ Coll/ RM Johnston." A small paper label reads: "Probably TYPE Crepidula hainsworthi Johnston." The registration number Z165 was later added. There are three specimens, one (Z3790) minute (in gel phial), a second (Z3791) mature shell partially broken and a third (Z165) the lectotype, figured by Ludbrook, is also probably the specimen figured by Johnston.

Zeapollia purpuroides (Johnston)

Ricinula purpuroides Johnston, 1880

Z3820

Holotype? (by monotypy)

Locality: Table Cape near Wynyard

Formation:

Age: Early Miocene

1880. Ricinula purpuroides Johnston, p. 33.

1970. Zeapollia purpuroides (Johnston); Darragh, p. 190.

Remarks: Johnston records seeing four specimens but only one has been located. It closely matches the description and measurements given by Johnston. The specimen is housed in a glass vial containing a small label bearing the following: "*Ricunula purpuroides* Johnston/B11 Donor R. N. Atkinson." The number Z3820 has been added. An associated TMAG label contains the same information plus the notation "conf. T.A. Darragh". A typed paper label with the specimen states: "*Zeapollia purpuroides* (Johnst.) ? both spms. They are from 2 different boxes but both were labelled *R. purp.* May be the smaller specimen is eroded - hence the lack of costae/varices or whatever the things are called." To that has been added, in pencil, the advice: "The possibly the eroded spec. is a living shell from the beach". That notation may be that of T.A. Darragh. The 1913 TMAG register lists a single specimen under B-11. The specimen is provisionally considered the holotype.

Zemacies conspicua (May)

Turris conspicua May, 1922

Z157

Lectotype (by Ludbrook, 1967) Locality: Table Cape, near Wynyard

Formation:

Age: Early Miocene

1922. Turris conspicuaMay, p. 11, pl. 4, fig. 7.

1964. Turris conspicua; Crespin, p. 20.

1967. Zemacies conspicua (May); Ludbrook, p. 68, pl.4, figs. 13, 14.

1970. Zemacies conspicua; Darragh, p. 162.

Remarks: May (1922) noted that he had examined two specimens. Only one remains in the collection. It is slightly larger than the dimensions given by May: 88 mm long, 25 mm diam. vs. 83 mm and 24 mm. The specimen bears "C 1679" and "Type" written in red ink and 7841/E10 and Z157 in black ink.

Echinodermata

Monostychia etheridgei (Tenison-Woods)

Micraster etheridgei Tenison-Woods 1877

Z504

Holotype (by monotypy)

Locality: Table Cape, near Wynyard.

Formation:

Age: Early Miocene

1877. Micraster etheridgei Tenison-Woods, p. 116

1960. Monostychia etheridgei (Tenison-Woods) Banks, pers. comm.

Remarks: The specimen is accompanied by a paper label reading: "Echinoderm/ Table Cape." A Tasmanian Museum label gives the generic and species name and notes that the specimen is a "probable type", the handwriting on the box being attributed to R.M. Johnston. Correspondence between Noel Kemp, Curator of Geology and Mr. Tony Sadler, South Australia (10/12/1991) states that only a single specimen exists and he enclosed a handwritten note attributed to Dr. M. Banks (written circa 1960, per Kemp) which deals with three types one of which is *Monostychia etheridgei*. Banks assigned the "probable type" to the specimen. The specimen is quite fragile and appears to have been slightly crushed at some point.

Conulariida

Paraconularia derwentensis (Johnston)

Paraconularia derwentensis (Johnston); Parfrey 1982

Specimen not located

Lectotype (by Waterhouse, 1979)

Z1997, Z1998

Figured Specimens (Parfrey, 1982)

Locality: Unknown

Formation: Probably Berriedale Limestone, Cascades Group.

Age: Permian

1887b. Conularia derwentensis Johnston, p. 17.

1888. Conularia tasmanica Johnston; Johnston, pl. 20, figs. 1, 1a, not 1b.

1902b. Conularia tasmanica; Johnston, p. 44.

1938. Conularia derwentensis; Fletcher, p. 253, pl. 26, fig. 9.

1969. Paraconularia cf. derwentensis (Johnston); Runnegar and Ferguson, p. 251, pl, 3, figs. 8, 9.

1979. Paraconularia derwentensis; Waterhouse, p. 480, fig. 1, 1-6.

1982. Paraconularia derwentensis; Parfrey, p. 72, fig.6c, 6d.

Remarks: Waterhouse (1979) designated as the lectotype the specimen figured by Johnston (1888) noting that the specimen had not been located at the Tasmanian Museum. Parfrey refers to Waterhouse having designated the lectotype but, again does not cite a specimen or a registration number suggesting that the specimen had still not been located for it was not included among the Tasmanian Museum specimens she examined. Among those Parfrey did review is Z261, a specimen that closely resembles Johnston's figure 1. Parfrey discusses the confusion caused by Johnston's use of the name "tasmanica" and concludes it is best treated as a junior synonym. Specimen Z1998 is Parfrey's figure 5A and 6C; Z1997 is figure 6D.

Paleozoic

PERMIAN

Brachiopoda

Birchsella spinosa Clarke

Birchsella spinosa Clarke 1987

Z2519

Holotype

Z2513-Z2517, Z2520-Z2528.

Figured Paratypes

Locality: Shore platform at Yellow Point, Birchs Bay @EN196187

Formation: Fifteen meters below top of Abels Bay Fm.

Age: Late Permian

1973. Spiriferid gen. nov. Clarke p. 50, p. 59.

1987. Birchsella spinosa Clarke, p. 283, pl. 16A-S, pl. 17A-O.

2006. Birchsella spinosa Clarke; Carter and Gourvennec, p. 1763, fig. 1161 2a-d.

Remarks: With few exceptions the paratypes of this species are complete internal moulds. The exceptions are the holotype, an external mould of the dorsal valve and ventral umbo and a cast of the dorsal valve, and a cast of the interior mould. Paratype Z2518 is represented by a mould of the dorsal valve exterior and latex cast of the dorsal exterior. None of the casts of interiors which have been figured bear Geological Survey numbers but have been matched visually with the figures and now bear TMAG "Z" numbers. The GST numbers cited in the text have also been added. The casts figured pl. 16N and 16O, are not present in the collection. The equivalencies are:

TMAG	GST	STATUS	FIGURE
Z2513	14055	Paratype	16A, B
Z2514	14056	Paratype	16C, D
Z2515	14057	Paratype	16 E,F
Z2516	14058	Paratype	16G,H
Z2517	14059	Paratype	16I, J
Z2518	14071	Paratype	16K
Z2519	14054a,b	Holotype	16L,M
Z2520	14061	Paratype	16P,Q
Z2521	14062	Paratype	16R,S
Z2522	14063	Paratype	17A,B
Z2523	14064	Paratype	17C,D
Z2524	14065	Paratype	17E,F
Z2525	14066	Paratype	17G,H
Z2526	14067	Paratype	17J,K
Z2527	14068	Paratype	17L,M
Z2528	14069	Paratype	17N,O
Z2529	14070	Paratype	171
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Carter and Gourvennec reprint Clarke's 1987, pl. 16 as follows: fig. 1161 2a=pl. 16L; fig. 1161 2b=pl.16A; fig. 1161 2c=fig. 16B; fig. 11612d= fig. 16M.

Echinalosia ovalis (Maxwell)

Echinalosia ovalis (Maxwell); Clarke 1987

Z2444–Z2453
Figured Specimens
Locality: Various

Formation: Malbina Formation Member E

Age: Late Permian

1954. Strophalosia ovalis Maxwell, p. 548, pl. 57, figs. 4–14. 1987. Echinalosia ovalis (Maxwell); Clarke, p. 264, figs. 2A–L.

Remarks: All specimens bear inked Geological Survey and TMAG Z numbers. Z2444a has counterpart 2444b and latex cast 2444c. Also on this slab is *Terrakea brachythaera* (Morris) Z2464, figured by Clarke 1987, fig. 3K.

TMAG	GST	FIGURE	LOCALITY
Z2444a,b	14006	Fig. 2A,B	Mt. Nassau, above Rathbones Quarry @EN156659
Z2445	14003	Fig. 2C	Mt. Nassau, above Rathbones Quarry @EN156659
Z2446	14002	Fig. 2D	Mt. Dromedary @EN156700
Z2447	14001	Fig. 2E	Shore platform below Shot Tower, Taronga
Z2448	9316	Fig. 2F	Shore platform below Shot Tower, Taronga
Z2449	14004	Fig. 2G	Mt. Nassau, above Rathbones Quarry @EN156659
Z2450	14005	Fig. 2H, K	Mt. Dromedary @EN156700
Z2451	14007	Fig. 2I,	Mt. Dromedary @EN156700
Z2452	14008	Fig. 2J	Mt. Dromedary @EN156700
Z2453	14009	Fig. 2L	Mt. Dromedary @EN156700

Wyndhamia ovalis Maxwell; Clarke, 1987

Z4751

Figured Specimen

Locality: Mt. Nassau @EN156659

Formation: Malbina Formation Member E

Age: Late Permian

1954. Strophalosia ovalis Maxwell, p. 548, pl. 57, figs. 4–14. 1969a. Wyndhamia ovalis (Maxwell); Clarke, p. 45, pl. 8, fig.6.

Remarks: The specimen does not bear the Tasmanian Mines Department number TMF3588 but has been examined by M.J. Clarke who identified it as the specimen he figured in 1969.

Farmerella exoporosa Clarke

Farmerella exoporosa Clarke 1992a

Z2660

Holotype

Z2661-Z2666

Figured Paratypes

Locality: Deep Bay, Cygnet

Formation: Early Middle Lymingtonian-Tomiopsis brevis Zone, Deep Bay Fm.

Age: Late Permian

1985. Notospirifer sp. nov. (coarsely plicate species), Clarke in Farmer, 1985, p. 35.

1991. gen. nov. B, Clarke pp. 64-65, fig. 5.

1992a. Farmerella exoporosa Clarke, p. 73, pl. 1A-J.

2006. Farmerella exoporosa Clarke; Carter and Gouvennec, p. 1762, fig. 1159, 2a-c.

Remarks: All specimens bear TMAG and Geological Survey numbers. The equivalencies are:

TMAG	GST	FIGURE	STATUS
Z2660	15500	1F,G	Holotype
Z2661	15501	1A	Paratype
Z2662	15502	1B	Paratype
Z2663	15503	1C	Paratype
Z2664	15504	1D,E	Paratype
Z2665	15505	1H,I	Paratype
Z2666	15506	1J	Paratype

Carter and Gourvennec (2006) reprint Clarke's (1992a) figures. as follows: 1159 fig. 2a=pl.1G; 1159 2b= pl.1F; 1159 2c= pl.1J.

Fletcherithyris biundata (McCoy)

Fletcherithyris biundata (McCoy); Clarke 1987

Z2530-Z2543

Figured Specimens

Locality: Birchs Bay @EN196187

Formation: 15 meters below top of Abels Bay Fm.

Age: Late Permian

1847. Atrypa biundata McCoy, p. 231, pl. 13, figs. 9, 9a.

1847. Fletcherithyris amygdala Dana, 1847, p. 152.

1965. Fletcherithyris amygdala Dana; Campbell, p. 26, pl. 3, figs. 1-6, pl. 6, figs. 11-34.

1982. Fletcherithyris biundata (McCoy); Waterhouse p. 62, pls. 15e, j, 17 a, c.

1987. Fletcherithyris biundata (McCoy); Clarke, p. 284, figs. 19A-Z

Remarks: All specimens bear the inked GST numbers of the Geological Survey and those of the TMAG. All specimens are complete internal moulds except for Z2543 which is an external dorsal valve mould. Equivalency of TMAG, GST and Clarke's (1987) figure numbers is:

TMAG	GST	FIGURE
Z2530	14074	19A,B
Z2531	14075	19C,D
Z2532	14076	19E-F
Z2533	14077	19G,H
Z2534	14078	19I,J
Z2535	14079	19K,L
Z2536	14080	19M,N
Z2537	14081	190,P
Z2538	14082	19Q,R
Z2539	14083	19S,T
Z2540	14084	19V,W
Z2541	14085	19X,Y
Z2542	14086	19U
Z2543	14087	19Z

Fletcherithyris parkesi Campbell

Fletcherithyris parkesi Campbell; Clarke 1987

Z2544-Z2554

Figured Specimens

Locality: Mt. Nassau @EN156659

Formation: Malbina Formation Member E

Age: Late Permian

1965. Fletcherithyris parkesi Campbell, p. 43, pl. 8, figs. 1–23. 1987. Fletcherithyris parkesi Campbell; Clarke, p. 284, fig. 20 A–R.

Remarks: All specimens bear GST and TMAG numbers. All specimens are complete internal moulds. Equivalency of TMAG, GST and Clarke's 1987 figure numbers is:

TMAG	GST	FIGURE
Z2544	14088	20 A, B
Z2545	14089	20 C, D
Z2546	14090	20 E, F
Z2547	14091	20 G, H
Z2548	14092	20 I, J
Z2549	14093	20 K, L
Z2550	14094	20 M, N
Z2551	14095	20 O, P
Z2552	14096	20 Q, R
Z2553	14097	20 S, T
Z2554	14098	20 U, V

Fusispirifer avicula (Morris)

Fusispirifer avicula (Morris); Clarke 1987 Z2472, Z2473, Z2474, Z2475, Z2476.

Figured Specimens Locality: Various Formation: Various Age: Late Permian

1845. Spirifer avicula Morris, pl. 17, fig. 6 non G.B. Sowerby, 1844.

1888. Spirifer avicula (Sowerby); Johnston, pl. 12, fig. 3.

1964. Spirifera avicula (Sowerby); Crespin, p. 14.

1987. Fusispirifer avicula (Morris); Clarke, p. 267, figs. 5A-E.

1987. Fusispirifer avicula (Morris); Archbold and Thomas, p. 196, figs. 12A-D, 13A-G, 14A-C.

Remarks: Although a specimen bearing the numbers Z242 and B1389 matches the illustration of *Spirifer avicula* (G. Sow.) in Johnston (1888), Clarke (1987) argued that: "The original material of *Spirifer avicula* G. B. Sowerby 1844, of uncertain provenance, is lost and the species is best based on the extant specimen [BM(NH) BB6248] described and figured by Morris...". That neotype is from Eaglehawk Neck as is Clarke's figured specimen Z2472 (GST887). Archbold and Thomas (1987) agreed citing consistency with ICZN Opinion 486. It is clear that the Johnston specimen was not known to Archbold and Thomas or Clarke although it was listed in Crespin's 1964 type catalogue as a hypotype. Many of the specimens figured by Clarke are also represented by rubber casts, some of which are the basis for the figures. The equivalencies of specimen numbers, figures, localities and formations are:

TMAG	GST	FIGURE	LOCALITY	FORMATION
Z2472	887	Fig. 5A	Eaglehawk Neck	Malbina Fm. Member E
Z2473	14027	Fig. 5B	Mount Dromedary	Malbina Fm. Member E
Z2474	14028	Fig. 5C	Deep Bay, Cygnet	Deep Bay Fm.
Z2475	8319a	Fig. 5D	Kangaroo Bay, Cygnet	Uppermost Minnie Point Fm
Z2476	14029	Fig. 5E	Deep Bay, Cygnet	Deep Bay Fm.

In 2004, Waterhouse described *Georginakingia* (Waterhouse, 2004, p. 184) with its type species *Spirifera avicula* Morris, 1845 non Sowerby 1844 thus making it a junior subjective synonym of *Fusispirifer* Waterhouse 1966. Carter (2006, p. 1799) followed Waterhouse's (2004) action. Gourvernnec in Gouvennec and Carter 2107, p. 2781) returned *Fusispirifer avicula* Morris as the senior combination.

Spirifera avicula G.Sowerby; Johnston 1888

Z242

Figured Specimen Locality: Hobart

Formation: Mudstone Beds

Age: Late Permian

1844. Spirifer avicula G. Sowerby; p. 160.

1845. Spirifera avicula; Morris, pl. 17, fig. 6 non G.B. Sowerby, 1844.

1888. Spirifera avicula G. Sowerby; Johnston, pl. 12, fig. 3.

1964. Spirifera avicula (Sowerby); Crespin, p. 14.

1987. Fusispirifer avicula (Morris; Archbold and Thomas, p.196.

1987. Fusispirifer avicula (Morris); Clarke, p. 267, figs. 5a-5e.

Remarks: See Remarks, Fusispirifer avicula above. None of the Fusispirifer avicula sensu Clarke are from the Permian in the vicinity of Hobart.

Gilledia ulladullensis Campbell

Gilledia ulladullensis Campbell; Clarke 1979

Z2555, Z2556

Figured Specimens

Locality Mt. Dromedary @EN156700

Formation: Malbina Formation Member E

Age: Late Permian

1965. Gilledia ulladullensis Campbell, p. 83, pl. 7 figs. 1-23, pl. 15, figs. 8-11.

1979. Gilledia ulladullensis Campbell; Clarke, p. 286., figs. 21A-D.

Remarks: Two complete internal moulds are figured. Figs. 21 A, B (Z2555 = GST8310), C, D (Z2556 = GST14099). Both specimens bear the Geological Survey number in pencil, the TMAG Z number in ink.

Glendonia duodecimcostata (McCoy)

Glendonia duodecimcostata (McCoy); Clarke 1987

Z2309, Z2511-2512- Figured Specimens

Localities: Z2510-2512 - Mt. Nassau @EN156659

Z2309 - Kangaroo Bay, Cygnet @EN077140

Formation: Z2510–2512 - Malbina Formation Member E

Z2309 - Top most bed, Minnie Point Fm.

Age: Late Permian

1847. Spirifer (Brachythyris) duodecimcostata McCoy, pl. 17, figs. 2, 3.

1978. Glendonia duodecimcostata (McCoy); McClung & Armstrong, p. 3, pl. 2, figs. 9–20.

1987. Glendonia duodecimcostata (McCoy); Clarke, p. 279, figs. 15 A-J.

Remarks: All specimens bear the Geological Survey and TMAG numbers. Rubber casts of moulds are also figured. The casts bear the same number as the mould. The equivalencies of TMAG, GST and Clarke's figures are:

TMAG GST FIGURE Z2309 14053B 15A,B,C,D Z2510 14051 15E,F Z2511 14052 15G Z2512 14050 15H,I,J

Grantonia hobartensis Brown

Grantonia hobartensis Brown; Clarke 1979

Z4322-Z4326

Figured Specimens

Locality: Rathbones Quarry, Granton Formation: Berriedale Limestone

Age: Late Permian

1845. Spirifer stokesi Morris in Strzelecki, p. 283, pl. 15, figs. 1, 1a.

1953. Grantonia hobartensis Brown, p. 61, pl. 6, figs. 1-9.

1979. Grantonia hobartensis Brown; Clarke, p. 200, pl. 3, figs 2-9.

Remarks: While Geological Survey numbers were assigned to the specimens and are recorded in Clarke's paper, the numbers are not on the specimens themselves. Clarke (1979) discusses the relationship of *Trigonotreta stokesi* and *Grantonia* in detail concluding that *Grantonia* is a subjective junior synonym of *Trigonotreta*. He does not, however, submerge *Grantonia* in this or in his later paper (1992b). The equivalencies between the TMAG and GST numbers and Clarke's 1979 figures are:

TMAG	GST	FIGURE
Z4322	368408	Pl. 3, fig. 2.
Z4323	368409	pl. 3, fig. 3.
Z4324	368410	Pl. 3, fig. 7
Z4325	368411	Pl. 3, fig. 8.
Z4326	368415	Pl. 3, fig. 9

Grumantia costellata Clarke

Grumantia costellata Clarke 1990; Clarke 1990, 1992b

Z2433a,b

Holotype

Z2434-Z2442

Figured Paratypes

Localities: See Remarks

Formation: Basal Bundella Formation, except Z2441, Z2442 Tasmanites Oil Shale.

Age: Late Carboniferous - Early Permian

1990. *Grumantia costellata* Clarke, p. 56, Figs. 4A–M. 1992b. *Grumantia costellata*; Clarke, p. 14, Figs 4A–K.

Remarks: Specimens are marked with both GST and TMAG numbers. The equivalencies between TMAG and GST numbers, and Clarke's 1990 and 1992b figures are:

TMAG	GST	FIGURES		LOCALITY
		Clarke, 1990	Clarke, 1992b	
Z2433a,b	8334a,b	Fig. 4G, H	Fig. 4C,	Green Point, Cygnet @EN076181
Z2434	14101	Fig. 4A	Fig. 4A	Wheatleys Bay, Cygnet @EN018168
Z2435	14102	Fig. 4B	Fig. 4B	Wheatleys Bay, Cygnet @EN018168
Z2436	14103	Fig. 4E	Fig. 4F	Langdons Hill, Cygnet @ EN059182
Z2437	14104	Fig. 4C		Wheatleys Bay, Cygnet @EN018168
Z2438	14105	Fig. 4F	Fig. 4G	Wheatleys Bay, Cygnet @EN018168
Z2439	14106	Fig. 4K,L	Fig. 4J,	K Wheatleys Bay, Cygnet @EN018168
Z2440	14107	Fig. 4J	Fig. 4I	Wheatleys Bay, Cygnet @EN018168
Z2441	14108	Fig. 4D	Fig. 4E	Gt. Bend Mersey River @DQ390175
Z2442	14109	Fig. 4M	Fig. 4H	Gt. Bend Mersey River @DQ390175

Grumantia pelicanensis (Fletcher)

Grumantia pelicanensis (Fletcher); Clarke 1990

Z2443

Figured Specimen

Locality: One mile south of Rosella Creek crossing, near Collinsvale, Bowen Basin, Queensland

Formation: pelicanensis bed, Blenheim Subgroup

Age: Early Permian

1952. Streptorhynchus pelicanensis Fletcher, p. 8, pl. 1, fig. 1.

1882. ?Grumantia pelicanensis (Fletcher); Waterhouse, p. 24, pl. 1c.

1990. Grumantia pelicanensis; Clarke, p. 58, fig. 4N.

Remarks: The specimen figured is a latex cast of a topotype dorsal valve interior. Z2443 = GST14110.

Ingelarella elegantula (Johnston)

Inoceramus (?) elegantula Johnston 1887b

Z956

Holotype (by monotypy)

Locality: Porter's Hill, Hobart

Formation:

Age: Late Carboniferous-Early Permian?

1887b. Inoceramus (?) elegantula Johnston, p. 12.

1888. Inoceramus elegantula Johnston, pl. 15, figs. 13, 13a.

1964. Inoceramus elegantula; Crespin, p. 16.

1964. Ingelarella elegantula; Banks in Crespin, p. 16.

Remarks: Crespin identifies specimen B743 (= Z956) as the questioned holotype.

Kelsovia superba Clarke

Kelsovia superba Clarke, 1990; Clarke 1990, 1992b

Z2646, Z2647

Holotype

Z2641-Z2645, Z2648-Z2651

Figured paratypes

Locality: Z2641, Z2644, Z2646, Z2647, Z2649-Z2651: Middle Arm, Beaconsfield; Z2642, Z2643, Z2645, Z2648: Fossil Cliffs, Darlington, Maria Island @EN887855.

Formation: Z2641, Z2644, Z2646, Z2647, Z2649-Z2651: Swifts Jetty Sandstone, Masseys Creek Group; Z2642, Z2643, Z2645, Z2648: 'Spirifer Zone'

Age: Late Carboniferous-Early Permian

1984. Notospirifer sp. nov. Clarke in Clarke and Baillie, p. 13.

1990. Kelsovia superba Clarke, p. 72, figs. 13A-N.

1992b. Kelsovia superba Clarke; Clarke, p.23, figs. 13A-N.

2006. Kelsovia superba Clarke; Carter in Carter and Gourvennec, p. 1763, fig. 1161, 1a-1e.

Remarks: The Holotype (Z2646, Z2427) is counterpart external and internal moulds of a dorsal valve. Most specimens bear the Geological Survey and TMAG numbers. Carter in Carter and

Gourvennec (2006) reproduced some of Clarke's (1990, 1992b) figures. Those equivalencies are:

GST	FIGURES		
	Clarke 1990	Clarke 1992b	Carter 2006
361085	Fig. 13A,B	Fig. 13 B,C	Fig. 1161,1c, 1d
14172	Fig. 13C	Fig. 13F	Fig. 1161.1e
14173	Fig. 13D	Fig. 13A	
361135	Fig. 13E	Fig. 13D	
14174	Fig. 13F	Fig. 13J	
361234	Fig. 13G	Fig. 13I,	Fig. 1161, 1a
361168	Fig. 13H	Fig.13H	Fig. 1161, 1b
14175	Fig. 13I	Fig. 13E	
361090	Fig. 13J	Fig. 13G	
361239	Fig. 13K	Fig. 13M	
361234	Fig. 13L	Fig. 13K	
361234	Fig. 13M	Fig. 13N	
361236	Fig. 13N	Fig. 13L	
	361085 14172 14173 361135 14174 361234 361168 14175 361090 361239 361234 361234	Clarke 1990 361085 Fig. 13A,B 14172 Fig. 13C 14173 Fig. 13D 361135 Fig. 13E 14174 Fig. 13F 361234 Fig. 13G 361168 Fig. 13H 14175 Fig. 13I 361090 Fig. 13J 361234 Fig. 13K 361234 Fig. 13L 361234 Fig. 13M	Clarke 1990 Clarke 1992b 361085 Fig. 13A,B Fig. 13 B,C 14172 Fig. 13C Fig. 13F 14173 Fig. 13D Fig. 13A 361135 Fig. 13E Fig. 13D 14174 Fig. 13F Fig. 13J 361234 Fig. 13G Fig. 13I, 361168 Fig. 13H Fig. 13H 14175 Fig. 13I Fig. 13E 361090 Fig. 13J Fig. 13G 361234 Fig. 13K Fig. 13M 361234 Fig. 13L Fig. 13K 361234 Fig. 13M Fig. 13N

Licharewiella apicallosa (Clarke)

Costalosia apicallosa Clarke 1969a; Clarke 1969b, 1990, 1992b

Z2575

Lectotype (designated by Clarke, 1990)

Z2576-Z2581

Paratypes

Locality: Quamby Brook, Golden Valley Area @DP660730

Formation: Glencoe Fm., Golden Valley Group

Age: Late Carboniferous - Early Permian

1968a. Costalosia sp. nov. aff. C. argentea (Douglas); Clarke, p. 23.

1969. Costalosia apicallosa Clarke, p. 37, pl. 6, figs. 9–11, pl. 7, figs. 1–8.

1990. Licharewiella apicallosa (Clarke) Clarke, p. 61, fig. 6A-H.

1992b. Licharewiella apicallosa; Clarke, p. 16, figs.6A-G.

Remarks: Most specimens bear the Tasmanian Department of Mines (TMF) number as well as the TMAG number. Clarke (1969) did not nominate a holotype for C. *apicallosa* instead identifying four syntypes for the species. They are Z2575, Z2581, Z2578 and one specimen bot located. Clarke later (1990, p. 61) selected Z2575 as the lectotype, listing the three "syntypes" as paratypes and adding Z2579 as a paratype. Specimen Z2577 does not match Clarke's (1969) pl. 6, Fig. 9. The equivalencies are:

TMAG	TMF	STATUS	FIGURES		
			Clarke, 1969	Clarke, 1990	Clarke, 1992b
Z2575	3554	Lectotype	Pl. 7, Figs. 1,2	Fig, 6A, B	Fig. 6A, B
Z2576	35117	Paratype	Pl. 6, Fig. 10	Fig. 6C	Fig. 6C
Z2577	35116	Paratype	Pl. 6, Fig. 9?	Fig. 6D	
Z2578	3557	Paratype	Pl. 7, Fig. 3	Fig. 6E	Fig.6F
Z2579	35113	Paratype	Pl. 7, Fig. 5	Fig. 6F	Fig. 6G
Z2580	3558	Paratype	Pl. 7, Fig. 4	Fig. 6G	Fig. 6E
Z2581	3555	Paratype	Pl. 7, Fig. 6	Fig. 6H	Fig. 6D

In the type collection the lectotype and paratypes are housed with Clarke 1969 types.

Costalosia apicallosa Clarke 1969

Z2575 Z2576, Z2577, Z2578, Z2579, Z2580, Z2581, Z5645

Figured Syntypes

Locality: Quamby Brook, Golden Valley area @DP660730

Formation: Glencoe Fm, Golden Valley Group Age: Late Carboniferous - Early Permian

1968a. Costalosia sp. nov. aff. C. argentea (Douglas); Clarke, p. 23.

1969a. Costalosia apicallosa Clarke, p. 37, pl. 6, figs. 9-11, pl. 7, figs. 1-8.

Remarks: Clarke (1969) figured 10 specimens, four of which were designated as syntypes: Z2575, Z2581, Z2578 and a missing specimen. These designations were modified, in part, by Clarke in 1990 and 1992b. See *Licharewiella apicallosa* (Clarke) above for discussion. The equivalencies are:

TMAG	GST	Clarke,1969	Clarke, 1980	Clarke 1992b
Z2574	3554	Pl. 7, Figs. 1,2	Figs. 6A, B	Fig. 6A, B
Z2575	3557	Pl. 7, Fig. 3	Fig. 6E	Fig. 6F
Z2580	3558	Pl. 7, Fig. 4	Fig. 6G	Fig. 6E
Z2581	3555	Pl. 7, Fig. 6	Fig. 6H	Fig. 6D
Z2576	35117	Pl. 6, Fig. 10	Fig. 6C	Fig. 6C
Z2577	35116	Pl. 6, Fig. 9	Fig. 6D	
Z5645	35118	Pl. 6, Fig. 11		
Z5650	35114	Pl. 7, Fig. 7		
Z5651	35115	Pl. 7, Fig. 8		
Z5683	35113	Pl. 7, Fig .5	Fig. 6F	Fig. 6G

Notospirifer minutus Campbell

Notospirifer minutus Campbell; Clarke 1987

Z2508

Figured Specimen

Locality: Mt. Dromedary @EN156700 Formation: Malbina Fm Member E

Age: Late Permian

1960. *Notospirifer minutus* Campbell, p. 1121, pl. 139, figs. 6–8. 1987. *Notospirifer minutes* Campbell; Clarke, p. 279, figs. 14A–C.

Remarks: The specimen consists of external moulds of the dorsal and ventral valves and a complete internal mould. The specimen bears both the numbers of the Geological Survey and the TMAG (Z2508a-c=GST14049a-c)

Plekonella acuta Campbell

Plekonella acuta Campbell; Clarke 1987

Z2471

Figured Specimen

Locality: Shore platform at Yellow Point, Birchs Bay @EN196187

Formation: 15 meters below top of Abels Bay Formation.

Age: Late Permian

1953. Plekonella acuta Campbell, p. 18, pl. 3, figs. 17–26.

1967b. Plekonella acuta Campbell; Waterhouse, p. 84, figs. 10, 14.

1987. Plekonella acuta Campbell; Clarke, p. 266, figs. 4A, B.

Remarks: The specimen consists of a single counterpart internal and external ventral valve mould. Latex casts have been made of both impressions and bear the same number as the original. Z2471a,b = GST8234a,b)

Pseudosyrinx allandalensis Armstrong

Pseudosyrinx allandalensis Armstrong; Clarke 1990, 1992b

Z2653-Z2659

Figured specimens

Locality: Various Formation: Various Age: Early Permian

1970. Pseudosyrinx allandalensis Armstrong p. 140, pl. 1, fig. 1–7.

1990. Pseudosyrinx allandalensis; Clarke, p. 72, fig. 14A-H.

1992b. Pseudosyrinx allandalensis; Clarke, p. 25,fig. 14A-H.

Remarks: Specimens are marked with TMAG and Geological Survey numbers. Equivalencies, figures, location and formation data are:

TMAG	GST	FIGURES		LOCALITY	FORMATION
		Clarke, 1990	Clarke, 1992b		
Z2652	361113	Fig. 14A	Fig. 14A	Middle Arm, Beaconsfield	Swifts Jetty Sst
Z2653	8275	Fig. 14B	Fig. 14C	Darlington, Maria Island	Darlington Ls.
Z2654	14176	Fig. 14C	Fig. 14B	Wheatleys Bay, Cygnet	Basal Bundella Fm.
Z2655	8268	Fig. 14D	Fig. 14F	Kansas Ck, Western Bluff,	Kansas Creek Fm.
					Great Western Tiers
Z2656	14178	Fig. 14E	Fig. 14D	Darlington, Maria Island	Darlington Ls.
Z2657	14177	Fig. 14F	Fig. 14E	Kansas Ck., Western Bluff	Kansas Creek Fm.
					Great Western Tiers
Z2658	14179	Fig.14G	Fig. 14H	Darlington, Maria Island	Darlington Ls.
Z2659	14180	Fig. 14H	Fig. 14G	Darlington, Maria Island	Darlington Ls.

Pseudosyrinx sp. in Clarke

?Pseudosyrinx sp. in Clarke 1987

Z2529

Figured Specimen

Locality: Mt. Dromedary @EN156700 Formation: Malbina Formation Member E

Age: Late Permian.

1987. ?Pseudosyrinx in Clarke 1987, p. 283, fig. 18.

Remarks: The specimen bears the inked numbers of the Geological Survey of Tasmania and

TMAG: GST 14073 = Z2529.

Strophalosia subcircularis Clarke

Strophalosia subcircularis Clarke 1969a, 1990, 1992b

Z2561

Lectotype (by Clarke, 1990)

Z2557-Z2560

Figured Paratypes

Locality: Quamby Brook, Golden Valley area @DP660730

Formation: Glencoe Fm.

Age: Late Carboniferous - Early Permian

1968a. Strophalosia sp. nov. Clarke, p. 23.

1968b. Strophalosia aff. preovalis Maxwell; Clarke, p. 142.

1969a. *Strophalosia subcircularis* Clarke, p. 22, pl. 1, figs. 1–8, pl. 2, figs 1–8, pl. 3, figs 1–8, pl. 4, figs. 1–9.

1990. Strophalosia subcircularis; Clarke, p. 58, figs. 5A-G.

1992b. Strophalosia subcircularis; Clarke, p. 16, figs. 5 A-G.

Remarks: In 1969a Clarke designated four syntypes for S. *subcircularis* (Z2559, Z2561, Z2562, Z2563). In 1990 he selected a Lectotype (Z2561) designating seven specimens (including the four original syntypes) as paratypes. These were all figured in his 1990 and 1992b papers. Clarke (1969) also described and figured three "varieties" of *S. subcircularis "forma typica"*: *S. subcircularis var. tumida* and *var. brevicardinalis*. Syntypes were designated for each variety. These would seem to have been subsumed for in his 1990 paper Clarke included all thirty-four specimens (Clarke, 1969) in *S. subcircularis*. Clarke (pers.comm. 1/6/2010) confirmed this stating that the "varieties" have no taxonomic significance. The syntypes designated for all the varieties have not been located.. The specimens cited by Clarke (1990, 1992b) bear numbers various noted as TMF and GST, both Geological Survey of Tasmania, as well as the TMAG 'Z' number. Clarke (Pers. Comm. 7/6/2011) noted that the specimen bearing the number TMF3544 should have been numbered TMF3589. The equivalencies of these are:

TMAG	TMF/GST	FIGURES		
		Clarke, 1969a	Clarke, 1990	Clarke, 1992b
Z2557	3592	Pl. 1, Fig. 4	Fig. 5A	Fig. 5B
Z2558	3595	Pl. 1, Fig. 7	Fig. 5B	Fig. 5D
Z2559	3589	Pl. 1, Fig.1	Fig. 5C	Fig. 5A
Z2560	3597	Pl. 2, Fig. 1	Fig. 5D	Fig. 5C
Z2561	3589	Pl. 4 Figs.1,2	Fig. 5E	Fig. 5E
Z2562	3546	Pl. 4, Fig.5	Fig. 5F	Fig. 5F
Z2563	3547	Pl. 4, Fig.6	Fig. 5G	Fig. 5G
Z5495	3594	Pl. 1, Fig.6		
Z5652	3552	Pl. 6, Fig.4		
Z5653	3577	Pl. 6, Figs. 5–6		
Z5654	3551	Pl. 6, Fig.1		
Z5655	3593	Pl. 1, Fig.5		
Z5656	35103	Pl. 2, Fig.3		
Z5657	35100	Pl. 2, Fig.6		
Z5658	35104	Pl. 2, Fig.5		
Z5659	35105	Pl. 3, Fig.2		
Z5660	35111	Pl. 3, Fig.7		
Z5661	35109	Pl. 3, Fig.5		
Z5662	35110	Pl. 3, Fig.8		
Z5663	3570	Pl. 4, Fig.4		
Z5667	3569	Pl. 4, Fig.3		
Z5668	3548	Pl. 5, Fig.1		
Z5669	3571	Pl.5, Fig.3		
Z5701	3549	Pl. 5, Fig.2		
Z5702	3571	Pl. 5, Fig.3		
Z5703	3550	Pl. 5, Fig.4		
Z5728	3548	Pl. 5, Fig.2		

The figured paratypes are housed in the type collection in Clarke 1969a. The lectotype is stored in Clarke 1990.

Strophalosia concentrica Clarke

Strophalosia concentrica Clarke, 1990; 1992b

Z2565

Holotype

Z2564-Z2574

Figured Paratypes

Locality: Various, see Remarks

Formation: Holotype and paratypes: Middle part of Kansas Creek Fm. Except: Z2567 and

Z2570: basal Bundella Formation. Z2571: Spreyton Formation.

Age: Late Carboniferous - Early Permian

1973. Strophalosia sp. nov. Clarke, in Clarke & Farmer, p. 43.

1975. Strophalosia sp. nov. Clarke, in Clarke & Banks, p. 457.

1976. Strophalosia sp. nov. Clarke, in Clarke & Farmer, p. 106.

1984. Strophalosia sp. nov. Clarke, in Calver et al., p. 139.

1990. Strophalosia concentrica Clarke, p. 60, figs. 5H-5R.

1992b. Strophalosia concentrica Clarke; Clarke, p. 16, fig. 5H-R.

Remarks: All specimens are marked with Geological Survey and TMAG numbers. The equivalencies between the TMAG and GST numbers, and Clarke's 1969a, 1990 and 1992b papers are:

TMAG	GST	FIGURES		LOCALITY	NUMBERS
		Clarke, 1990	Clarke 1992b		
Z2564	14111	Fig. 5H	Fig. 5I	Kansas Creek, Western Bluff	DP240780
Z2565	14112	Fig. 5I	Fig. 5H	Kansas Creek, Western Bluff	DP240780
Z2566	8271	Fig. 5J	Fig. 5J	Kansas Creek, Western Bluff	DP240780
Z2567	14113	Fig. 5K	Fig. 5K	Wheatleys Bay, Cygnet	EN018168
Z2568	14114	Fig. 5L	Fig. 5P	Kansas Creek, Western Bluff	DP240780
Z2569	14115	Fig. 5M	Fig. 5R	Kansas Creek, Western Bluff	DP240780 Ka
Z2570	14116	Fig. 5N	Fig. 5Q	Wheatleys Bay, Cygnet	EN018168
Z2571	351350	Fig. 50	Fig. 50	Gt. Bend Mersey River, Latrobe	DQ390175
Z2572	8272	Fig. 5P	Fig. 5L	Kansas Creek, Western Bluff	DP240780
Z2573	14117	Fig. 5Q	Fig. 5M	Kansas Creek, Western Bluff	DP240780
Z2574	14118	Fig. 5R	Fig. 5N	Kansas Creek, Western Bluff	DP240780

Sulciplica crassa Clarke

Sulciplica crassa Clarke 1990; Clarke 1990 and 1992b

Z2596 (original designation)

Holotype

Z2394, Z2598, Z2590–Z2603

Paratypes

Locality: Fossil Cliff, Darlington, Maria Island @EN887855

Formation: 'Spirifer' Zone, Fossil Cliffs. Age: Late Carboniferous - Early Permian

1990. Sulciplica crassa Clarke, p. 64, figs. 8A-M.

1992b. Sulciplica crassa Clarke; Clarke, p. 19, figs. 8A-N.

Remarks: All specimens are marked with Geological Survey (GST) and TMAG (Z) numbers in ink.

The equivalencies are:

TMAG	GST	FIGURES	
		Clarke, 1990	Clarke 1992b
Z2590`	14123	Fig. 8A	Fig. 8C
Z2591	14124	Fig. 8B	Fig. 8F
Z2592	14134	Fig. 8C	Fig. 2B
Z2593	14125	Fig. 8D	Fig. 8D
Z2594	14126	Fig. 8E	Fig. 8N
Z2595	14136	Fig. 8F	Fig. 8K
Z2596	14127	Fig. 8G	Fig. 8A
Z2597	14128	Fig. 8H	Fig. 8G
Z2598	14135	Fig. 8I	Fig. 8E
Z2599	14129	Fig. 8J	Fig. 8M
Z2600	14130	Fig. 8K	Fig. 8J
Z2601	14131	Fig. 8L	Fig. 8H
Z2602	14132	Fig. 8M	Fig. 8I
Z2603	14133	Fig. 8N	Fig. 8L

Sulciplica subglobosa Clarke

Sulciplica subglobosa Clarke 1990; Clarke 1990, 1992b

Z2614

Holotype

Z2604-Z2613, Z2615-Z2616

Figured Paratypes

Locality: Fossil Cliffs, Darlington, Maria Island

Formation: 'Spirifer' Zone

Age: Late Carboniferous - Early Permian

1990. Sulciplica subglobosa Clarke, p. 64, figs. 9A-M.

1992b. *Sulciplica subglobosa* Clarke; Clarke, p. 21, Fig. 9A–M. 2004. *Unicostatina subglobosa* (Clarke); Waterhouse, p. 184.

2007. Unicostatina subglobosa (Clarke); Gourvennec in Gourvennec and Carter, p. 2781.

Remarks: All specimens are marked with Geological Survey (GST) and TMAG (Z) numbers.

Specimen Z2613 does not appear to match the figure, although it is appropriately marked.

Gourvennec, 2007, p. 2781, in an internal note on *Unicostatina*, reports that Waterhouse had assigned this genus to the Trigonotretidae "but is here maintained in the Choristitdae". Clarke (pers.comm. 4/3/2012) asserts this to be incorrect and that *Unicostatina* "is of very doubtful validity."The equivalencies are:

TMAG	GST	FIGURE		
		Clarke, 1990	Clarke, 1992b	Gourvennec and Carter, 2007
Z2604	14138	Fig. 9A	Fig. 9B	Fig. 1861, 3a
Z2605	14139	Fig. 9B	Fig. 9C	
Z2606	14140	Fig. 9C	Fig. 9A	
Z2607	14141	Fig. 9D	Fig. 9D	
Z2608	14142	Fig. 9E	Fig. 9F	
Z2609	14143	Fig. 9F	Fig. 9G	
Z2610	14144	Fig. 9G	Fig. 9E	
Z2611	14145	Fig. 9H	Fig. 9I	
Z2612	14146	Fig. 9I	Fig.9J	
Z2613	14147	Fig. 9J	Fig.9H	
Z2614	14137	Fig. 9L	Fig. 9M	Fig. 1161, 3b.
Z2615	14148	Fig. 9K	Fig. 9K	
Z2616	14149	Fig. 9M	Fig. 9L	Fig. 1861. 3c.

Sulciplica tasmaniensis (Morris)

Sulciplica tasmaniensis (Morris); Clarke 1979

Z4327, Z4328

Figured Specimens

Locality: Z4327: Eastern Marshes, nr. Stonehenge. Z4328: Rathbones Quarry, Granton

Formation: Unnamed limestone (Z4327)

Berriedale limestone (Z4328)

Age: Permian

1845. Spirifer tasmaniensis Morris in Strzelecki, p. 280, pl. 15, fig. 3.

1953. Trigonotreta stokesi (Koenig) Brown, partim pl. 5, fig. 5 only.

1968. Spirifer tasmaniensis Morris; Armstrong, p. 84, pl. 6, figs. 7–12.

1979. Sulciplica tasmaniensis (Morris); Clarke, p. 206, pl. 4, figs. 1-9

Remarks: Clarke cites the GST numbers, but they are not marked on the specimens.

Z4327=GST368418 pl. 4, fig. 3; Z4328=GST36841 pl. 4, fig. 4.

Sulciplica transversa Waterhouse

Sulciplica transversa Waterhouse 1968; Clarke 1987

Z2477-Z2487

Figured Specimens

Locality: Z2485: Byatts Farm Road, Rossarden @EP675956; Z2486a,b, Z2487: Ridge north of Counsel Creek, Maria Island; All others from Eaglehawk Neck @EN765376.

Formation: Z2486a,b, Z2487: top of the Marra Formation; Z2485: unnamed glauconitic formation; All others from the Malbina Fm Member E.

Age: Late Permian

1845. Spirifer vespertilio Morris, p. 282, pl. 17, figs. 1–2.

1849. Spirifer vespertilio Morris; Dana, p. 685, pl. 2, fig. 3a, 3b.

1968. Sulciplica transversa Waterhouse, p. 27, pl. 16, figs. 1–4.

1987. Sulciplica transversa Waterhouse; Clarke, p. 269, figs. 6A-D, 7A-E, 8A-F.

2006. Sulciplica transversa Waterhouse; Carter, p.1805, Fig.1196, 2a-2d.

Remarks: All specimens bear the numbers of the Geological Survey and TMAG. Several specimens are associated with rubber casts of natural moulds. The equivalency of TMAG and GST numbers and figures are:

TMAG	GST	FIGURE	
		Clarke 1987	Carter 2006
Z2477	14030	Fig 7A	
Z2478	14031	Fig. 6A	
Z2479	14032	Fig. 6B	
Z2480	14033	Fig. 6D	
Z2481	14034	Fig. 7B	
Z2482	14035	Fig. 8C	
Z2483	14036	Fig. 7C	
Z2484	14037	Fig. 6C	
Z2485	14038	Fig. 8A	
Z2486a	14039a	Fig. 8D	Fig. 1197, 2c
Z2486b	Fig. 8E		
Z2486b	Fig. 8F		
Z2487a	14040a	Fig. 8B	Fig. 1197, 2d

M.J.Clarke, (Pers. Comm. 4/3/2012) notes that localities of the specimens refigured by Carter (2006) are not assigned correct localities. Specimens figured as Fig. 1197, 2a,2b said to be New South Wales are from New Zealand and originally figured by Waterhouse (1968). Fig. 2c, 2d are from Maria Island, Tasmania.

Taeniothaerus subquadratus (Morris)

Taeniothaerus subquadratus Morris; Parfrey 1983

Z107, Z115, Z4504, Z4505

Figured Specimens
Locality: See Remarks

Formation: See Remarks
Age: Late Permian

1845. Productus subquadratus Morris in Strzelecki, p. 284

1928. Taeniothaerus subquadratus (Morris); Whitehouse, p. 281

1950. Aulosteges (Taeniothaerus) subquadratus (Morris); Hill, p. 6, pl. 1a-c non pl. 5, figs. 1, 2 and pl. 6, fig. 4.

1957. Taeniothaerus subquadratus (Morris); Coleman, p. 87, pl. 15, figs. 1-7

1960. ?Taeniothaerus subquadratus (Morris); Muir-Wood and Cooper, pl. 11, fig. 2.

1983. Taeniothaerus subquadratus (Morris); Parfrey, pp. 289–296, figs. 1-4.

2007. Taeniothaerus subquadratus (Morris); Brunton, p. 2670, figs. 1178.a-d, 1179.a, b.

Remarks: The specimens bear TMF and TMAG numbers. Fig. 4 is of a latex cast. Both cast and mould are present. Parfrey figured additional specimens in her 1994 Ph.D. thesis. Equivalcies are:

TMAG GST	FIGURE	LOCALITY	FORMATION
	Parfrey Brunton		
Z107	2D 1178 2c	Rathbones Quarry, Granton	Berriedale Limestone
Z115	2B 1778 2d	Strickland Ave, North Hobart	
Z4504 9443	4	North Maria Island	Counsel Creek Formation
Z4505 9445	2A	Weily's Quarry, Glenorchy	Berriedale Limestone

Terrakea brachythaera (Morris)

Terrakea brachythaera (Morris); Clarke 1987 Z2454 - Z2463, Z2465, Z2466, Z2469-Z2470

Figured Specimens

Localities: Z2454: Shore platform below Shot Tower, Taronga EN278433; Z2468, 3.2 km north of Bronte Park @DP401599; All others from Mt. Dromedary @EN156700.

Formations: Z2454, Malbina Formation, Member E; Z2468, Unnamed sandstone unit; all others, Malbina Formation, Member E.

Age: Late Permian

1845. Productus brachythaerus (Morris, p. 284, pl. 14, figs. 4a-c.

1964. Terrakea brachythaera (Morris); Waterhouse, p. 73, pl. 12, figs. 1–8, pl. 14, figs. 1–13.

1987. Terrakea brachythaera (Morris); Clarke, p. 266, figs 3A–3Q.

Remarks: Clarke cites in "Materials and localities" GST8318. This is correctly GST8319 as recorded in the caption for Figure 3A. He also cites specimen GST14026 which is correctly GST14025 (=Z2468).

Specimen Z2464 is on a slab filed with *Echinalosia ovalis* (Maxwell) (Z2444). (See p. 50 this catalogue) All specimens bear the numbers of the Geological Survey and TMAG. Several specimens are associated with rubber casts of natural moulds. The equivalencies are:

```
TMAG
        GST
                 FIGURE
Z2454
        8319
                 ЗА
Z2455
        14011
                 3B
Z2456
        14012
                 3C
Z2457
        14010
                 3D
Z2458
        14013
                 3E
Z2459
        14014
                 3F
Z2460
        14016
                 3G
Z2461
        14015
                 3H
Z2462
        14017
                 31
Z2463
        14018
                 ЗJ
Z2464
        14021
                 3K on slab with Echinalosia ovalis Z2444.
Z2465
        14022
Z2466
        14019
                 3
Z2468
        14025
                 3N
2469
        14023
                 3P
Z2470
        14024
                 3Q
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Tomiopsis cf. branxtonensis (Etheridge)

Tomiopsis cf.branxtonensis (Etheridge); Clarke 1990, 1992b

Z2634-Z2640

Figured Specimens

Locality: Z2634–Z2638: Lake River, Great Western Tiers @EP168585 Z2639: Channel Highway north of Snug River @EN206321; Z2640: Middle Arm, Beaconsfield @DQ770255.

Formation: Z2634–Z2638: Billop Formation, Golden Valley Group; Z2639: Uppermost Bundella Formation; Z2640: Swifts Jetty Sandstone, Masseys Creek Group.

Age: Late Carboniferous - Early Permian

1919. Martiniopsis subradiata var. branxtonensis Etheridge jr, p. 185, pl. 28, figs. 5,6; pl. 29, figs. 1,2.

1975. Martiniopsis branxtonensis Etheridge jr; Runnegar and McClung, pl. 31, figs. 4,5.

1978. Ingelarella branxtonensis (Etheridge); McClung, p. 44, pl. 3, fig. 1-6.

1990. Tomiopsis cf. branxtonensis (Etheridge); Clarke, p. 68, figs. 12A-K.

1992b. Tomiopsis cf. branxtonensis (Etheridge); Clarke, p. 22, Fig. 12A-K.

Remarks: All specimens are marked with Geological Survey (GST) and TMAG (Z) numbers. The equivalencies are:

TMAG	GST	FIGURE	
		Clarke, 1990	Clarke 1992b
Z2634	14166	Fig. 12A, B	Fig. 12A, B
Z2635	14167	Fig. 12C	Fig. 12C, L
Z2636	14168	Fig. 12D	Fig. 12D
Z2637	14169	Fig. 12E	Fig. 12E
Z2638	14170	Fig. 12F–H	Fig. 12F–H
Z2639	14171	Fig. 12I	Fig. 12I
Z2640	14172	Fig. 12J–K	Fig. 12J–K

Tomiopsis elongata (McClung and Armstrong)

Tomiopsis elongata (McClung and Armstrong); Clarke 1990, 1992b

Z2617-Z2621, Z2623-Z2625

Figured Specimens

Locality: Z2617-Z2620: Wheatleys Bay, Cygnet @EN081168; Z2621-Z2625: Scolyers Hill,

Hellyer Gorge area @CQ640235

Formation: Z2617-Z2621: Basal Bundella Foration; Z2621-Z2625: Inglis Formation.

Age: Late Carboniferous - Early Permian

1975. Martiniopsis elongata McClung and Armstrong, p. 231, fig. 1a-j.

1978. *Ingelarella elongata (*McClung and Armstrong); McClung , p. 45, Pl. 2, figs. 1–2, Pl. 3, figs. 7–11.

1990. Tomiopsis elongata (McClung and Armstrong); Clarke, p. 64, fig. 10A-L.

1992b. Tomiopsis elongata (McClung and Armstrong); Clarke, p. 22, figs 10 A-L.

Remarks: All specimens are marked with Geological Survey (GST) and TMAG (Z) numbers in ink. The equivalencies are:

TMAG	GST	FIGURES	
		Clarke, 1990	Clarke, 1992b
Z2617	14150	Fig. 10A	Fig. 10C,D
Z2618	14151	Fig. 10C,D	Fig. 10A,B
Z2619	14153	Fig. 10F	Fig. 10E,F
Z2620	14152	Fig. 10B	Fig. 10G
Z2621	14154	Fig. 10H	Fig. 10H
Z2622	14155	Fig. 10I	Fig. 10l
Z2623	14156	Fig. 10J	Fig. 10J
Z2624	14157	Fig. 10K	Fig. 10K
Z2625	14158	Fig. 10L	Fig. 10L

Tomiopsis isbelli (Campbell)

Tomiopsis isbelli (Campbell); Clarke, 1987

Z2494-Z2505

Figured specimens

Localities: Various, see Remarks Formations: Various, see Remarks

Age: Late Permian

1961. Ingelarella isbelli Campbell, p. 181, pl. 25, figs. 1-5.

1975. Martiniopsis isbelli (Campbell); Runnegar and McClung, pl. 31, figs 30-31.

1987. Tomiopsis isbelli (Campbell); Clarke, p. 275, figs. 10A-E, 11A-D, 12A-C.

1998.

Remarks: Specimen Z2497 is a figured topotype. All specimens bear the inked numbers of the Geological Survey and the TMAG. The equivalencies are:

TMAG	GST	FIGURE	LOCALITY	FORMATION
Z2494	36300	Fig. 10A	Friendly Beaches @FP053456	Unnamed glauconitic ss.
Z2495	36296	Fig. 10B	Friendly Beaches @FP053456	Unnamed glauconitic ss.
Z2496	36261	Fig. 10C	Friendly Beaches @FP053456	Unnamed glauconitic ss.
Z2497	14047	Fig. 10D	North Britton, Homevale Station,	Topotype
			Queensland.	
Z2498	36259	Fig. 10E	Friendly Beaches @FP053456	Unnamed glauconitic ss.
Z2499	14046	Fig. 11A	Eaglehawk Neck @EN765376	MalbinaFm.Member E
Z2500	36289	Fig. 11B	Friendly Beaches @FP053456	Unnamed glauconitic ss.
Z2501	6324	Fig. 11C	Friendly Beaches @FP053456	Unnamed glauconitic ss.
Z2502	14045	Fig. 11D	Mt. Dromedary @ EN156700	MalbinaFm.Member E
Z2503	14043	Fig. 12A	Mt. Dromedary @ EN156700	Risdon ss.
Z2504	14044	Fig. 12B	Mt. Nassau @EN156659	MalbinaFm.Member E
Z2505	36340	Fig. 12C	Friendly Beaches @FP053456	Unnamed glauconitic ss.

Tomiopsis konincki (Etheridge)

Tomiopsis konincki (Etheridge); Clarke 1990, 1992b

Z2625-Z2633

Figured Specimens

Locality: Z2625–Z2632: Tobys Hill, Cygnet @EN083219. Z2633: Middle Arm, Beaconsfield @DQ770255

Age: Late Permian

1877 (1898) *Spirifer darwinii* Morris; de Koninck, p. 242, pl. 10, figs. 11, 11a, *non* pl. 10, fig. 11b, pl. 16, fig. 1.

1892. Martiniopsis subradiata var.konincki Etheridge, p. 239.

1969. Ambikella konincki(Etheridge jr); Runnegar, p. 294, pl. 20, figs. 1–5.

1975. Martiniopsis konincki Etheridge jr; Runnegar and McClung, pl. 31, fig. 3.

1978. Ingelarella konincki; McClung, p. 44, pl. 3, figs. 1-6.

1990. Tomiopsis konincki; Clarke, p. 66, figs. 11A-J.

1992b. Tomiopsis konincki; Clarke, p. 22, figs. 11A-J.

Remarks: All specimens are marked with Geological Survey (GST) and TMAG (Z) numbers. The equivalencies are:

TMAG	GST	FIGURES	
		Clarke, 1990	Clarke, 1992b
Z2626	14159	Fig. 11A	Fig. 11C
Z2627	14160	Fig. 11B, C	Fig. 11A-B
Z2628	14161	Fig. 11D	Fig. 11E
Z2629	14162	Fig. 11E	Fig. 11D
Z2630	14163	Fig. 11F	Fig. 11G
Z2631	14164	Fig. 11G	Fig. 11H
Z2632	14165	Fig. 11H	Fig. 11F
Z2633	361074	Fig. 11I, J	Figs. 11I–J

Tomiopsis magna (Campbell)

Tomiopsis magna (Campbell); Clarke 1987

Z2488-Z2493

Figured Specimens

Locality: Z2488-Z2491: Friendly Beaches @FP053456; Z2492-Z2493: Crest of ridge, Forcett @

EN523605.

Formation: Z2488–91: unnamed glauconitic sandstone; Z2492–3: Abels Bay Formation

Age: Late Permian

1960. Ingelarella magna Campbell, p. 1117, pl. 140, figs. 1-4.

1987. Tomiopsis magna (Campbell); Clarke, p. 273, figs. 9A-G.

Remarks: All specimens bear the numbers of the Geological Survey Tasmania and TMAG. Some specimens are accompanied by rubber casts also figured and bear the same numbers as the moulds.

Clarke (1987, p. 273) incorrectly mentions in "Materials and Localities" specimen GST36361 and again in the caption for Figure 9A. This was correctly registered as TMF 36321a, b. and is now registered as Z2488 (the figured specimen) and Z4458

The equivalencies are:

TMAG	GST (TMF)	FIGURE
Z2488	36321a	Fig. 9A
Z2489	14041	Fig. 9B
Z2490	36320	Fig. 9C
Z2491	36322	Fig. 9D
Z2492a	14042a	Fig. 9F
Z2492b	14042b	Fig. 9G
Z2493	14100	Fig. 9E

Tomiopsis oviformis (McCoy)

Tomiopsis oviformis (McCoy); Clarke 1987

Z2507

Figured Specimen

Locality: Near New Norfolk @ EN980349

Formation: Ferntree Formation

Age: Late Permian

1847. Spirifer (Brachythyris) oviformis McCoy, pl. 13, figs. 5-6

1960. Ingelarella oviformis (McCoy); Campbell, p. 1115, pl.139, figs. 1, 2.

1978. Ingelarella oviformis (McCoy); McClung, p. 42, pl. 14, figs. 4?, 15–16, pl. 15 figs. 1–6.

1987. Tomiopsis oviformis (McCoy); Clarke, p. 275, fig. 13.

Remarks: The specimen bears the inked numbers of the Geological Survey Tasmania and TMAG. Z2507 = GST14048

Tomiopsis strzeleckii (Koninck)

Tomiopsis strzelekii (Koninck); Johnston 1888

Z425

Figured Specimen Locality: Mt. Nicholas

Formation: Marine Mudstones

Age: Late Permian

1877 (1898) Spirifer strzeleckii de Koninck (in part), p. 183 (1898) non pl. 13, figs. 1, 1a; pl. 14, figs. 1,1a

1888. Spirifer strzeleck (Koninck); Johnston pl. 13, fig. 1

1892. Spirifera strzeleckii (Koninck); Etheridge jn., p. 234, pl. 10, figs. 5-6 non pl. 10, fig. 7.

1978. Ingelarella strzeleckii (Koenig); McClung, p. 43, pl.3, figs. 20-26

Remarks: McClung (1978) gives an extensive treatment of this species which is otherwise rather insignificant. Johnston's figured specimen is an internal cast which makes its placement difficult. M.J. Clarke (Pers. Comm. 5/10/2010) has suggested it as *Tomiopsis* close to the *T. etheridgei* and *T. david*i species group. Waterhouse (1964) places *strzelecki* close to his *Ingelarella dissimilis* and provides a discussion of the need for a neotype, but does not select one.

Trigonotreta stokesi Koenig

Trigonotreta stokesi Koenig; Clarke 1979, 1990, 1992b

Z2582-Z2589, Z4317-Z4320, Z4375

Figured Specimens

Locality: Various, see Remarks

Formation: Z2582, Z2583: Glencoe Fm, Golden Valley Gp.; Z2584, Z2587: Swifts Jetty Sst. Masseys Creek Gp.; Z2585: Inglis Fm.; Z2586: Bundella Fm; Z2588, Z2589: "Spirifer

Zone", Darlington Ls.; All others Swifts Jetty Sst., Masseys Creek Group.

Age: Permian

1825. Trigonotreta stokesi Koenig, 1825. p. 3, pl. 6, fig. 70.

1953. Trigonotreta stokesii Koenig; Brown, p. 58, pl. 5, figs. 1 only.

1979. Trigonotreta stokesii Koenig; Clarke, p. 199, pl. 1, fig. 1–9, pl. 2, figs 1–9.

1990. Trigonotreta stokesii Koenig; Clarke, p. 62, figs. 7A-H

1992. Trigonotreta stokesii Koenig; Clarke, p. 18, figs7A-H.

2006. Trigonotreta stokesii Koenig; Carter, p,1801, fig, 1195, 2a-2e.

Carter refigures Clarke's (1979) figures. His figure 1195 2a is from Quamby Brook in the Great Western Tiers; His fig 1195 2b,2c are of the lectotype and his figs. 1195 2d and 2e are from the topotype area, the Swifts Jetty Sandstone, Massey's Creek, Middle Arm near Beaconsfield.

Remarks: Clarke (1979) discusses the complexity of this genus. Specimens from the Middle Arm, Beaconsfield are topotypes(Z2584, Z2587, Z4317–Z4398). Z2584 and Z2587 are accompanied by figured fibre glass casts. Most specimens are marked with Geological Survey and TMAG numbers. The equivalencies are:

TMAG	GST	FIGURES			LOCALITY
		Clarke, 1979	Clarke, 1990	Clarke, 1992b	
Z2582	368402	Pl.1,Fig. 2	Fig. 7A	Fig, 7B	Quamby Brook, Great Western Tiers
Z2583	368401	Pl. 1,Fig. 1	Fig. 7B	Fig. 7A	Quamby Brook, Great Western Tiers
Z2584	361116	Pl. 2,Fig. 6	Fig. 7C	Fig. 7C	Middle Arm, Beaconsfield
Z2585	14119		Fig. 7D	Fig. 7G	Scolyers Hil, Hellyer Gorge area
Z2586	14120		Fig. 7E	Fig. 7H	Wheatleys Bay, Cygnet
Z2587	368405	Pl. 1.Fig. 9	Fig. 7F	Fig. 7D	Middle Arm, Beaconsfield
Z2588	14121		Fig. 7G	Fig. 7F	Fossil Cliffs, Darlington, Maria Island
Z2589	14122		Fig. 7H	Fig. 7E	Fossil Cliffs, Darlington, Maria Island
Z4317	361138	Pl. 1,Fig. 6			Middle Arm, Beaconsfield
Z4318	361153	Pl. 1,Fig. 8			Middle Arm, Beaconsfield
Z4319	361139	Pl. 2,Fig. 9			Middle Arm, Beaconsfield
Z4320	361092	Pl. 2,Fig. 4			Middle Arm, Beaconsfield
Z4321	368406	Pl. 2,Fig. 2			Middle Arm, Beaconsfield
Z4375	361172	Pl. 2,Fig. 8			Middle Arm, Beaconsfield
Z4397	368404	Pl. 2,Fig. 3			Middle Arm, Beaconsfield
Z4398	361200	Pl. 2,Fig. 1			Middle Arm, Beaconsfield

Specimens Z2583, Z2587 and Z2584 are housed in the Type Collection with Clarke, 1979, the remainder with Clarke, 1990.

Spirifera stokesii (Morris); Johnston 1888

Z243

Figured specimen

Locality: Bridgewater (Granton)

Formation: Marine Mudstones (Berriedale limestone, Cascades Group)

Age: Late Permian

1825. Spirifer stokesii Morris, p. 280, pl.15, figs. 1, 1a.

1888. Spirifera stokesii (Morris); Johnston, pl. 13, fig. 2.

1964. Spirifera stokesii (Morris); Crespin, p. 14.

1979. Trigonotreta stokesii (Morris); Clarke, p. 199.

Remarks: The most recent label accompanying the specimen bears the numbers B1386 and Z243 and a pencilled notation that M. J. Clarke identified the specimen as probably *Sulciplica tasmaniensis*. Clarke (pers. comm 13.4.2010) stated that "...because of decortication of the specimen only examination of the muscle scars would place it definitively in *Trigonotreta* or *Sulciplica*." The specimen bears some resemblance to Johnston's figure, but the illustration is somewhat generalized. Crespin transposed the number B1386. Both the genus *Trigonotreta* and the species T. *stokesii* have a convoluted taxonomic history fully discussed by Clarke (1979) which should be referred to. The synonomy given here relates only to the Johnston specimen.

Spirifera convoluta Phillips; Johnston 1888

Z241

Figured specimen Locality; Oatlands

Formation: Marine Mudstone Beds

Age: Permian

1836. Spirifera convoluta Phillips, p. 35, Pl. 5, figs. 9-15; p. 223, pl. 1, figs. 1,2.

1888. Spirifera convolute Phillips; Johnston, pl. 12, fig. 5.

Remarks: The specimen bears the inked number B1387 and Z241. The locality and identity of this specimen are doubted. M.J. Clarke (pers. comm. 13/4/2010) doubts the locality given by Johnston as the specimen is silicified and would more probably have come from Permian strata between Fingal and St. Marys. The identification as a tomiopsid is more certain when the reverse of the figured specimen is examined.

Wyndhamia (? irregularis Clarke

Wyndhamia? irregularis Clarke

Z5724-Z5727

Figured Syntypes

Locality: Quamby Brook Valley, Northern Tiers @DP660730

Formation: Glencoe Fm., Golden Valley Group

Age: Early Permian

1969a. Wyndhamia? irregularis Clarke, p. 45, pl. 5, figs. 5-8.

Remarks: Clarke proposed this new species based upon the four syntypes. No type specimen was identified. The specimens were identified byTMF numbers in the plate captions, but those numbers do not appear on the specimens which were matched with the figures by M.J. Clarke (5/7/2011).

Specimen Z5724 = TMF3565; Z5725 = TMF3566; Z5726 = TMF3567; Z5727 = TMF3568.

Wyndhamia jukesi (Etheridge)

Strophalosia gerardi var. tasmaniensis Prendergast mss.;Clarke 1969a

Z104

Lectotype (by Clarke, 1969a)

Z105, Z106

Lectoparatypes

Locality: Rathbone's Limestone Quarry near Granton

Formation: Berriedale Limestone

Age: Late Permian

1943. Strophalosia gerardi var. tasmaniensis Prendergast mss. 1969a. Wyndhamia jukesi (Etheridge) Clarke, p. 44, pl.8, fig.3.

Remarks: The specimen is housed in a circular, light wood, container incorporating a label bearing the locality notation 4276/N91 and the TMAG number Z104. An external, handwritten, label bears the notation "Tas. Mus. P.20." and the scientific name is followed by "n. var." The location and stratigraphic information on this label is that presented above. Clarke (1969a, p.

44) provides the taxonomic circumstances that led him to select specimen Z104 (given in Clarke as P20Z104) as lectotype for an otherwise *nomen nudum*. By implication the two associated specimens, Z104.2 and Z104.3 (now re-registered as Z105, Z106), are lectoparatypes. Clarke gave the three specimens from which he chose the lectotype the numbers P20Z104,...105 and ...106. These are now correctly given as Z104, Z105, Z106. In a discussion of this speciems in 6/2011 M.J. Clarke suggested that these specimens had been collected by Ida Brown. The lectotype (Z104) is figured by Clarke 1969a, pl. 8, fig. 3.

Wyndhamia preovalis (Maxwell)

Wynhamia preovalis (Maxwell); Clarke 1969a

Z5723

Figured Specimen

Locality: Mt. Nassau near Granton

Formation: Nassau Siltstones, Cascades Groupp

Age: Permian

1954. Strophalosia preovalis Maxwell,

1969a. Wyndhamia preovalis (Maxwell) Clarke, p. 47, pl.6. fig. 8.

Remarks: Clarke figured the single specimen mentioned. It was numbered TMF 35119 in the caption but that number does not appear on te specimen. Clarke matched the specimen with the figure 5/7/2011.

Bivalvia

Deltopecten illawarensis (Morris)

Deltopecten illawarensis (Morris); Clarke 1992b

Z4294, Z4331, Z4344, Z4382, Z4548, Z4648, Z4652, Z4706, Z4707

Figured Specimens Locality: See Remarks Formation: See Remarks

Age: Late Carboniferous-Early Permian

1845. Pecten illawarensis Morris, p. 277, pl. 14, fig. 3.

1992b. Deltopecten illawarensis (Morris); Clarke, p.41, figs. 25A-I, 26A-F

Remarks: The specimens are marked with TMAG and GST numbers. Clarke transposed the locality data for specimens figured as 25A and 25B. The equivalencies are:

TMAG	GST	FIGURE	LOCALITY	FORMATION
Z4294	14349	26C	Musselroe Bay @EQ920803	Unnamed sandstone unit
Z4331	14340	25C	Tobys Hill, Cygnet @EN083219	Bundella Formation
Z4344	14345	25H	Wheatleys Bay, Cygnet @EN181168	Bundella Formation
Z4382		251	Gt. Bend Mersey River, Latrobe @DQ390175	Tasmanites Shale
Z4548	14338	25A	Quamby Brook, Gt. Western Tiers	Glencoe Fm, Golden
			@DQ660730	Valley Gp.
Z4648	14341	25D	Musselroe Bay @ EQ920803	Unnamed sandstone unit
Z4652	14342	25E	Musselroe Bay @ EQ920803	Unnamed basal unit
Z4706	14351	26E	Port Sorell @ DQ650587	Masseys Creek Group
Z4707	14343	25F	Musselroe Bay @EQ920803	Unnamed basal unit
Z4712	14344	25G	Darlington, Maria Island	"Spirifer" Zone

Etheripecten tenuicolis (Dana)

Etheripecten tenuicolis (Dana); Clarke, 1992b

Z4646, Z4647 Figured specimen Locality: Various Formation: Various

Age: Late Carboniferous-Early Permian

1847. Pecten tenuicolis Dana, p. 705, pl. 9, figs. 7, 7a.

1963. Aviculopecten tenuicolis Dickins, p. 82, pl. 11, fig. 5; pl. 13, fig. 12-17; pl. 14, fig. 1.

1992b. Etheripecten tenuicolis (Dana); Clarke, p. 40, figs. 24A-F.

Remarks: The equivalencies are:

TMAG	GST	FIGURE	LOCATION	FORMATION
Z4646	441167	24E	Middle Arm, Beaconsfield @ DQ770255	Swifts Jetty Sstn,
				Masseys Creek Gp.
Z4647		24F	Toby's Hill, Cygnet @ EN083219	Bundella Fm.

Eurydesma cordatum Morris

Eurydesma cordatum Morris; Clarke 1992b Z4293, Z4345, Z4459, Z4462, Z4494

Figured specimens Locality: Various Formation: Various

Age: Late Carboniferous-Early Permian

1845. Eurydesma cordata Morris, p. 276, pl. 12, fig. 1.

1992b. Eurydesma cordatum; Clarke, p. 34, fig. 19A,B, 20D, 21A.

Remarks: Specimen Z4459 is conjoined valves. Clarke notes in the caption for figure 19D (Z4459) that "tall (dorso-ventrally) specimens like this could be placed in *Eurydesma playfordi* Dickins. Specimen Z4345 is given in the caption for figure 21B as *Eurydesma* sp. but is listed under "Materials" for *E. cordatum*. The equivalencies are:

TMAG	GST	FIGURE	LOCALITY	FORMATION
Z4293	14319	21A	Tobys Hill, Cygnet	Bundella Ls.
Z4345	14320	21B	Fossil Cliffs, Maria Island	Darlington Ls.
Z4459	14318	20D	Point Hibbs, West Coast	Unnamed
Z4462	14312	19A	Port Sorell., Beaconsfield	Masseys Creek Gp.
Z4494	14313	19B	Fossil Cliffs, Maria Island	Darlington Ls.

Eurydesma hobartensis hobartensis (Johnston)

Pachydomus hobartensis Johnston 1887b; Runnegar, 1970 Z955

Lectotype (Runnegar, 1970)

Locality: Huon Road between Ferntree and South Hobart (see Runnegar, 1970 for discussion)

Formation: Cascades Group, probably Deep Bay Formation

Age: Early Permian

1887b. Pachydomus hobartensis Johnston, p. 16.

1888. *Pachydomus hobartensis* Johnston, pl. 16, fig. 2. 1964. *Pachydomus hobartensis*; Crespin, p. 16.

1969. Eurydesma hobartensis (Johnston); Waterhouse, p. 46.

1970. Eurydesma hobartense hobartense; Runnegar, p. 95, pl. 15, figs. 1-4, 6-11.

Remarks: Specimen (Z295) bears the following inked, on the interior of the shell: "B-736; Pachydomus/ hobartensis/ RM Johnston/ Type ?/ G.T. Pl XVI". The number Z955 has been added later. The specimen resembles closely that illustrated in Johnston. Runnegar remarks that Crespin identified specimen B 736 as the "?Holotype" then confirmed its status by formally identifying it as the lectotype. Runnegar did not illustrate Z955 other than reproducing Johnston's 1888 figure. Eurydesma hobartensis hobartensis (Johnston); Clarke, 1992b

Z4295, Z4484

Figured Specimens

Locality: Z4295: Quamby Brook, Great Western Tiers @DP660730; Z4484: Great Bend of the Mersey River, Latrobe @DQ390175

Formation: Z4295: Glencoe Fm. Golden Valley Group. Z4484: Tasmanites Shale

1887b. Pachydomus hobartensis Johnston, p. 16.

1970. Eurydesma hobartense hobartense (Johnston) Runnegar, p. 95, pl. 15, figs. 1-4, 6-11

1992b. Eurydesma hobartensis hobartensis; Clarke, p. 38, figs. 20G,21C,

Remarks: The equivalencies are:

TMAG GST FIGURE Z4295 14321 21C Z4484 8274 20G

Eurydesma hobartensis konincki (Johnston)

Pachydomus konincki Johnston 1887b; Clarke, 1992b

Z4383, Z4384, Z4345, Z4460

Figured Specimens

Locality: All specimens from Fossil Cliffs, Darlington, Maria Island

Formation: Spirifer zone, Darlington limestone

Age: Early Permian

1887. Pachydomus konincki Johnston, p. 15.

1888. Pachydomus konincki Johnston, pl. 18, fgs. 2.

1970. Eurydesma hobartense konincki (Johnston) Runnegar, p. 97–98, pl. 15, fig. 3.

1992b. Eurydesma sp.; Clarke, Fig. 19C.

1992b. Eurydesma hobartense konincki; Clarke, p. 38, Fig. 20C,E,F, 21B.

Remarks: Runnegar appears to have been the author of the two subspecies of Eurydesma. He quotes Crespin's (1964) remark that many of Johnston's (1888) figured specimens appear to have been lost and Johnston's type has not been located. Runnegar nominated the specimen figured by Johnston (1888, pl. 18, fig. 2) as the lectotype and chose as a neotype specimen University of Queensland F51940 from the Darlington Limestone at Fossil Cliffs, Maria Island. Clarke states that the four specimens he illustrated as figures 20C, 20E, 20F and figure 21B are *E. hobartense konincki*. However in the caption for figure 21B is identified as *Eurydesma sp*. The equivalencies are:

TMAG	GST	FIGURE
Z4345	14320	21B
Z4383	14317	20E
Z4384	14316	20F
Z4460	14315	20C

Eurydesma sp. in Clarke 1992b

Z4708

Figured Specimen

Locality: Middle Arm, Beaconsfield @ DQ770255 Formation: Swifts Jetty Sstn., Masseys Creek Group

Age: Early Permian

1992b. Eurydesma sp. Clarke, Fig. 19C

Remarks: Clarke figures this specimen, an internal mould of a right valve, without text comment but includes it with *Eurydesma hobartensis konincki* in the text. The slab also bears an external mould of *Deltopecten illawarensis* (Morris) and a *Schizodus australis* Runnegar, neither figured.

Megadesmus gryphoides de Koninck

Cardiomorpha gryphoides de Koninck; Waterhouse, 1969

Z238

Figured specimen

Locality: Latrobe, Tasmania Formation: Marine mudstones

Age: Late Carboniferous-Early Permian

1887b. Cardiomorpha gryphoides de Koninck; Johnston, p.11.

1888. Cardiomorpha gryphoides de Koninck; Johnston, pl. 15, fig. 1.

1964. Cardiomorpha gryphoides de Koninck; Crespin, p. 15.

1965. Megadesmus gryphoides de Koninck; Runnegar, p. 239.

1969. Megadesmus gryphoides; Waterhouse, p. 44, fig. 21A, B.

1992b. Megadesmus pristinus (de Koninck); Clarke, p. 29

Remarks: Waterhouse's figure is the first photograph of the specimen. Clarke (pers. comm 7/2010) suggests that *M. grypholdes* is more probably *M. pristinus*.

Megadesmus pristinus Runnegar

Megadesmus pristinus Runnegar; Clarke 1992b

Z4340-Z4343, Z4709

Figured Specimens

Locality: Z4340-Z4342, Z4709 - Great Bend of the Mersey River, LaTrobe @DQ390175

Z4343 - Middle Arm, Beaconsfield @DQ770255

Z4710 - Port Sorell @ DQ650587

Formation: Z4340-Z4342, Z4709 - Tasmanites Shale, Spreyton Formation

Z4343-Swifts Jetty Sstn, Masseys Creek Group

Z4710- Lower part of the Masseys Creek Group

Age: Late Carboniferous-Early Permian

1972. Megadesmus pristinus Runnegar, p. 310, pl. 1, figs. 1-6.

1992b. Megadesmus pristinus; Clarke, p. 27, figs. 15A-F.

Remarks: The specimens are marked with TMAG and GST numbers. The equivalencies are:

TMAG	GST	Figure
Z4340	441492	15C
Z4341	441334	15D
Z4342	441334	15F
Z4343	44412	15E
Z4709	14328	15A
Z4710	14329	15B

Megadesmus trigonalis (Johnston)

Notomya trigonalis Johnston 1887b

Z239

Holotype (by monotypy; lectotype by Waterhouse, 1969?)

Locality: Western Tiers (Deloraine)

Formation: Probably Brumby Marl, Golden Valley Group (fide M. Banks cited in Waterhouse, 1969).

Age: Probably Early Permian

1887b. Notomya trigonalis Johnston, p. 14.

1888. Notomya trigonalis Johnston, pl. 19, fig. 2.

1965. Megadesmus (Megadesmus) nobilissimus (de Koninck); Runnegar, p. 237.

1969. Megadesmus trigonalis (Johnston); Waterhouse, 1969, p. 46, text fig. 20, pl. 7, figs 3,4, pl. 8, fig. 1.

Remarks: Waterhouse (1969) in the caption for text figure 20, pl. 7, figs. 3, 4 and pl. 8, fig. 1, refers to this specimen as the lectotype. He does not mention this designation in the text. Runnegar later examined the specimen Z239 and identified it then as *Megadesmus* (*Cleobis*) grandis Dana (per handwritten label dated 11/1/1966). Clarke (pers. comm. 5/4/2010) suggests that the formation is more probably a glauconitic sandstone and that the location is more probably northeastern Tasmania not Deloraine.

Merismopteria macroptera (Morris)

Merismopteria macroptera (Morris); Clarke, 1992b

Z4316, Z4332-Z4339, Z4379, Z4380-Z4381, Z4598a,b.

Figured Specimens Localities: Various

Formation: Various

Age: Late Carboniferous-Early Permian

1845. Pterinea macroptera Morris, p. 276, pl. 13, figs. 2,3.

1960, Merismopteris macroptera (Morris) Dickins, p. 387, pl. 63, figs. 6–2.

1981. Merismopteria sp. in Dickins, p. 27, pl. 2, fig. 16.

1992b. Merismopteria macroptera; Clarke, p. 40, figs. 18C-I, 22A-F, fig. 23.

Remarks: The equivalencies are:

TMAG	GST	FIGURE	LOCALITY	FORMATION
Z4316	442011	2B	Flower Pot Point, Blackmans Bay	Abels Bay Fm.
Z4332	14309	22D	Flower Pot Point, Blackmans Bay	Abels Bay Fm.
Z4333	14310	22E	Flower Pot Point, Blackmans Bay	Abels Bay Fm.
Z4334	14311	22F	Shore Platform nr. Yellow Point, Birchs Bay	Abels Bay Fm.
Z4335	14304	18E	Shore Platform nr. Yellow Point, Birchs Bay	Ables Bay Fm.
Z4336		18H	Shore Platform nr. Yellow Point, Birchs Bay	Abels Bay Fm.
Z4337	8320	181	Shore Platform nr. Yellow Point, Birchs Bay	Abels Bay Fm.
Z4338	14306	18F	Shore Platform nr. Yellow Point, Birchs Bay	Abels Bay Fm.
Z4339	14301	18C	Great Bend of Mersey River, Latrobe	Tasmanites Shale
Z4379	14302	18D	Cutting, Marlborough Hway, Bronte	Unnamed Sstn.
Z4380	14305	18G	Great Bend of Mersey River, Latrobe	Tasmanites Shale
Z4381	14308	22C	Shore Platform nr. Yellow Point, Birchs Bay	Abels Bay Fm.
Z4598	14307	22A	Channel Highway north of Snug River	Top of Bundella Fm.

Myonia elongata Dana

Myonia elongata Dana; Clarke 1992b

Z4330

Figured Specimen

Locality: Lake River area @EP168585

Formation: Billop Sandstone, Golden Valley Group

Age: Early Permian

1847. Myonia elongata Dana, p. 158.

1849. Myonia elongata Dana, p. 695, pl. 5, fig. 3a-c.

1967. Myonia elongata Dana; Runnegar, p. 47, pl. 5, fig. 12–15.

1992b. Myonia elongata Dana; Clarke, p. 30, fig. 16E.

Remarks: GST 14327 = Z4330

Myonia (Pachymyonia) morris (Etheridge jr)

Myonia (Pachymyonia) morrisi (Etheridge jr); Clarke, 1992b

Z4312, Z4330, Z4377, Z4378, Z4464

Figured Specimens Locality: Various Formation: Various

Age: Late Carboniferous-Early Permian

1919. Maeonia morrisi Etheridge jr, p. 186, pl. 28, fig.78.

1967. Myonia morrisi; Runnegar, p. 53, pl.4, figs. 3–5, pl. 5, figs. 1–11, 16–17; pl. 12, fig. 4.

1992b. Myonia (Pachymyonia) morrisi; Clarke, p. 30, fig. 16A-D.

Remarks: Clarke follows Dickins (1963) in using *Pachymyonia* as a subgenus. The equivalencies are:

TMAG	GST	FIGURE	LOCALITY	FORMATION
Z4312	441169	16B	Middle Arm, Beaconsfield	Swifts Jetty Sst., Masseys Creek Group.
Z4377	14326	16A	Tobys Hill, Cygnet	Bundella Formation
Z4378	441075	16D	Middle Arm, Beaconsfield	Swifts Jetty Sstn., Masseys Creek Group
Z4464	44725	16C	Scolyers Hill, Hellyer Gorge	Inglis Fm.

Phestia darwini (Koninck)

Phestia darwini (Koninck) Clarke, 1992b

Z4649, Z4650

Figured Specimens

Location: Z4649: Near Nicholls Rivulet, Toby's Hill, Cygnet @EN127196: Z4650: Lake River District @ EP169587.

Formation: Z4649: Basal Bundella; Z4650: Upper Quamby Fm.

Age: Early Permian

1877. Tellinomya darwini Koninck, p. 147, pl.16, fig. 9.

1887b. ?Tellinomya etheridgei Johnston, p. 17.

1888. ?Tellinomya darwini; Johnston, pl. 15, fig. 12.

1888. ?Tellinomya etheridgei; Johnston, pl. 15, fig. 14.

1945. Nuculana darwini (de Koninck); Fletcher, p. 306, pl. 21, fig. 1–2; pl. 22, figs. 1–2.

1963. Phestia darwini (de Koninck); Dickins, p. 38, pl. 2, fig. 4-11.

1992. Phestia darwini; Clarke.p. 26, figs. 24J, 24K.

Remarks: Specimen Z4749 has the notation "Ph. Doc. TDM8270". It appears as figure 24K. Specimen Z4650 bears a green paper dot and the number TDM8269 and is figured at 24J.

Promytilus cancellatus Maxwell

Promytilus cancellatus Maxwell; Clarke 1992b

Z4596

Figured Specimen

Location: Nicholls, Rivulet, Wheatleys Bay, Cygnet @ EN018168.

Formation: Basal Bundella

Age: Early Permian

1964. Promytilus cancellatus Maxwell, p. 16, pl. 3, figs. 4-6.

1992b. Promytilus cancellatus; Clarke, p. 34, Fig. 24G-I.

Remarks: The specimen bears only the TMAG number, but has been confirmed as the figured specimen by M.J. Clarke (pers. comm. 17/9/2010). The cast, which was also figured, has not been located.

Pyramus laevis (Sowerby)

Pyramus laevis (Sowerby); Clarke 1992b

Z4516, Z4701-Z4705, Z4711

Figured Specimens

Locations Z4701–Z4705 - Middle Arm, Beaconsfield @ DQ770255; 4711 - Langdons Hill, Cygnet @ EN059182

Formation: Z4701–4705 - Swifts Jetty Sstn, Masseys Creek Group; Z4711 - Basal Bundella Formation

Age: Permian

1838. Megadesmus laevis J. Sowerby, p. 15, pl. 3, fig. 1.

1967. Pyramus laevis (Sowerby); Runnegar, p. 34, pl. 1, figs. 1–12, pl. 2, figs. 1–10.

1992b. Pyramus laevis; Clarke, p. 30, figs. 17A-H, 18A,B.

Remarks: The equivalencies are:

TMAG	GST	FIGURE
4516	441079	18B
4701	441182	17A, B
4702	441017	17E
4703	441181	17C,D,G
4704	441180	17H
4705	441178	17F
4711	14300	18A

Schizodus australis (Runnegar)

Schizodus australis (Runnegar); Clarke 1992b

Z4439-Z4441, Z4643, Z4895, Z4619

Figured Specimens

Location: All from Great Bend of the Mersey River, nr. Latrobe @DQ390175 except Z4895 Middle Arm, Beaconsfield @DQ770255 and Z4619 Scolyers Hill, Hellyer Gorge area at CQ640235.

Formation: All from Lower part of Spreyton Fm. except Z4895 Swifts Jetty Sstn. Masseys Creek Group and Z4619 Inglis Formation.

Age: Early Permian

1969. Neoschizodus australis Runnegar, p. 280, pl. 19, figs. 8–13.

1992b. Schizodus australis; Clarke, p. 43, Figs. 19D, 19H, 19F

Remarks: The equivalency of TMAG and GST numbers is:

TMAG	GST	Figures
Z4439	441369	19D
Z4440	441372	19H
Z4441	441366	19F
Z4619	14314	191
Z4643	441367	19E
Z4895	441170	19G

Stutchburia farleyensis Etheridge jr.

Stutchburia farleyensis Etheridge jr; Clarke 1992b

Z4313-Z4315

Figured Specimens

Locality: Middle Arm, Beaconsfield @ DQ770255

Formation: Swifts Jetty Sandstone, Masseys Creek Group

Age: Early Permian

1900. Stutchburia farleyensis Etheridge jr., p. 183, pl. 32, figs. 3-6.

1992b. Stutchburia farleyensis; Clarke, p. 43, Figs. 16F-I.

Remarks: The equivalencies between TMAG and Geological Survey numbers are:

TMAG GST FIGURE
Z4313 441082 Fig 16 F,G
Z4314 441221 Fig 16 H, I
Z4315 441222 Fig. 16 J-L

Gastropoda

Keeneia platyschismoides Etheridge jr.

Keeneia platyschismoides Etheridge jr; Clarke 1992b

Z4299, Z4300

Figured Specimens

Locality: Z4299: Point Hibbs @CN586804; Z4300; Quamby Brook, Great Western Tiers @

DP660730

Formation: Glencoe Formation, Golden Valley Group

Age: Early Permian

1902. Keeneia platyschismoides Etheridge jr, p. 199, pl. 32, pl. 33. Fig. 3–5.

1992b. Keeneia platyschismoides; Clarke, p. 46, fig. 27D-G.

Remarks: The specimen bearing the numbers Z4299 = GST14354 is figured at 27F; G that bearing Z4300 = GST14353 is the basis for figures 27D, E.

Keeneia twelvetreesi Dun

Keeneia twelvetreesi Dun; Clarke 1992b

Z4298

Figured Specimen

Locality: Quamby Brook, Great Western Tiers @DP660730

Formation: Glencoe Formation, Golden Valley Group

Age: Early Permian

1913. Keeneia twelvetreesi Dun, p. 8, pl. 2.

1992b. Keeneia twelvetreesi; Clarke, p. 46, figs. 237A-C.

Remarks: The specimen bears a green dot and the numbers Z4298 = GST8297.

Rhabdocantha intermedia Fletcher

Rhabdocantha intermedia Fletcher; Clarke 1992b

Z4296, Z4297

Figured Specimens

Locality: Middle Arm, Beaconsfield

Formation: Swifts Jetty Sandstone, Masseys Creek Group

Age: Early Permian

1958. Rhabdocantha intermedia Fletcher, p. 124, pl. 7, figs. 10–11. 1992b. Rhabdocantha intermedia Fletcher; Clarke, p. 46, fig. 20A, 20B.

Remarks: Z4296 (=GST421110) is shown as figure 20A. Z4297 (=GST441111) is figure 20B.

Nomen nudum

Pleurotomaria woodsii Johnston

Pleurotomaria woodsii Johnston 1887b

Z961 or Z962 Holotype?

Locality: Maria Island

Formation: Darlington Limestone

Age: Early Permian

1887b. *Pleurotomaria woodsii* Johnston, p. 7. 1888. *Pleurotomaria woodsii* Johnston, p. 116.

Remarks: Johnston twice listed this name but neither described nor figured specimens of this species.

Crinoidea

Tasmanocrinus sp.

Tasmanocrinus sp. in Webster & Jell 1999

Z32591, 2

Figured specimen

Locality: Eaglehawk Neck near Blow Hole, Storm Bay Sheet 8411, GR. 773 348

Formation: Malbina Age: Late Permian

1999. Tasmanocrinus sp. Webster and Jell, p. 332, fig. 34

Tribrachyocrinus corrugatus, Ratte

Tribrachyocrinus corrugatus F. Ratte 1885; Webster & Jell, 1999

Z3256

Figured Specimen

Locality: Eaglehawk Neck near Blow Hole, Storm Bay Sheet 8411, GR. 773 348

Formation: Malbina Age: Late Permian

1885. Tribrachyocrinus corrugatus Ratte, p. 1158, pl. 68.

1999. Tribrachyocrinus corrugatus; Webster and Jell, p. 329, fig. 28.

Remarks: The specimen is on thin shale supported by rubber cast.

Tribrachyocrinus granulatus Etheridge jr.

Tribrachyocrinus granulatus Etheridge jr.; Webster & Jell 1999 Z3258

Figured Specimen

Locality: Eaglehawk Neck near Blow Hole, Storm Bay Sheet 8411, GR. 773 348

Formation: Malbina Formation

Age: Late Permian

1892. *Tribrachyocrinus granulatus* Etheridge jr, p. 97, pl. 22, figs. 2, 3. 1999. *Tribrachyocrinus granulatus*; Webster and Jell, p. 329, pl. 29.

Remarks: The specimen is on fissile shale and has been broken but mended.

SILURIAN

Brachiopoda

Notoconchidium tasmaniense (Etheridge jr)

Pentamerus tasmaniensis Etheridge, jr. 1883; Wright & Garratt 1990

Z1583

Lectotype (by Gill, 1950)

Z1584-1586

Figured Paratypes

Locality: Fossil Bluff, Table Cape nr. Wynyard, Tasmania

Formation: Clast in Till, Wynyard Tillite

Age: Upper Silurian

1883. Pentamerus tasmaniensis Etheridge jr, p. 160, pl. 2, figs. 1, 3, 7, 8.

1950. Notoconchidium florencensis, Gill, pp. 242-243, pl. 1, fig. 7-9.

1990. Notoconchidium tasmaniense; Wright and Garratt, pp. 26-28, fig. 2, A-C.

Remarks: Wright and Garratt note that the specimens the basis for Etheridge's pl. 2, figs. 5–6 are missing. Gill (1950) is credited by Wright and Garrett for selection of the lectotype and identifing the remaining specimens of Etheridge's collection as lectoparatypes. Wright and Garratt utilize both the TMAG 'Z' numbers and the older 'B' numbers in identifying the specimens. Specimen Z1586 appears to be the counterpart of a specimen on slab Z1585. The equivalencies are:

TMAG (Z	Z) TMAG (B)	Etheridge jr (1883)	Wright & Garratt (1990)
Z1583	B361	Pl.2, Fig. 1	Fig. 3A,B
Z1584	B362	Pl. 2, Fig. 3, 4	Fig. 3C
Z1585	B363	Pl. 2, Fig. 7	
Z1586	B364	Pl. 2, Fig. 8	
Z1587	B365		

Cephalopoda

Ephippiorthoceras decorum Teichert and Glenister

Ephippiorthoceras decorum Teichert and Glenister 1953

Z246a-Z246c

Holotype

Locality: Gordon River

Formation: Gordon River Group or Eldon Group (Banks, 1962, p. 173)

Age: Early to mid Silurian

1888. Orthoceras sp. indet., Johnston; pl. 4, fig. 9.

1953. Ephippiorthoceras decorum, Teichert and Glenister, p. 40, pl 3, figs. 7, 8, pl. 4, fig. 9, text fig. 2D.

1964. Ephippiorthoceras decorum; Crespin, p. 21.

Remarks: The holotype is cited by Teichert and Glenister as B804. The specimen has been cut longitudinally into three pieces. One, Z246a is figured as pl. 4, fig. 9. Z246b and Z246c, two pieces, are joined together by clay and are the basis for pl.3, figs. 7, 8. The joined specimen could be the basis for Johnston's *Orthoceras* sp. indet. (pl. 4, figs.9) but that figure is so poorly drawn that it cannot be definitely determined.

Gordonoceras bondi Teichert and Glenister

Gordonoceras bondi Teichert and Glenister 1953

Z247a,b?

Holotype

Locality: Gordon River

Formation: Gordon River Group or possibly Eldon Group (Banks, 1962, p. 173)

Age: Early to Mid Silurian

1888. Orthoceras sp. indet.; Johnston, pl. 4, fig. 8.

1953. Gordonoceras bondi: Teichert & Glenister, p. 39, pl. 4, figs. 1-3, text fig. 2C

1964. Gordonoceras bondi; Crespin, p. 21.

Remarks: The holotype consists of two pieces which conceivably could be the upper and lower portions of the specimen figured on pl. 4 figs. 1, 2 byTeichert & Glenister. The lower half (Z247b) has been polished and is depicted as figure 3. The specimen is referred to in Teichert and Glenister by its older number B805. Crespin (1964) incorrectly cites the holotype as being registered as Z245.

Grasconsoceras insperatum Teichert and Glenister

Grasconsoceras insperatum Teichert and Glenister 1953

Z245

Holotype

Locality: Gordon River

Formation: Gordon River Group or possibly Eldon Group (Banks, 1962, p. 173)

Age: Early to Middle Silurian

1888. Phragmoceras sp. indet. allied to P. compressus (Sowerby); Johnston, pl. 4, figs. 2,3.

1953. Gasconsoceras insperatum Teichert and Glenister, p. 48, pl. 6, figs. 1–4.

1964. Gasconsoceras? insperatum; Crespin, p. 21.

Remarks: The specimen was previously registered as Tasmanian Museum B775 by which it is identified by Teichert and Glenister. A second bit of limestone associated with the specimen is also labelled with this number but is not physically affiliated. Crespin (1964) introduced the query on the generic placement of the species without comment.

Stromatoceras eximiumTeichert and Glenister

Stromatoceras eximium Teichert and Glenister 1953

Z244.1–3

Holotype

Locality: Gordon River

Formation: Gordon River Group or possibly Eldon Group (Banks, 1962, p. 173)

Age: Early to Middle Silurian

1888. Orthoceras sp. indet; Johnston, pl. 4, fig. 1.

1953. Stromatoceras eximium, Teichert and Glenister, p. 37, pl. 5 figs. 1-3, text fig. 2B.

1964. Stromatoceras eximum; Crespin, p. 22.

Remarks: The holotype Z244, is three pieces. The larger was registered as B774 which was written in ink on the specimen. That is the number used by Teichert and Glenister. A second specimen has been axially polished and a third, smaller bit, is included.

Trilobita

Dicranurus nesiotes Holloway and Sandford

Dicranurus nesiotes Holloway and Sandford 1993 Z3690a,b.

Holotype

Locality: Tiger Range, west side of Florentine Valley about 25 km NW of Maydena (PL296)

Formation: Richea Siltstone

Age: Early Silurian

1984. Dicranurus sp. in Jell & Baillie, p. 272.

1989. Dicranurus sp. in Baillie, p. 227.

1993. Dicranurus nesiotes Holloway and Sandford, p. 99, fig. 7E-G.

Remarks: The latex cast which Holloway and Sandford figured no longer accompanies the specimen The holotype consists of counterparts of a dorsal exoskeleton. Z3690 (= GST17012).

Dalmanites tigerensis Holloway and Sandford

Dalmanites tigerensis Holloway and Sandford 1993

Z3684

Holotype

Z3685, Z3686, Z3687, Z3688, Z3689

Paratypes

Locality: Tiger Range, West side of Florentine Valley about 25 km NW of Maydena

Formation: Richea Siltstone

Age: Early Silurian

1979. Dalmanites sp.in Baillie p. 9.

1984. Dalmanites sp.in Jell & Baillie, p. 272.

1989. Dalmanites sp.in Baillie, p. 227.

1993. Dalmanites tigerensis Holloway and Sandford, p. 95, fig. 5A, D, fig. 6A, C.

Remarks: Holloway and Sandford list 24 paratypes from collections other than those in the TMAG. The equivalencies for specimens in the TMAG are:

TMAG	GST	FIGURE	
Z3684	17004	6A	Holotype, latex cast and mould.
Z3685	17002	5H	Paratype, latex cast and mould.
Z3686	17003	5G	Paratype
Z3687	17006	5D	Paratype
Z3688	17008	6C	Paratype
Z3689	17009	5A	Paratype

Echinodermata

Stenaster obtusus (Forbes)

Stenaster obtusus (Forbes); Jell and Baillie 1984

Z3683a, b.

Figured Sp ecimen

Locality: Quarry on Terry Walsh Road, Florentine Valley, Tasmania (GR 55GDN512846)

Formation: Richea Shale

Age: Early Silurian 1848. Forbes

1984. Stenaster obtusus (Forbes) Jell and Baillie, p. 272, fig. C and E.

Remarks: The specimen is a part and counterpart. Both parts bear the number TMF9700.

ORDOVICIAN

Brachiopoda

brachiopod, gen. et sp. indet.

brachiopod, gen. et sp. indet. Kobayashi 1940b

Z155, Z5009

Figured Specimens

Locality: Caroline Creek, near Latrobe, Mersey River District;

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. brachiopod: gen. et sp. indet. Kobayashi, p. 67, pl. 12, figs. 20, 21

1964. brachiopod, gen. et sp. indet.; Crespin, p. 15.

Remarks: Crespin listed only a single specimen, but there are two. The present registration gives Z155 for the specimen figured by Kobayashi on plate 12, figure 21 and Z5009 for that on plate 12, figure 20.

Orusia.(?) sp.

Orusia (?) sp. in Kobayashi 1940a

Z154, Z5010

Figured Specimens

Locality: Maydena

Formation: Florentine Valley Mudstone

Age: Early Ordovician

1940a. Orusia (?) sp. Kobayashi, p. 61, pl. 11, figs. 1,2

1964. Orusia (?); Crespin, p. 24

Remarks: Crespin listed only Z154 whilst there are two specimens requiring a registration change. Z154 is that figured by Kobayashi on plate 11, figure 2. Z5010 appears on plate 11, figure 2.

Gastropoda

Cryptolites sp.

Cryptolites sp. in Kobayashi 1940b

Z141

Figured Specimen

Locality: Caroline Creek, near Latrobe, Mersey River District;

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. Cryptolites sp. in Kobayashi, p. 68, pl. 12, fig. 22.

1967. Cryptolites sp. in Crespin, p. 17.

Remarks: This specimen is on the same slab as the holotype of the trilobite *Carolinites bulbosa* (Z5011). Four plaster casts showing both *C. bulbosa* and *Cryptolites* sp. accompany the

specimen. Crespin listed the figured specimen of *Cryptolites* as Z141a. *Specimen Z141 is stored with Carolinites bulbosa Kobayashi (Z5011).*

Lecanospira tasmanensis Kobayashi

Lecanospira tasmanensis Kobayashi 1940a

Z152

Figured Syntypes Locality: Maydena

Formation: Florentine Valley Mudstone

Age: Early Ordovician

1940a: Lecanospira tamanensis Kobayashi, p. 63, pl. 11, fig. 11.

1964. Lecanospira tasmanensis; Crespin, p. 18.

1974. Lecanospira tasmanensis; Corbett and Banks, p. 219, pl. 2, figs. 7, 8.

Remarks: The specimen is a medium sized slab with numerous specimens of *Lecanospira*. Those figured by Kobayashi appear to have been from a latex casts. Corbett and Banks re-figured a mould and the latex cast of the two syntypes, identified on the slab by an inked circle.

Loxonema sp. indet. in Johnston

Loxonema sp. indet. Johnston 1888

Z964

Figured Specimen Locality: Gordon River

Formation: Gordon Limestone

Age: Ordovician

1888. Loxonema sp. indet. Johnston, pl.4, fig. 4.

Remarks: The specimen is a complete except for its mid-to-lower shell which was broken away. It was previously registered as B776.

? Lophospira salteri (Johnston); Tassell

Scalites salteri Johnston 1888; Tassel 2008

Z966

Figured specimen Locality: Gordon River

Formation: Gordon River Limestones

Age: Ordovician

1888. Scalites salteri Johnston, pl. 5 fig. 2. 1964. Scalites salteri; in Crespin, p. 19.

2008. ?Lophospira salteri (Johnston); Tassell, p. 10.

Remarks: The specimen was previously registered as B-852. Johnston did not describe the species, only figuring it in 1888. It is probably a *nomen nudum*. Tassell indicates that the poor preservation prevents further identification.

Cephalopoda

Anaspyroceras sp.

Anaspyroceras sp. in Teichert & Glenister 1953

Z249.1, 1906.2 Figured Specimen Locality: Gordon River

Formation: Gordon River Limestone

Age: Ordovician

1953. Anaspyroceras sp. Teichert and Glenister, p. 31, pl. 3, figs. 5-6.

1964. Anaspyroceras sp.; Crespin, p. 21.

Remarks: Z249, previously registered as B850, is in a tray containing three pieces. Z249.1, the figured specimen, has been sawn and polished. Specimen Z249.2 also bears the inked number B850 and has been sawn and polished. The third piece is a chip from the sawing process or may be questionably associated with the other two.

Tasmanoceras zeehanensis Teichert and Glenister

Tasmanoceras zeehanensis Teichert and Glenister 1953

Z42

Figured Paratype

Z248

Figured Specimen

Locality: Gordon River

Formation: Gordon River Limestone

Age: Mid to Late Ordovician

1952. Tasmanoceras zeehanensis Teichert and Glenister, p. 739, pl. 104, figs. 3-9.

1953. Tasmanoceras zeehanensis; Teichert and Glenister; p. 16, pl. 4, figs. 4, 5.

1964. Tasmanoceras zeehanensis; Crespin, p. 23.

Remarks: Teichert and Glenister (1952) described the species from specimens in the Geology Department, University of Melbourne collection. In 1953 they further discussed and figured the species based on a Tasmanian Museum specimen stated as being registered as B845. That specimen, now registered as Z42, was incorrectly cited as "B845" by Teichert and Glenister as it bears only the field number 8622/N27a. B845 neither appears in the 1913 TMAG register, nor in the list of specimens loaned to Teichert and Glenister. However, in their text Teichert & Glenister (1953, p. 16) discuss yet another specimen from the Tasmanian Museum that had come into their hands after completion of their 1952 paper. That specimen, Z248, does bear the number B845 in ink. As the specimen was used by the authors adding to the original description we include it here as a part of the type series. Crespin correctly associated the numbers B845 and Z248 but incorrectly gave Z248 as the figured specimen. The specimen figured by Teichert & Glenister (1953, pl. 4, figs. 4, 5) is Z42; the specimen discussed in the text is Z248.

Trilobita

Asaphopsoides florentinensis (Etheridge jr)

Dikelocephalus florentinensis Etheridge jr 1905; Jell and Stait 1985a

Locality: Florentine Valley

Formation: Florentine Valley Mudstone

Age: Early Ordovician

1905. Dikelocephalus florentinensis Etheridge jr, p. 24, pl. 10, fig. 4.

1914. Dikelokephalina florentinensis (Etheridge jr); Walcott, p. 350.

1936. Taihungshania florentinensis (Etheridge jr); Kobayashi, p. 179, pl. 20, fig. 16, (not fig. 15).

1936. Asaphopsis juneensis Kobayashi, p. 64, pl. 11, figs. 6-9.

1940a. Asaphopsis (?) gracicostatus Kobayashi, p. 65, pl. 11, fig. 10.

1974. "Asaphopsis" juneensis Kobayashi; Stait and Laurie, p. 207.

1980. Asaphopsis sp. nov. Stait and Laurie, p. 207

1985a. *Asaphopsoides florentinensis* (Etheridge jr); Jell and Stait, p. 19, pl. 2, fig. 15, pl. 9, figs. 1–11, pl.10, figs. 1–10

Remarks: No specimens of this species (*sensu stricto*) from the TMAG were figured. The holotype is held in the Australian Museum (*fide* Jell and Stait (1985a, p.19.) The species as defined by Jell and Stait in their revision of the Florentine Valley trilobites, includes species previously described by Etheridge jr. and T. Kobayashi, now considered junior synonyms, most of which are represented in the TMAG collections as types and/or figured specimens. These are given below.

Asaphopsis(?) gracicostatus Kobayashi 1940a; Jell & Stait 1985b

Z138

Holotype (by monotypy)

Locality: Western railway cut, 2 miles west of Junee railway station, Russell Falls River Valley

Formation: Florentine Valley Mudstone.

Age: Early Ordovician

1940a. Asaphopsis (?) gracicostatus Kobayashi, p. 65, pl. 11, fig. 10.

1964. Asaphopsis gracicostatus; in Crespin, p. 23.

1980. Asaphopsis juneensis Kobayashi; Stait and Laurie, p. 207.

1985a. Asaphopsoides florentinensis; Jell and Stait, p. 20, 21.

Remarks: The specimen is labelled with Z138 in ink on white paint. An obscure Z138 in ink on rock is below that. Crespin identified this specimen as the holotype of *A. gracicostatus*.

Asaphopsis juneensis Kobayashi 1940a; Jell & Stait 1985b

Z137

Lectotype (by Crespin, 1964)

Z135, Z136, Z139

Figured Paratypes

Locality: Western railway cut, 2 Km west of Maydena railway station, Tyenna River Valley

Formation: Florentine Valley Mudstone.

Age: Early Ordovician

1940a Asaphopsis juneensis Kobayashi, p. 64, pl. 11, fig 6.

1964. Asaphopsis juneensis; in Crespin 1964, p. 23.

1974. "Asaphopsis" juneensis; Corbett and Banks, p. 219.

1980. Asaphopsis juneensis; Stait and Laurie, p. 207.

1985b. Asaphopsoides florentinensis (Kobayashi); Jell and Stait, p. 19.

Remarks: The selection of the lectotype (Z137), a pygidial external mould, was by Crespin (1964). As this selection was made in the presence of other figured specimens of *Asophopsis juneensis*, it is considered as a valid lectotype nomination. While Crespin labelled as "holotype" the specimen Z137, she further indicated that specimen Z136 was the first illustrated, her usual criterion for holotype designation. Figured paratypes are Z135 as figure 7, Z136 as figure 6 and Z139 as figure 8. Z136 is affixed in plaster as the host rock is cracked.

Carolinites tasmaniensis (Etheridge jr)

Ptychoparia (?) tasmaniensis (Etheridge jr 1919); Jell & Stait 1985b

Z1387

Holotype (fide Jell and Stait, 1985b)

Z142, Z4640

Figured Specimens

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. 'fragmentary head shield; allied to Bathyurus's Etheridge, p. 157, pl. 1, fig. 12.

1888. Bathyurus (?) sp.in Johnston, p. 37, pl. 1, fig. 19.

1919. Ptychoparia (?) tasmaniensis Etheridge jr., p. 392.

1940b. Carolinites bulbosa Kobayashi, p. 70, pl. 12, fig. 6 (non pl. 12, fig. 7).

1940b. Carolinites quadrata Kobyashi, p. 70, pl. 12, figs. 8, 9.

1940b. Carolinites (?) tasmanensis [sic] (Etheridge jr.); Kobayashi, p. 71.

1953. Carolinites genacinaca; Hintze, p. 146, pl. 20, figs. 3-6.

1970. Carolinites ex. gr. genacinaca Ross; Bursky, p. 103, pl. 6, fig. 10.

1975. Carolinites genacinaca nevadensis Hintze; Fortey, p. 115, pl. 38, figs. 4–13.

1985b. Carolinities tasmaniensis; Jell and Stait, p. 40, pl. 15, figs. 1–17. non Carolinites bulbosa Kobayashi, Legg (1976), p. 5, pt. 1, figs. 20,25,26,30,34; non Carolinites bulbosa Kobayashi, Henderson (1983), p. 146, figs. 1A–H, K.

Remarks: Jell and Stait give specimen Z1387 as the holotype based on careful examination of the specimen of Etheridge's (1883, pl. 1, fig.12) "fragmentary head shield". That specimen, previously registered as B332, has Z1387 on white paint, a green paper dot and a square paper with the printed numeral 6. The 1913 TMAG register, under the heading B332, states: "Trilobites etc from the Mersey River District Presented by T. Stephens, & described by R. Etheridge Jnr ...have apparently never been registered."....\ fragmentary head shield\ [fig.] 12 \Z1387 probably (6). Returned from Q. Uni, May 1968." Further in the 1913 register is a note indicating that the numbers in brackets [in the Register] are the same as printed numbers on the specimen. This information is recorded here because a subsequent entry in the 1913 register relates that "Fifty or more specimens discovered...[later] ... Portion of the collection forwarded by Mr. Thomas Stephens to E. Etheridge, British Museum, 1881" There is adequate evidence that Z1387 was among those seen by Etheridge jr. Jell and Stait (1985a. p. 41) discuss the relationship of the various specimens associated with this species and their figure captions (pl. 15, figs. 7A and 7B) clarify the issues raised. Figured specimen Z142 (their plate 15, figure 5), the holotype of

Carolinities quadrata Kobayashi (pl. 12, fig. 9), is now considered a junior synonym. A slab containing four specimens previously registered as B324 and, more recently, Z1380a,b,c,d, has been re-registered yet again. (See *Conocephalites stephensi* for the details of the reregistration). Specimen Z1380b cited and figured by Jell & Stait (pl. 15, fig. 3) has accordingly been re-registered as Z4640. Specimen Z4640 is also the basis for Johnston's (1888, pl. 1, fig. 19) *Bathyurus* (?) sp. which figure appears to be a copy of Etheridge's (pl. 1, fig. 12). Kobayashi (1940b, p. 71) would have this specimen placed in *Carolinites tasmanensis* [sic] (Etheridge jr.). That species is considered a junior synonym of *Carolinites tasmaniensis* by Jell and Stait 1985b.

TMAG		ETHERIDGE	JOHNSTON	KOBAYASHI	JELL&S7	ΓΑΙΤ
New	Old	1883	1888	1940b	1985B	
Z1387 1					5(7A,B)	Holotype: C. tasmaniensis
	Z142			12(9)	15(5)	Holotype: C. quadrata
Z4640	1380b	1(12)	1(19)		15(3)	Kobayashi: C. tasmanensis
[Plate, figure numbers are given in this form: X(XX)]						

Carolinites bulbosa Kobayashi 1940b; Jell & Stait 1985b

Z5011

Holotype (by monotypy)

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. Carolinites bulbosa Kobayashi, p. 70, pl. 12, fig. 6, (non fig. 7).

1964. Carolinites bulbosa; in Crespin, p. 24.

1985b. Carolinites tasmaniensis; Jell and Stait, p. 40.

Remarks: The holotype, Z5011 is on the same slab as Z141, the figured specimen of *Cryptolites* sp. Associated are four identical plaster casts showing both *C. bulbosa* and *Cryptolites sp*. Crespin identified the specimen Z141a (now Z5011) as the holotype of C. *bulbosa*. Jell and Stait discuss (p. 41) their re-examination of specimens Z1387 and modification thereof as a part of the reassignment of this species. They assign the specimen (Z5011) figured by Kobayashi 1940b on plate 12, figure 7, to *Etheridgaspis carolinensis*.

Carolinites quadrata Kobayashi 1940b; Jell & Stait 1985b

Z142

Holotype (by monotypy)

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. Carolinites quadrata Kobayashi, p. 70, pl. 12, figs. 8, 9.

1964. Carolinites quadrata Kobayashi; Crespin, p. 24.

1985b. Carolinites tasmaniensis; Jell and Stait, p. 41, pl. 15, fig. 5.

Remarks: A latex cast of this specimen is the basis for Kobayashi's 1940b, pl. 12, fig. 9 and Jell and Stait's pl. 15, fig. 5. A second specimen, the basis for their plate 15, figure 8 has not been located. Specimen Z142 bears the TMAG number below a not quite legible inked phrase.

Bathyurus (?) sp. in Johnston 1888; Jell & Stait 1985b

Z4640

Figured Specimen

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Lower Ordovician

1883. 'Fragmentary head shield; allied to Bathyurus's; Etheridge jr; p. 157, pl. 1, fig. 12.

1888. Bathyurus (?) sp., Johnston, p. 37, pl. 1, fig. 18.

1985b. Carolinities tasmaniensis; Jell and Stait, p. 40, pl. 15, fig. 3A, 3B.

Remarks: Specimen Z4640 (formerly registered as Z1380b) was re-registered in consequence of a penned note, attributed to P. Jell. assigning new names to the three specimens on the slab (See *Conocephalites stephensi* for details).

Etheridgaspis carolinensis (Etheridge jr)

Ptychoparia, carolinensisEtheridge, jr, 1883; Jell & Stait, 1985b

Z1385

Lectotype (designated by Jell and Stait, 1985b)

Z144, Z146, Z1380, Z1386, Z4640, Z4644

Figured Specimens

Locality: Caroline Creek, Mersey District, Tasmania

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. Conocephalites stephensi Etheridge jr., pl. 1, fig. 3 and librigena in fig. 2 (non pl. 1, figs. 1, 2).

1883. (?) Conocephalites sp. Etheridge jr., p. 156, pl. 1, figs. 8, 9, 11.

1883. (?) Conocephalites sp. Etheridgejr., p. 157, 162, pl. 1, fig. 10

1888. Conocephalites sp. indet.; Johnston, p. 37, pl. 1, fig. 7, 10, 11, 16.

1888. Conocephalites stephensi Etheridge; Johnston, pl. 1, fig. 14 (non figs. 3, 4).

1919. Ptychoparia (?) carolinensis; Etheridge, p. 391.

1919. Ptychoparia (?) carolinensis Johnston, p. 392.

1940b. Etheridgaspis carolinensis (Etheridge); Kobayashi, p. 71, pl. 12, figs. 10, 11

1940b. Etheridgaspis johnstoni (Etheridge), Kobayashi, p. 72, pl. 12, figs. 12–14

1940b. Etheridgaspis bulbosa Kobayashi, pl. 12, fig. 7 (non fig. 6).

1964. Etheridgaspis carolinensis; in Crespin, p. 24.

1985b. Etheridgaspis carolinensis; Jell and Stait, p. 38, pl. 14, figs. 1–15; pl. 18, fig. 15, text fig. 2A–2F.

Remarks: The lectoholotype, Z1385, previously registered as B329, has a green paper dot just above the cranidium. It is the basis for Etheridge's pl. 1, figs.8,9.

Re-registrations of TMAG specimens are noted below.

TMAG		AUTHOR, DATE	PLATE (FIGURE)	IDENTIFIED AS
New	Old			
Z1385		Etheridge jr. 1883	1(8, 9)	As (?) Conocephalites sp.
		Jell & Stait, 1985b	text (2A, 2B)	Lectotype Jell & Stait, 1985b, p. 38
Z1380	Z1380a	Etheridge jr., 1883	1(3)	As Conocephalites stephensi (pars.)
		Jell & Stait, 1985b	14(3)	
Z1386		Etheridge jr, 1386	1(10)	As Conocephalites sp.
		Jell & Stait, 1985b.	text(2C)	
Z144	Z144a	Kobayashi, 1940b	12(10)	As Etheridgaspis carolinensis
		Jell & Stait, 1985b	14(8)	
Z146	Z146A	Kobayashi, 1940b	2(12)	As Etheridgaspis johnstoni
		Jell & Stait 1985b	text(2E)	
Z4642	Z1380d	Jell & Stait 1985b	text(2D)	
Z4644	Z146a	Kobayashi 1940b	12(13)	As Etheridgaspis johnstoni
		Jell & Stait 1985b	text (2F, 2G)	

Carolinities bulbosa Kobayashi 1940b; Jell & Stait 1985b

Z5011

Holotype (by monotypy)

Locality: Caroline Creek, Mersey District Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. Carolinites bulbosa Kobayashi, p. 70, pl. 12, fig. 7 (not fig. 6).

1964. Carolinites bulbosa; Crespin, p. 24.

1985b. Carolinites bulbosa; Jell and Stait, p. 38

Remarks: Carolinities bulbosa and Lecanospira tasmanensis Kobayashi are on the same slab and had been registered as Z141A and 141B. The Lecanospira remains Z141; the specimen of C. bulbosa is re-registered as Z5011. Kobayashi figured two specimens: the pygidium represented here and a glabella now assigned to Carolinities tasmaniensis which see. Crespin did not select a holotype but explicitly marked the notation of figure 6 with an asterisk, which was her usual way of identifying the specimen she recorded as a holotype. If that is accepted, the result is that C. bulbosa (represented by its putative lectotype) is a junior synonym of Carolinites tasmaniensis and Kobayashi's figured specimen is a junior synonym of Etheridgaspis carolinensis. The point is, however, moot as both are junior synonyms.

Conocephalites stephensi Etheridge jr 1883; Jell and Stait 1985b

Z1380

Figured Specimen

Locality: Caroline Creek, Mersey District Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. Conocephalites? stephensi Etheridge, p. 153, pl. 1, fig.3.

1985b. Etheridgaspis carolinensis; Jell and Stait, p. 38.

Remarks: A slab containing four specimens previously registered as Z1380a,b,c,d is accompanied by a handwritten paper label provisionally identified as being by Peter Jell. These specimens have been re-registered in accordance with that label as follows (text is that of the label): Z1380 - "Cotype of *TASMANOCEPHALUS STEPHENSI* (Eth. fil) (free cheek near green spot). Figd. Eth., 1883, pl.1, fig.3)". Z4640: What is believed to be the holotype of CAROLINITES (?) TASMANIENSIS (Eth, Fil.) Figd. Eth., 1883, pl. 1, fig. 12"; Z4641: Pygidium of *Tasmanocephalus stephensi;* Z4642 - "What is believed to be the holotype of ETHERIDGASPIS CAROLINENSIS (Eth. Fil.) Figd. Eth., 1883, pl. 1, figs. 8 & 9 at white arrow". The slab also bears the previous registration number B324. The 1913 TMAG register lists the specimen only as a type and figured specimen of Etheridge with the identification of *Conocephalus stephensi*. Three older labels provide various data with the oldest professing "*Dikelocephalus tasmanicus*", seemingly relating this identification to all specimens on the slab. Etheridge (p. 155) says of this specimen (Z1380): "In one case only has any appearance of a free cheek in contact with other portions of the head represented itself, ..." . This statement being associated with his nomination of the specific name suggests the specimen being the type.

(?) Conocephalites sp. Etheridge 1883; Jell and Stait 1985b Z1385

Figured Specimen (of Etheridge,1883); Lectotype of *Etheridgaspis carolinensis* (by Jell and Stait 1985b)

Locality: Mersey River District, Tasmania

Formation: Caroline Creek beds

Age: Early Ordovician

1883. ? Conocephalites sp. Etheridge, p. 153, pl. 1, figs. 8, 9., 11.

1985b. Etheridgaspis carolinensis (Etheridge); Jell and Stait, p. 38, text figs. 2 A,B.

Remarks: Specimen Z1385, was previously registered as B329, bears a green paper dot. The specimen that was the basis for Etheridge's fig. 11 has not been identified.

(?) Conocephalites sp. Etheridge 1883; Jell and Stait 1985b

Z4642, Z1386

Figured specimens

Locality: Caroline Creek, near Latrobe, Mersey River District;

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. ? Conocephalites sp. Etheridge, p. 156, pl. 1 figs. 8-9 and (?) 11.

1888. Loganellus (?) or Conocephalites (?); Johnston, p. 37, pl. 1, figs. 7, 11 and (?) 16.

1919. Ptychoparia (?) carolinensis; Etheridge, p. 361.

1940b. Etheridgaspis carolinensis; Kobayashi, p. 71, pl. 12, figs. 10-11.

1940b. Etheridgaspis johnstoni (Etheridge), Kobayashi, p. 72, pl. 12, figs. 12-14

1940b. Etheridgaspis bulbosa Kobayashi, pl. 12, fig. 7 (non fig. 6)

1964. Etheridgaspis carolinensis; Crespin, p. 24.

1985b. Etheridgaspis carolinensis; Jell and Stait, p. 38, pl. 14, figs. 1–15; pl 18, fig. 15, text fig. 2A, 2B.

Remarks: Crespin lists both Z144 and Z145 as figured specimens (hypotypes) of this species. Specimens Z146 and Z4644 are on the same slab. Specimens 1380d and 146A and Z146B have been re-registered. Specimen Z1386 has been labelled as the holotype of *E. Johnstoni* but does not match Kobayashi's pl. 12, fig. 12. The equivalencies are:

TMAG New	Old	ETHERIDGE jr 1883	KOBAYASHI 1940b	JELL & STAIT 1985b
Z143			12(14)	
Z144			12(10)	14(8)
Z145			12(11)	
Z146	Z146a		12(12)	Text fig. 2E
Z4644	Z146b		12(13)	Text fig. 2F, 2G
Z4642	Z1380d	1(3)		Text fig. 2D
Z1386		1(10)		Text fig. 2C

Ptychoparia (?) johnstoni Etheridge jr.

Z1386

Holotype (by monotypy?)

Locality: Caroline Creek, near Latrobe, Mersey River District;

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. Second species. Etheridge, p. 157, 162. pl 1, fig 10.

1888. Logonellus (?) or Conocephalites (?) sp; Johnston, p. 37, pl. 1, fig. 10.

1919. Ptychoparia (?) johnstoni; Etheridge, p. 392.

1940b. Etheridgaspis johnstoni; Kobayashi, p. 72, pl. 12, figs. 12-14

1964. Etheridgaspis johnstoni; in Crespin, p. 24.

1985b. Etheridgaspis carolinensis (Etheridge); Jell and Stait, p. 38, fig. 2 C.

Remarks: The TMAG number is written in ink on paint. In ink Immediately above is the old registration B330, a small square paper bearing the printed number "3" and a green dot. Labels accompanying the specimen include a heavy paper, printed label bearing the handwritten name "Conocephalites?", the locality "Caroline Creek, Mersey Valley" and the number B.330. A paper label bears the handwritten information (possibly by Peter Jell(): "B.330. Holotype of Etheridgaspis johnstoni (Eth-fil.)/ Figd. Eth. 1883, pl. 1. fig. 10./ Early Ord. Caroline Ck. Tas."

TMAG New	Old	AUTHOR, DATE	PLATE(FIGURE)	IDENTIFIED AS
Z1386		Etheridge jr, 1883	1(10)	As Conocephalites sp.
		Jell & Stait, 1985b	Text(2C)	
Z143		Kobayashi, 1940b	12(14)	As Etheridgaspis johnstoni
Z4644	Z146b	Kobayashi, 1940b	12(13)	As Etheridgaspis johnstoni

Hystricurus lewisi (Kobayashi)

Tasmanaspis lewisi Kobayashi 1940a; Jell & Stait 1985a

Z151

Holotype

Z995

Figured Specimen

Locality: Railway cutting 2 km west of Maydena Railway Station.

Formation: Florentine Valley Mudstone.

Age: Early Ordovician

1940a. Tasmanaspis lewisi Kobayashi, p. 65, pl. 11, figs. 3,4.

1940a. Tasmanaspis longus Kobayashi, p. 66, pl. 11, fig. 5.

1964. Tasmanaspis lewisi;in Crespin, p. 25.

1964. Tasmanaspis longus; in Crespin, p. 25.

1974. Hystricurus paragenalatus Ross; Corbett and Banks, pl. 1, figs. 16, 20, pl. 2, fig. 11

1974. Hystricurus sp. in Corbett and Banks, pl. 1, figs. 21, 25-27, pl. 2, fig. 12

1974. hystricurid librigenae in Corbett and Banks, pl. 1, fig. 19

1980: Hystricurus lewis (Kobayashi); Stait and Laurie, fig. 3, Appendix 1.

1985a. Hystricurus lewisi Jell and Stait, p. 5, pl. 2, fig. 1–15, pl. 3, figs.9,10,13.

Remarks: Kobayashi (1940a) figured the holotype on plate 11, figs 3–4 and wrote in the caption for those figures (p.66): "Holotype Cranidium and Associated Free Cheek." Jell and Stait (1985a) figure a latex cast (not with specimen) of the holotype on pl. 2, fig. 2. The caption for pl. 2, fig. 3 correctly gives the specimen as Tasmanian Museum Z995.

Tasmanaspis longus Kobayashi 1940a; Jell and Stait, 1985a

Z150

Holotype (by monotypy)

Locality: Western railway cut, 2 Km west of Maydena railway station, Tyenna River Valley,

Formation: Florentine Valley Mudstone.

Formation: Junee Mudstone.

Age: Early Ordovician

1940a. Tamanaspis longus Kobayashi, p. 66, pl. 11, fig. 5.

1964. Tasmanaspis longus; in Crespin, p. 25.

1985a. Hystricurus lewis (Kobayashi); Jell and Stait, p. 5, pl. 2, fig. 4.

Remarks: Crespin gives Z150 as the holotype.

Parabasilicus ? lewisi (Kobayashi)

Asaphellus lewisi Kobayashi 1940b; Jell and Stait 1985b

Z133

Lectotype (by Jell and Stait 1985b)

Locality; Caroline Creek, Mersey Valley District, Tasmania

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. Asaphus sp. A. Etheridge jr, p. 156, pl. 1, figs. 6, 7.

!883. Asaphus sp. B. Etheridge jr, p. 156, pl. 1, fig. 5.

1888. Asaphus sp. indet. Johnston, pl. 1, figs. 9, 17, 18.

1919. Bathyurus (?) spp. Etheridge, p. 392.

1940b. Asaphellus lewisi Kobayashi, p. 74, pl. 12, figs 16, 17, 19 (non fig. 18)

1964. Asaphellus lewisi; Crespin, p. 23.

1985b Parabasilicus ? lewisi; Jell and Stait, p. 46, pl. 17, fig. 2A, 2B.

Remarks: Crespin gave specimen Z133 as the holotype of *Asaphellus lewisi* and specimen Z134 as a paratype. Jell and Stait named Z133 as the lectotype. It is figured on pl. 12, fig. 16 of Kobayashi and pl. 17, fig. 2A and 2B of Jell and Stait The paratype Z134, so labelled by Crespin, is now identified by Jell and Stait as *Tasmanocephalus stephensi*.

Asaphus sp. A Etheridge jr 1883; Jell & Stait 1985b

Z1383

Figured Specimen

Locality; Caroline Creek, Mersey Valley District.

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. *Asaphus* sp. A Etheridge jr, p. 156, pl. 1, fig. 6.

1985b Parabasilicus ? lewisi; Jell and Stait, p. 46.

Remarks: The specimen bears a paper green dot, a square sticker with the printed numeral 8 and was previously registered as B321. It is figured by Etheridge jr on pl. 1, fig. 6. A paper label (attributed here to P. Jell) identifies this specimen as the type of *Asaphus* sp. A of Etheridge and also probably *Asaphellus* (?) *lewisi* of Kobayashi 1939 but note that is is not the type of this species. An older label gives *Asaphus a* and the locality. Several later TMAG labels by Curator Noel Kemp give corrected data.

Asaphus sp.B Etheridge jr 1883

Z1382

Figured Specimen

Locality; Caroline Creek, Mersey Valley District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. Asaphus sp. B Etheridge jr, p. 156, pl. 1, fig. 5.

1964. ? Asaphellus lewisi Kobayashi; Crespin, p. 24.

1985b. Parabasilicus ? lewisi; Jell and Stait, p. 46, text fig. 4C, D.

Remarks: The specimen bears was previously registered as B326 and is accompanied by an old label and a more recent paper label (by P. Jell?) identifying it as *Asaphus* sp. B and as the "holotype". Crespin cites this specimen as Z132 (now re-registered as Z1382). It appears, with that number, in Jell and Stait 1985b, text fig. 4D

Labrum

Z1384

Figured specimen

Locality: Caroline Creek, Mersey Valley District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. ? Asaphus sp. A Etheridge jr, pl. 1, fig. 7. 1940b. ? Asaphellus lewisi Kobayashi, p. 74,

1985b. Parabasilicus ? lewisi (Kobayashi); Jell and Stait, p. 46, text fig. 4B.

Remarks: The specimen bears the inked number B328. Etheridge identifies this specimen only as "Labrum" in his "Description of the Figures" and there is no mention of the "Labrum" in the text discussion of *Asaphus* A or B (pp. 156–158). It is not until Jell and Stait that the specimen is associated with a species and then only in the caption of text figure 4B. J. Jago (Pers. Comm. 12/4/2012) advises that "hypostome" is a more accurate descriptor of this fragment than "labrum".

Protoencrinurella? subquadrata (Kobayashi)

Prosopiscus (?) subquadratus Kobayashi 1940b; Jell & Stait 1985b

Z147

Lectotype (by Crespin, 1964)

Z1382, Z1384

Figured Specimens

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. Prosopiscus (?) subquadratus: Kobayashi, p. 70, pl. 12, fig. 5.

1964. Prosopiscus (?) subquadratus; Crespin, p. 24.

1985b. Protoencrinurella? subguadrata; Jell and Stait, p. 47, pl 18, figs. 1–7, text fig. 4A.

Remarks: Jell and Stait state that the species is rare, limited to the few they illustrate and note that the "holotype specimen is mislaid". The holotype, listed as such by Crespin without comment, is now located. It consists of a small fragment of sandstone with unidentifiable trilobite fragments common in the matrix. The specimen bears the inked number Z147. It is associated with a clay pressure cast of the largest cephalic mould present on the specimen but neither agrees with fig. 5 of Kobayashi. On the reverse side are fragments which resemble those illustrated by Jell and Stait (text fig. 4A) and which could be the basis of Kobayashi's figure. Specimen Z1382 is illustrated in Jell and Stait as figure 4C and 4D; Z1384 as figure 4B.

Tasmanocephalus stephensi (Etheridge)

Conocephalites (?) stephensi (Etheridge jr.); Jell & Stait 1985b

Z1378

Lectotype (designated by Jell and Stait, 1986b)

Z1385

Figured paratypes

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. Conocephalites? stephensi Etheridge jr, p. 153, pl. 1, fig. 3 and librigena in fig. 2 (Not pl. 1, figs. 1, 2).

1883. Dikelocephalus tasmanicus Etheridge jr, p. 155, pl. 1, fig. 4.

1888. Conocephalites stephensi; Johnston, p. 37, pl. 1, fig.3, 4 (non librigina in fig. 4).

1888. Dikelocephalus tasmanicus; Johnston, p. 37, pl. 1, fig. 8.

1919. Crepicephalus tasmanicus (Etheridge jr); Etheridge jr, p. 390.

1936. *Tasmanocephalus stephensi* (Etheridge jr); Kobayashi, p. 180, pl. 20, figs. 11–14; pl.21, figs. 2–4 (non pl.21, fig. 1 or the librigena in fig. 2).

1940b. Tasmanocephalus stephensi; Kobayashi, p. 69, pl. 12, figs 1–4.

1940b. Free cheek gen. et sp. undet.; Kobayashi, pl. 12, fig. 15.

1940b. (?) Asaphellus lewisi; Kobayashi, p. 74, pl. 12, fig. 18, (not pl. 12, figs. 16, 17, 19).

1964. Tasmanocephalus stephensi; in Crespin p. 25.

1985b. *Tasmanocephalus stephensi*; Jell and Stait, p. 44, pl. 16, figs. 1–14; pl. 18, figs. 8–12; text fig. 3A–3D.

Remarks: Z1378, previously registered as B322, bears a green dot and a paper sticker with the numeral 1. It is figured as *Conocephalites (?) stephensi* by Etheridge jr. (1883, pl. 1, fig.1), as (?) *Asaphallus lewi*si by Kobayashi (1940b, pl. 12, fig.18) and by Jell and Stait (1985b, pl. 16, fig. 12).

TMAG	AUTHOR, DATE	PLATE (FIGURE)	IDENTIFIED AS
Z1378	Etheridge jr 1883	1(1)	Conocephalites (?) stephensi
	Johnston, 1888	1(3, 4, not librigina)	Conocephalites stephensi
	Kobayashi, 1940b	12(18)	(?) Asaphellus lewisi
	Jell & Stait, 1985b	16(12)	Tasmanocephalus stephensi - Lectotype

? Asaphellus lewisi Kobayashi 1940b; Jell & Stait 1985b

Z134

Lectotype (by Crespin, 1964)

Z132

Figured Paratype

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. ? Asaphellus lewisi Kobayashi: p. 74, pl. 12, figs. 16, 17, 19. non fig. 18.

1964. Asaphellus lewisi; in Crespin, p. 23.

1985b. Tasmanocephalus stephensi; Jell and Stait, p. 44, pl. 16, fig. 3.

Remarks: Z134 is figured by Kobayashi on pl.12, fig. 18 and Z132 on pl. 12, fig 17. It was also named a paratype of *A. lewisi* by Crespin in the confusion of her nomination of the lectotype.

Conocephalites? stephensi Etheridge jr. 1883; Jell & Stait 1985b

Z1378

Lectotype (designated by Jell and Stait, 1985b)

Z148, Z1379

Figured specimens

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1883. Conocephalites? stephensi Etheridge jr., p. 153, pl. 1, figs. 1, 2 non pl. 1, fig.3 or librigena in fig. 2).

1888. Conocephalites (?) stephensi; Johnston, p. 37, pl. 1, figs. 7, 10, 11, 16.

1936. Tasmanocephalus stephensi; Kobayashi, p. 180

1940b. Tasmanocephalus stephensi; Kobayashi, p. 69, pl. 12, figs. 1–4.

1964. Tasmanocephalus stephensi; Crespin, p. 25

1985b. Etheridgaspis carolinensis; Jell and Stait, p. 38, pl. 14, figs. 1-15; pl. 18, fig. 15, text fig. 2

Remarks: Z1378 was previously registered as B322. A green paper dot and a paper with the printed numeral 1 printed on it are pasted on. This specimen may be the basis for pl. 1, fig. 1 of Etheridge jr.

TMAG	AUTHOR, DATE	PLATE(FIGURE)	IDENTIFIED AS
Z1379	Etheridge jr 1883	1(1), 1(2)	Conocephalites (?) stephensi pars only
	Kobayashi 1940b	12(1)	Tasmanocephalus stephensi
	Jell & Stait 1985b	text fig. 3A	
Z1378	Etheridge jr 1883	1(1)	Conocephalites (?) stephensi
(=B322)	Jell & Stait 1985b	16(12)	Lectotype
Z148	Kobayasji 1940b	12(1)	Tasmanocephalus stephensi
	Jell & Stait 1985b	16(7A, 7B)	

Dikelocephalus tasmanicus Etheridge jr. 1883

88Z1381

Holotype (by monotypy)

1883. Dikelocephalus tasmanicus Etheridge jr, p. 155, pl. 1, fig. 4.

1888. Dikelocephalus tasmanicus; Johnston, p. 37, pl. 1, fig. 8.

1940b. Tasmanocephalus stephensi; Kobayashi, p. 69, pl. 12, figs. 1-4.

1985b. *Tasmanocephalus stephensi*; Jell and Stait, p. 44, pl. 16, figs. 1–14, pl. 18, figs. 8–12; text fig. 3.

Remarks: The specimen bears the inked numbers Z1381 and was previously registered as B325 and has an adherent green dot. Two older museum labels and a handwritten label (by P. Jell?) explaining its synonymy to *Tasmanocephalus stephensi* Etheridge. Z1381 is figured by Etheridge as pl. 1, fig. 4 and by Kobayashi pl. 12, fig 3. The Etheridge figure also appears in Johnston (1888) pl. 1 fig. 8). Jell and Stait figure Z1381 on pl. 18, fig. 10 and the cranidium of Etheridge (1883, pl. 1, fig.1) on pl. 16, fig. 12.

Free cheek gen. et sp. undet. Kobayashi, 1940b

Z140

Figured Specimen

Locality: Caroline Creek, near Latrobe, Mersey River District

Formation: Caroline Creek Sandstone

Age: Early Ordovician

1940b. Free cheek gen. et sp. undet. Kobayashi, p. 67, pl. 12, fig.15. 1985b. *Tasmanocephalus stephensi* (Kobayashi); Jell and Stait, p. 44.

Remarks: The specimen is accompanied by a latex cast and a clay cast.

Echinodermata

macrocystellid indeterminate in Jell, Burrett and Banks, 1985

Z3713d,e

Figured Specimen

Locality: NE of Winkleigh, SW of Beaconsfield

Formation:

Age: Lower Ordovician

1985. macrocystellid indet. Jell, Burrett and Banks, p. 204, fig. 15 A, B., fig. 16 A,B.

Remarks: The specimen is on a slab, now in five pieces (GST8342 = Z3713) with the figured specimen appearing on two of the fragments. Specimen Z3713d (= GST8342d) is Fig. 15A, 16A; specimen Z3713e (= GST8342e) is Fig. 15B, 16B.

Miscellaneous

probable calcareous sponge

probable calcareous sponge Johnston 1888

Z240

Figured Specimen Locality: Gordon River

Formation: Gordon River Limestone

Age: Ordovician

1888. Probable calcareous sponge Johnston, pl. 2, fig.13.

1964. ?calcareous sponge; Crespin, p. 10.

Remarks: A large specimen and two small specimens possibly attached to the larger when illustrated. Crespin erroneously cites the registration number as Z20.

CAMBRIAN

Trilobita

Acmarhachis sp.

Acmarhachis? sp.in Jell, Hughes & Brown, 1991

Z3586

Figured specimen

Locality: Loc. 1, Higgins Creek. Formation: Huskisson Group

Age: Late Cambrian

1991. Acmarhachis? sp.in Jell, Hughes and Brown, p. 460, figs. 2A, B.

Remarks: Z3586 also bears the GST number 14355.

Agnostus (Homagnostus) sp.

Agnostus (Homagnostus) sp. in Jago & Brown, 1992 Z3298–Z3308, Z3316, Z3318, Z3320–Z3324, Z3327

Figured Specimens:

Locality: Huskisson River area Formation: Huskisson Group

Age: Late Cambrian

1992. Agnostus (Homagnostus) sp.in Jago and Brown, p. 61, pl. 1, figs. A-S.

Remarks: The specimens are internal or external moulds in grey or black siltstone. Latex casts of these were made for photographic purposes some of which (see Z3299–3311) are present. The specimens bear both TMAG and GST numbers. The equivalencies are:

TMAG	GST	FIGURE
Z3298	15003	1A
Z3299	15004	1E on slab with Z3311 Pseudagnostus (Pseudagnostus) idalis huskissonensis
Z3300	15005	1F
Z3301	15006	1G
Z3302	15007	1J
Z3303	15008	1K
Z3304	15009	10
Z3305	15010	1M
Z3306	15011	1N
Z3307	15012	1P
Z3308	15013	1Q
Z3316	15021	11
Z3318	15023	1B
Z3320	15025	1D on slab with Z3321, Z3322, Z3323 and Z3295 Glyptagnostus reticulatus
Z3321	15026	1C on slab with Z3320, Z3322, Z3233 and Z3295 Glyptagnostus reticulatus
Z3322	15027	1S on slab with Z3320. Z3321, Z3233 and Z3295 Glyptagnostus reticulatus
Z3323	15028	1R on slab with Z3320. Z332I, Z3322 and Z3295 Glyptagnostus reticulatus
Z3324	15029	1H on slab with Z3325 <i>Pseudagnostus</i> sp.
Z3327	15032	1L

Aphelaspis sp.

Aphelaspis sp. in Jell, Hughes & Brown, 1991

Z3669, Z4550, Z3670, Z3671

Figured Specimens Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Aphelapsis sp. in Jell, Hughes and Brown, p. 478, fig. 13A-C.

Remarks: The specimens are on two slabs. One contains Z3669 and Z4550, and the other

Z3670 and Z3671. The equivalencies are:

TMAG GST FIGURE Z3669 14460 13C Z3670 14461 13B Z3671 14463 13D, E Z4550 14462 13A

Aposolenopleura sp.

Aposolenopleura sp. in Jell, Hughes & Brown, 1991

Z3681

Figured Specimen Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Aposolenopleura sp. in Jell, Hughes and Brown. p. 483, fig. 13F

Remarks: Z3681 also bears the GST number 14464.

Asiocephalus latosuggrundus Jell, Hughes and Brown

Asiocephalus latosuggrundus Jell, Hughes and Brown ,1991

Z363a,b Holotype Z3632

Figured Paratype

Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1983. *Hedinaspis* (*Asiocephalus*) sulcata Lisogor (pars.); Apollonov and Chugaeva, 1983, p. 83, pl. 10, figs. 2,3.

1991. Asiocephalus latosuggrundus Jell, Hughes and Brown, p. 471, figs. 7A, B. 8C.

Remarks: The holotype (Z3631.a,b) is an internal mould of an articulated specimen represented as a part and counterpart. The equivalencies are:

TMAG	GST	FIGURE
Z3631.a	14419	8A
Z3631.b	14419	8B
Z3632	14420	8C

Cermatops thalasta Jell, Hughes and Brown

Cermatops thalasta Jell, Hughes & Brown, 1991

Z3626

Holotype

Z3622-Z3630, Z4576

Figured Paratypes

Locality: Higgins Creek

Formation: Huskisson Group

Age: Late Cambrian

1991. Cermatops thalasta, Jell, Hughes and Brown, p. 469, figs. 7A-K.

Remarks: The equivalencies are:

TMAG	GST	FIGURE
Z3622	14409	7A
Z3623	14410	7B
Z3624	14411	7C,D
Z3625	14413	7F
Z3626	14412	7E Holotype
Z4576	14414	7G on slab with Z3627
Z3627	14415	7H on slab with Z4576
Z3628	14416	71
Z3629	14417	7J
Z3630	14418	7K

Charchaqia halli Jago

Charchaqia halli Jago, 1991; Bao and Jago, 2000

Z4554

Figured Paratype

Locality: Macquarie Harbor area Formation: Un-named siltstone

Age: Late late Cambrian

1991. Charchaqia halli Jago, p. 131, pl. 1, fig. 8

2000. Charchagia halli Bao; Bao and Jago, p. 893, pl. 2, figs 1-6.

Remarks: Z4554 bears the Mines Department number TMD5133. The holotype of this species is lodged at the Geology Department, University of Tasmania.

Chekiangaspis concavus Jell, Hughes and Brown

Chekiangaspis concavus Jell, Hughes & Brown, 1991

Z3674

Holotype

Z3651, Z3675, Z36676, Z3677, Z3678

Figured Paratypes

Locality: Higgins Creek

Formation: Huskisson Group

Age: Late Cambrian

1991. Chekiangaspis concavus Jell, Hughes and Brown, p. 474, fig. 10A-G.

Remarks: Rubber moulds or ? casts, when present, are stored with the specimen. The

equivalencies are:

TMAG	GST	FIGURE
Z3651	14433	10B
Z3669	14460	13C
Z3674	14432	10A
Z3675	14435	10D
Z3676	14434	10C
Z3677	14436	10E
Z3678	14437	10F, G

Conokephalinidae indet.

Conokephalinidae indet." in Hughes & Brown, 1991

Z3667, Z3660, Z3661, Z3662,

Figured Specimens

Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Conokephalinidae indet. in Jell, Hughes and Brown, p. 481, Fig. 13,G-J.

Remarks: Five specimens are present of three slabs. All are marked by TMAG and GST numbers.

TMAG	GST	FIGURE
Z3660	14468	13I on slab with Z3661
Z3661	14469	13J on slab with Z3660
Z3662	14465	13G
Z3680	14467	13H on slab with Z3679 not figured

Dikelokephalinidae gen. et sp. indet.

Dikelokephalinidae gen. et sp. indet., in Bao & Jago 2000

Z3283

Figured Specimen

Locality: Near Birch Inlet, south of Macquarie Harbour

Formation:

Age: Late late Cambrian

2000. Dikelokephalinidae gen. et sp. indet. in Bao and Jago, p.911, pl. 16, fig. 6.

Remarks: Specimen Z3282 is also numbered TMD5143.

Glyptagnostus reticulatus reticulatus (Angelin)

Glyptagnostus reticulatus reticulatus (Angelin); Jell & Brown, 1992

Z3295a,b.

Figured Specimen

Locality: Huskisson River area Formation: Huskisson Group

Age: Late Cambrian

1851. Agnostus reticulatus Angelin, p. 8.

1962. Glyptagnostus reticulatus reticulatus (Angelin); Palmer, p. 18, pl. 2, figs. 1, 3, 8.

1992. Glyptagnostus reticulatus reticulatus (Angelin); Jago and Brown, p. 61, fig. 1T.

Remarks: This is a poorly preserved pygidium part and counterpart which is found on a slab with *Agnostus (Homagnostus) sp.* specimen Z3320. Jago (1974) offers a complete discussion of the subspecies of *Glyptagnostus reticulatus*. (TMAG Z3295 = GST 15000)

Ivshinaspis reticulata Bao and Jago

Ivshinaspis reticulata Bao and Jago 2000

Z4556, Z3282

Figured Paratypes

Z3278, Z3280

Paratypes

Locality: Near Birch Inlet, south of Macquarie Harbour

Formation: Un-named Siltstone

Age: Late late Cambrian

2000. Ivshinaspis reticulata Bao and Jago, p. 909, text fig. 3B, 3H

Remarks: Silicone rubber casts prepared for photography were not transferred with the specimens. The specimens bear both TMAG and Tasmanian Mines Department (TMD) numbers.

TMAG	TMD	FIGURE
Z4556	519a	3H
Z3278	3124	Not figured
Z3279	5131	Not figured
Z3282	5139	3B

Leiagnostus inletensis Bao and Jago

Leiagnostus inletensis Bao and Jago 2000 Z3800

Figured syntype

Locality: Near Birch Inlet, south of Macquarie Harbour

Formation: Un-named siltstone

Age: Late Cambrian

2000. Leiagnostus inletensis Bao and Jago, p. 887, pl. 1, fig. 4.

Remarks: Specimens listed by Bao and Jago in "materials" are here considered as syntypes. Silicone rubber casts prepared for photography were not transferred. Z3800 bears Tasmanian Mines Department number TMD5112.2.

Lotagnostus tullahensis Jell, Hughes and Brown

Lotagnostus tullahensis Jell, Hughes and Brown 1991

Z3576

Holotype

Z3574, Z3575

Figured Paratypes

Locality: Higgins Creek

Formation: Huskisson Group

Age: Late Cambrian

1991: Lotagnostus tullahensis: Jell, Hughes and Brown, p. 459, figs 3G-I.

Remarks: The specimens bear TMAG and Geological Survey numbers. Many of the figures were based on latex casts. These, when still present, are placed with the specimens. The equivalencies are:

TMAG GST FIGURE Z3574 14373 3G Z3575 14374 3H

Z3576 14375 3I on slab with Z3570 and Z3571, Rhaptagnostus mij.

Micragnostus intermedius Palmer

Micragnostus sp. cf. M. intermedius Palmer; Jell, Hughes & Brown, 1991

Z3583, Z3584, Z3585, Z3587

Figured Specimens Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1968 Geragnostus intermedius: Palmer, 1968, p. B24, Pl. 12, figs. 1, 2

1991. Micragnostus sp. cf. M intermedius (Palmer); Jell, Hughes and Brown. P. 460, figs. 2G-L

Remarks: Specimen Z3587 is on same slab as Z3588, Rhaptagnostus mji. The equivalencies are:

TMAG	GST	FIGURE
Z3583	14361	21
Z3584	14359	2G
Z3585	14360	2H
Z3587	14366	2K (rt.) on slab with Z3588, Rhaptagnostus miji

Neoagnostus clavus (Shergold)

Pseudagnostus clavus (Shergold); Jell, Hughes & Brown, 1991

Z3573

Figured Specimen Location: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1972. Pseudagnostus c lavus Shergold, pp. 31, 34, pl. 3, figs. 1–8.

1977. *Neoagnostus clavus* (Shergold); Shergold, p. 81, 98, pl. 16, fig. 13–15. 1991. *Neoagnostus clavus* (Shergold); Jell, Hughes and Brown, p. 461, fig. 3M.

Remarks: Z3573 figured by Jell, Hughes and Brown (1991), bears the Geological Survey number GST14379.

Olenus apoxysomatus Jell, Hughes and Brown

Olenus apoxysomatus Jell, Hughes and Brown, 1991

Z3642.1,2

Holotype

Z3633, Z3634, Z3636–Z3641, Z3672, Z3673

Figured Paratypes

Location: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Olenus apoxysomatus, Jell, Hughes and Brown, 473, fig 9A-K.

Remarks: The holotype Z3642 is on the same slab as Z3641. A latex cast of Z3642 exists.

TMAG	GST	FIGURE	SPECIFIC LOCALITY (all Huskisson River, Western Tasmania)
Z3633.1, 2	14421	9A	Loc. 1 on slab with Z3634
Z3634.1, 2	14423	9C	Loc. 1 on slab with Z3633
Z3636	14422	9B	Loc. 7
Z3637	14424	9D	Loc. 7
Z3638	14426	9G	Loc. 7
Z3639,1, 2	14428	91	Loc. 1
Z3640	14429	9J	Loc. 7
Z3641.1, 2	14425	9F	Loc. 1A
Z3642.1,.2	14427	9H, K Holotype	Loc. 1
Z3672.1, 2	14430	9L	Loc. 7
Z3673	14431	9M	Loc. 7

Proceratopyge longa Bao and Jago

Proceratopyge longa Bao and Jago, 2000

Z2316, Z4555a,b Figured Syntypes

Z3798 Syntypes

Locality: Near Birch Inlet, south of Macquarie Harbour

Formation: Un-named siltstone

Age: lateLate Cambrian

2000. Proceratopyge longa Bao and Jago, p. 896, pl. 2, figs. 8–13.

Remarks: Silicone rubber casts prepared for photography were not transferred with the specimens. The specimens bear both TMAG and Tasmanian Mines Department (TMD) numbers.

TMAG	TMD	FIGURE
Z3281	5135	
Z3798	5112-1	
Z3781a-d	5116	
Z3272	514a	Pl. 2, fig. 9
Z4555a,b	514	Pl.2, fig. 11

Proceratopyge sp. cf. P. gordonensis Jago

Proceratopyge sp. cf. P. gordonensis Jago in Jell, Hughes & Brown, 1991

Z3615-Z3621

Figured specimens Location: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1987. *Proceratopyge gordonensis* Jago, p. 222, pl. 26, figs. 1–10; pl. 27, figs 1–8. 1991. *Proceratopyge* sp, cf. P. *gordonensis*; Jell, Hughes and Brown, p. 467, fig. 6A–G.

Remarks: This suite of specimens bear GST numbers and TMAG numbers in ink.

TMAG	GST	FIGURE	LOCALITY (All Higgins Creek)
Z3615	14402	6A	Loc. 9
Z3616	14403	6B	Loc. 1
Z3617	14404	6C	Loc. 7
Z3618	14405	6D	Loc. 8
Z3619	14406	6E	Loc. 1
Z3620	14407	6F	Loc. 1
Z3621	14408	6G	Loc. 5

Pseudagnostus sp.

Pseudagnostus sp. in Jell, Hughes and Brown, 1991

Z3582, Z3589–Z3605, Z3664

Figured Specimens Location: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Pseudagnostus sp. Jell, Hughes and Brown, p. 463, figs. 4,5.

Remarks: Specimen GST14395 is listed in "Material" but was not figured.

TMAG	GST	FIGURE
Z3582.1	,214381	4A
Z3589.1	,214383	4C, D
Z3590.1	,214384	4E, F
Z3591	14385	4H
Z3592	14386	41
Z3593	14387	4J
Z3594.1	,214388	4K, L
Z3595	14390	5A
Z3596	14391	5B
Z3597	14392	5C
Z3598.1	,214393	5D
Z3599.1	.214394	5E, F
Z3601	14396	5G
Z3605	14397	5H
Z3602	14398	51
Z3603	14399	5J
Z3604.1	,214000	5K
Z3605	14401	5L
Z3664	14382	4B, G

Pseudagnostus sp. in Jago and Brown, 1991

Z3325

Figured Specimen

Locality: Huskisson River area Formation: Huskisson Group

Age: Late Cambrian

1991. Pseudagnostus sp. in Jago and Brown, p. 63, pl. 2P.

Remarks: The specimen is an internal or external mould in grey or black siltstone. Latex casts of these were made for photographic purposes but did not accompany the specimens when transferred from the Geological Survey. Z3325 = GST 15030.

Pseudagnostid indet. in Jell, Hughes and Brown, 1991

Z3606.1,2, Z3607 Figured Specimens Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Pseudagnostus indet. in Jell, Hughes and Brown, fig. 2L and fig. 3L respectively.

Remarks: The specimens appear on the plates cited but are not included in the text, appearing only in the captions. The equivalencies are:

TMAG GST FIGURE LOCALITY Z3606.1.214363 2L Loc. 5 Z3607 14378 3L Loc. 7

Effaced pseudagnostid in Jell, Hughes and Brown, 1991

Z3611.1,2

Figured specimen Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. effaced pseudagnostid, Jell, Hughes and Brown, fig. 2C.

Remark: Specimen Z3611 = GST14356. As with *Pseudagnostus* indet. (see above) this specimen is mentioned only in the caption, not in the text.

Pseudagnostus (Pseudagnostus) idalis huskissonensis Jago and Brown

Pseudagnostus (Pseudagnostus) idalis Jago and Brown, 1992

Z3319

Holotype

Z3296b, Z3309-Z3315, Z3317, Z3319, Z3326, Z3328-Z3334

Figured Paratypes

Locality: Huskisson River area Formation: Huskisson Group

Age: Late Cambrian

1967. Pseudagnostus idalis Opik, p. 153, pl. 62, figs. 8, 9; pl. 63, figs. 1,3

1992. Pseudagnostus (Pseudagnostus) idalis huskissonensis (Opik), Jago and Brown, p. 63, pl. 2 fig. A.

Remarks: The specimens are internal or external moulds in grey or black siltstone. Latex casts of these were made for photographic purposes but did not accompany the specimens when transferred to the TMAG. The equivalencies are:

TMAG	GST	FIGURE
Z3296b	15001b	1W
Z3300	15015	2D
Z3309	15014	2B
Z3311	15016	20 on slab with Z3299 Agnostus (Homoagnostus sp.)
Z3312	15017	2G
Z3313	15018	1U
Z3314	15019	2E
Z3315	15020	2C
Z3317	15022	1V
Z3319	15024	2A
Z3328	15033	2F
Z3329	15034	2H
Z3330	15035	2J
Z3331	15036	2N
Z3332	15037	2K
Z3333	15038	2L
Z3334	15039	2M
Z2336	15031	21

Pseudagnostus (Sulcatagnostus) sp.

Pseudagnostus (Sulcatagnostus) sp , in, Jell, Hughes and Brown 1991

Z3609, Z3610

Figured Specimens Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Pseudagnostus (Sulcatagnostus) sp. Jell, Hughes and Brown, p. 463, fig. 3J, K.

Remarks: Specimen Z3610 (= GST14376) is Fig. 3J; Z3609 (= GST14377) is Fig. 3K. Both are

from the same locality.

Rhaptagnostus convergens (Palmer)

Rhaptagnostus convergens (Palmer); Jell, Hughes and Brown, 1991

Z3614a, b

Figured Specimen Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1955. Pseudagnostus convergens Palmer, pp. 96–97, pl. 19, figs. 14,15. 1977. Rhaptagnostus convergens (Palmer); Shergold, p. 87, pl. 16, fig. 1

1991. Rhaptagnostus convergens (Palmer); Jell, Hughes and Brown, p. 466, fig. 3N, 0.

Remarks: The specimen is a mould and cast. A latex cast of the mould is present and was figured. Z3614 = GST14380.

Rhaptagnostus miji Jell, Hughes and Brown

Rhaptagnostus miji Jell, Hughes and Brown, 1991

Z3613

Holotype

Z3577-Z3580, Z3588, Z3611-Z3612, Z3665, Z3668

Figured Specimens Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Rhaptagnostus miji Jell, Hughes and Brown, p. 466, fig2D-F, K (left), 3A-F

Remarks: Z3613 (= GST14368) is incorrectly given as GST14357 in the caption for figure 2D. The equivalencies are:

TMAG	GST	FIGURE
Z3577	14369	3C on slab with Z3580 Wujiajiania distorta
Z3578	14370	3D on slab with Z3576 Lotagnostus tullahensis and Z3579
Z3579	14371	3E on slab with Z3576 Lotagnostus tullahensis and Z3578
Z3580	14459	3C
Z3588	14365	2K(left) on slab with Z3587 Micragnostus sp. cf. M. intermedius
Z3611	14357	2E, F
Z3612	14358	2D
Z3613	14367	3A Holotype
Z3665	14368	3B on slab with Z3668
Z3668	14372	3F on slab with Z3665

Wujiajiania distorta Jell. Hughes and Brown

Wujiajiania distorta Jell, Hughes and Brown, 1991

Z3648

Holotype

Z3580, Z3643–Z3647, Z3649–Z3650, Z365–Z3659, Z3663, Z3666, Z3667, Z3682

Figured Paratypes Locality: Higgins Creek Formation: Huskisson Group

Age: Late Cambrian

1991. Wujiajiania distorta Jell, Hughes and Brown, p. 477, figs. 11, 12.

Remarks: The equivalencies are:

TMAG	GST	FIGURE	LOCALITY
Z3643	14438	11A	Loc. 3
Z3644	14439	11B	Loc. 9
Z3645	14441	11D	Loc. 3
Z3646a,b	14440	11C	Loc. 2
Z3647	14443	11F	Loc. 3
Z3648	14442	11E	Loc.9
Z3649	14454	12B	Loc. 9
Z3650	14456	12D	Loc. 3
Z3652	14458	12F	Loc. 9
Z3653	14446	111	Loc. 9 on slab with Z3654 and Z3655
Z3654	14447	111	Loc. 9 on slab with Z3653 and Z3655
Z3655	14448	111	Loc. 9 on slab with Z3653 and Z3654
Z3656	14445	11H	Loc. 9
Z3666	11449	11J	Loc. 9
Z3667	11450	11J	Loc. 9
Z3657	14451	11K	Loc. 9 on slab with Z3658
Z3658	14452	11K	Loc. 9 on slab with Z3657
Z3682	14453	12A	Loc. 9
Z3659a,b	14455	12C	Loc. 9
Z3663	14444	12E	Loc. 9
Z3580	14459	12G	Loc. 9 on slab with Z3577, Raptagnostus miji.

Dendroidea

Note: While the authors of the paper in which the following specimens are figured are R.B. Rickards, P.W. Baillie and J.B. Jago (1990), it is noted therein (p. 211) that authorship of new taxa should be ascribed to R.B. Rickards. Rickards lists the suite of specimens examined but does not designate paratypes.

Aellograptus savitskyi Obut

Aellograptus savitskyi Obut; Rickards, 1990

Z3691, Z3692

Figured Specimens

Locality: Scopus, Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1964. Aellograptus savitskyi Obut, p. 306, pl. 3, fig. 2.

1990. Aellograptus savitskyi; Rickards in Rickards, Baillie & Jago, p. 230, figs. 31, 15, 16.

Remarks: The equivalencies are: Z3691 = GST14213, fig. 15; Z3692 = GST14214, fig. 16.

Archaeolafoea monegettae (Chapman)

Archaeolafoea monegettae (Chapman); Rickards 1990

Z2756

Figured Specimen

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1919. Mastigograptus monegettae Chapman; p. 391, pl. 19, figs. 2, 2a, pl.20, fig. 6.

1936. Archaeolafoea monegettae(Chapman); Chapman & Thomas, p. 200, pl. 14, figs. 6-8.

1971. Archaeolafoea monegettae (Chapman); Quilty, p. 177, pl. 13, figs. 5-7; text fig. 3.5, 3.6.

1990. Archaeolafoea monegettae(Chapman); Rickards in Rickards, Baillie & Jago, p. 229. figs. 3G, 14.

Remarks: ZS2756 (= GST14193) is on the reverse of Z2690 (= GST14182), a figured paratype of *Aspidograptus smithtonensis* Rickards. Equivalency is: Z2756 = GST14193 = Fig. 14.

Aspidogrptus smithtonensis Rickards

Asidograptus smithtonensis Rickards 1990

Z2689a1,a2, a3

Holotype

Z2690

Figured Syntype

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1990. Aspidograptus smithtonensis Rickards in Rickards, Baillie & Jago, p. 216, figs. 6A, 7A.

Remarks: The holotype of A. *smithtonensis* is very fragile and now consists of a larger slab and three fragments (Z2689a1,a2 and a3. and the counterpart Z2689b. The holotype figured is Z2689a1,a2,a3. The Paratype Z2690 (figure 7A) also bears on its reverse specimen Z2756 (GST14193), the figured specimen of *Archaeolafoea mongettae* (Chapman) Rickards. Equivalencies are:

TMAG GST FIGURE Z2689 14181a,b. 6A

Z2690 14182 7A on slab with Z2756 Archaeolafoea monegettae

Callograptus praesalteri Rickards

Callograptus prasesalteri Rickards 1990

Z2727

Holotype

Z2728-Z2737

Ten Syntypes

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idmean)

1990. Callograptus praesalteri Rickards in Rickards, Baillie & Jago, p. 222, figs. 3B, 10.

Remarks: The equivalency is: Z2727 = GST14187 = fig. 10 - Holotype.

Dendrograptus aff. D. hallianius Prout)

Dendrograptus aff..D. hallianius Prout; Rickards 1990

Z2676

Figured Specimen

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1851. aff. Graptolithus hallianus Prout, pp. 187-191, fig. 1 (non 2).

1947. aff. Dendrograptus hallianus (Prout); Ruedemann, p. 211, pl. 18, figs. 1-10.

1971. Dendrograptus aff. hallianus; Quilty, p. 183, fig. 4.1.

1990. Dendrograptus aff. hallianus; Rickards in Rickards, Baillie & Jago, p. 212, fig. 4.

Remarks: The equivalency is: Z2676 = GST14278 = fig. 4. in Rickards et al, 1990).

Desmograptus quiltyi Rickards

Desmograptus quiltyi Rickards 1990

Z2691

Holotype

Z2700, Z2703a,b, Z2698, Z2696a,b,c

Figured Syntypes

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1990. Desmograptus quiltyi, Rickards in Rickards, Baillie & Jago, p. 218, figs. 3E, 6B, 7B, 8, 9.

Remarks: Rickards identifies the holotype and notes "...numerous other specimens..." The figured specimens here identified as syntypes are listed below.

TMAG	GST	FIGURE
Z2691	14183	8A Holotype
Z2692a,b	14199	6B Figured syntype
Z2696a,b,c	14203	9B Figured syntype
Z2698	14205	9A Figured syntype
Z2700	14207	8B Figured syntype
Z2703a,b	14210	7B Figured syntype

Dictyonema cf. ramosissimum Ruedemann

Dictyonema ramosissimum Ruedemann 1947; Rickards 1990 Z2686

Figured Specimen

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1947. Dictyonema ramosissimum Reudemann, p. 164, pl. 2, figs. 30–32.

1990. *Dictyonema* cf. *ramosissimum* (Reudeman); Rickards in Rickards, Baillie & Jago, p. 213, fig. 3H, 5.

Remarks: The equivalency is: Z2686=GST14257

Mastigograptus serialis (Chapman and Thomas)

Mastigograptus serialis (Chapman and Thomas); Rickards 1990

Z2752

Figured specimen

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean

1936. Archaelafoea serialis Chapman and Thomas; p. 201, pl. 14, figs. 9-11; pl. 15, figs. 12, 12b.

1945. Archaeolafoea serialis; Thomas & Henderson, p. 6, pl. 1, fig. 3a.

1948. Archaeolafoea serialis; Harris & Thomas, p. 43, fig. 1.

1962. Archaeolafoea serialis; Skwarko, p. 239, fig. 5.21.

1971. Mastigograptus serialis (Chapman and Thomas); Quilty, p. 177, pl. 13, figs. 8, 9, text. Fig. 3.7.

1990. Mastigograptus serialis); Rickards in Rickards, Baillie & Jago, p. 228, figs. 3F, 13.

Remarks: The equivalency is: Z2752 = GST 14231 = Rickards in Rickards et al (1990) Fig. 13.

Palaeodictyota sp.

Palaeodictyota sp.in Rickards, 1990

Z2740

Figured specimen

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1990. Palaeodictya sp. Rickards in Rickards, Baillie & Jago, p. 236, figs. 3A, 12.

Remarks: The equivalency is: Z2740 = GST14224 = Fig. 12.

Polygonograptus mellaensis Rickards

Polygonograptus mellaensis Rickards, 1990

Z2738

Holotype

Z2739

Syntype

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1990. Polygonograptus mellaensis Rickards in Rickards, Baillie & Jago, p. 224, fig.3C, 11A, 11B.

Remarks: The equivalencies are:

TMAG GST

Z2738 14184 Fig. 11A, Holotype

Z2739 14185 Syntype

14189 Fig. 11A, Figured Syntype

Thallograptus sp.

Thallograptus sp. in Rickards, 1990

Z2745, Z2746

Figured Specimens

Locality: Scopus; Circular Head sheet @CQ336BO5

Formation:

Age: Late Cambrian (Idamean)

1990. Thallograptus sp. Rickards in Rickards, Baillie & Jago, p. 227, figs. 11c, 11d

Remarks: The equivalencies are:

TMAG GST FIGURE Z2745 14194 11D Z2746 14195 11C

Vertebrate Palaeontology

PISCES

Acrolepis tasmanicus Johnston & Morton

Acrolepis tasmanicus Johnston & Morton 1891

Z1374, Z1375

Holotype

Z1996

Figured Specimen

Locality: Tinder-Box Bay, D'Entrecastreau Channel

Formation: Knocklofty Formation

Age: Early Triassic

1891. Acrolepis tasmanicus Johnston & Morton, p. 152, pls. 2-3.

1930. Acrolepis tasmanicus; Wade, p. 125

1937. Acrolepis tasmanicus; Aldinger, p. 261.

1964. Arcolepis tasmanicus; Crespin, p. 26.

1974. Acrolepis tasmanicus; Cosgriff, p. 5.

1980. Acrolepis tasmanicus; Dziewa, p. 151, pls. 2,3.

2008. Arcolepis tasmanicus; Bender, p. 33, fig. 3.

Remarks: The holotype consists of the left (Z1374) and right (Z1375) impressions of a nearly complete vertically compressed fish. Z1374 was previously registered as B930 and the counterpart Z1375 has the number B931. The figured specimen (Z1996) is a right lateral impression of a laterally compressed fish (Dziewa, p. 151, pls. 2, 3.). The location it was taken from is unknown. Its age is inferred by Dziewa. Specimen (Z1996) was not known to Johnston and Morton nor was it listed by Crespin. It has been erroneously listed as a paratype by some authors.

Acrolepis? hamiltoni Johnston & Morton

Acrolepis? hamiltoni Johnston & Morton 1890

Z1337

Holotype (by monotypy)

Locality: Flagstone Quarry near Cascades, Hobart, Tasmania

Formation: Knocklofty Formation

Age: Early Triassic

1890. Acrolepis? hamiltoni Johnston and Morton, p. 102, figs. 1,2.

1891. Acrolepis hamiltoni; Johnston and Morton, p. 154

1930. Acrolepis hamiltoni; Wade, p. 125.

1937. Acrolepis hamiltoni; Aldinger, p. 259

1964. Acrolepis? hamiltoni; Crespin, p.26.

1974. Acrolepis hamiltoni; Cosgriff, p. 5.

1980. Acrolepis hamiltoni; Dziewa, p. 150.

2008. Acrolepis? hamiltoni, Bender, p. 33, fig. 4.

Remarks: This specimen is a left lateral impression of a laterally compressed specimen. It also bears the TMAG number TM2612. Dziewa (1980) discusses the species noting that the right lateral impression was missing. Crespin correctly records that only the one part was in the collection at the time of her audit. The counterpart may never have existed.

actinopterygian fish

actinopterygian fish of uncertain affinity in Bender 2008

Z1771

Figured specimen

Locality: Kemp and Denning Quarry, 10 mile Hill, Austin's Ferry, Tasmania

Formation: Knocklofty Formation

Age: Early Triassic

2008. actinopterygian fish of uncertain affinity, Bender, p.34, fig. 5.

AMPHIBIA

Banksiops townrowi (Cosgriff)

Blinasaurus townrowi Cosgriff 1974

Z3721.1

Fibreglass cast of holotype

Z3721b,c

Fibreglass casts of figured paratypes

Locality: Old Beach (holotype), Midway Point and Lime Bay (paratypes)

Formation: Knocklofty Formation

Age: Early Triassic

1974. Blinasaurus townrowi Cosgriff, p. 7, figs. 1–29.

1998. Banksia townrowi (Cosgriff); Warren and Marsicano, p. 338.

2000. Banksiops townrowi (Cosgriff); Warren and Marsicano, p. 186.

Remarks: The holotype and paratypes are housed in the Geology Department, University of Tasmania collection (UTGD). Quality fibreglass casts and portions of the collection are housed in the TMAG. Equivalencies are:

TMAG	UTGD	COMPONENT	LOCALITY
Z3721	87785	Nearly complete skull	Old Beach
Z3721b	85700	Lower jaw fragment	Midway Point
Z3721c	87500	Incomplete interclavicle	Lime Bay

Bothriceps australis Huxley

Bothriceps australis Huxley 1859 Z4579, Z4582, Z4583, Z4584, Z4586

Figured specimens

Locality: Rock platform at Eli Point, Koonya, Tasman Peninsula

Formation: Lower Upper Parmeener Group Age: Latest Permian or earliest Triassic 1859. *Bothriceps australis* Huxley, p.642.

2011. Bothriceps australis; Warren, Rozefelds and Bull, p. 740, figs. 2-8.

Remarks: Specimen Z4579, an articulated vertebral spiral, is figured at 8A–E; Z4584, an isolated centrum, is figures 8F–G. Specimen Z4582 a vertebral column and isolated centra, is figures 7A–G. Z4586 is figure 6, a posterior half of a right mandibular ramus. Z4586, figures 5A–C, show a mandible. Z4586, a skull, is figure 3A–C and Z4583 also a skull, figures 2A–B.

Chomatobatrachus halei Cosgriff

Chomatobatrachus halei Cosgriff 1974

Z2305

Fibreglass cast of holotype

Z3914

Fibreglass cast of figured paratype

Z3913

Fibreglass cast of paratype

Locality: Meadowbank Dam, Derwent River (holotype) and Midway Point (paratype)

Formation: Knocklofty Formation

Age: Early Triassic

1974. Chomatobatrachus halei Cosgriff, p. 44, figs. 30–43.

Remarks: The original specimens are housed in the Geology Department, University of Tasmania collection. The three quality fibreglass casts held by the TMAG are from among the twenty-three specimens examined by Cosgriff.

TMAG	UTGD	COMPONENT	LOCALITY
Z2305	80738	Complete skull	Meadowbank Dam
Z3913	87521	Lower jaw fragment	Old Beach
Z3914	85704	Lower left jaw ramus	Midway Point

Deltasaurus kimberleyensis Cosgriff

Deltosaurus kimberleyensis Cosgriff 1965

Z3722

Fibreglass cast of holotype Locality: Poatina Road Formation: Cluan Formation

Age: Early Triassic

1965. *Deltosaurus kimberleyensis* Cosgriff, p. 68, Figs. 1–9. 1974. *Deltosaurus kimberleyensis* Cosgriff, p. 71, figs. 44–47.

Remarks: The cast, of a left posterolateral skull fragment, bears a University of Tasmania, Geology Department collection number UTGD54626. The original is in the collections of the Geology Department, University of Tasmania

Derwentia warreni Cosgriff

Derwentia warreni Cosgriff, 1974 Z3933

Fibreglass Cast of holotype

Locality: Old Beach

Formation: Cluan Formation

Age: Early Triassic

1974. Derwentia warren Cosgriff, p. 75, fig. 48.

Remarks: The cast is of a nearly complete skull. It bears the University of Tasmania Geology Department number UTGD 87784. The original specimen is in the collection of the Geology Department, University of Tasmania.

Temnospondyl left femur

Labyrinthodont humerus in Twelvetrees and Pettard, 1900

Z163a,b,c, Z3553

Figured Specimens

Locality: Quarry, near Government House, Hobart

Formation: Knocklofty Formation

Age: Early Triassic

1900, Labyrintodont humerus; Twelvetrees and Petterd, p. 28, pl., figs. 1–4.

1950. Captorhinomorph femur; David, T.W.E.

1974. Temnospondyl left femur; Cosgriff W., p. 5.

2011. Temnospondyl femora; Akerman. and Rozefelds, p. 5

Remarks: The materials included here consist of two parts (Z163a,b) of a femur, a thin section (Z163c) made from Z163b and a second specimen (Z3553) a "replica of a cast" in the collection of the British Museum. The original humerus (Z163) had been in the Tasmanian Museum from 1856 and is one of the specimens examined and figured by Twelvetrees and Petterd. The second (Z3553), is a replica of a cast sent by Twelvetrees to Prof. Owen, British Museum for study. It was identified by Prof. Owen and labelled as a "humerus of a labyrinthodont reptile from sandstone, probably carboniferous, Tasmania." An associated label reads "humerus of a labyrinthodont reptile....examined by Professor Owen," On its reverse, attributed to an authority at the British Museum, is a pencilled notation "try Eosaurus of Marsh." The notation on the reverse also carries a later added citation to the Proceedings of the Royal Society of Tasmania for 1856, p. 32. The replica "cast" was sent sent to the Tasmanian Museum about 1898. Twelvetrees and Petterd note the differences in measurements of the two casts. The complicated history of the twospecimens is fully explored in Ackerman and Rozefelds (2011).

Temnospondyl jaw fragment

Lepidostrobus muelleri Johnston 1885d

Z1376

Holotype (by monotypy)

Locality: Campania

Formation: Knocklofty Formation or stratigraphic equivalent

Age: Triassic?

1885d. Lepidostrobus muelleri Johnston, p. 225, fig. 1.

1888. Lepidostrobus muelleri Johnston, pl. 22, fig. 12

1925. Lepidostrobus muelleri Johnston; Walkom, p. 88

1964. Lepidostrobus muelleri Johnston; Crespin, p. 26.

1964. jaw of an amphibian, M. Banks quoted in Crepin, p. 26.

2011. temnospondyl jaw fragment; Rozefelds and Warren, p. 459.

Remarks: The specimen has a large paper label affixed to one side of the slab. Its content is unreadable because of fading. The specimen was previously registered as B1361. Walkom (1925) incorrectly cited the date of Johnston's publication as 1883 (1884). Doubts that this specimen is a fructification have been noted by various observers. Walkom (1925) stated that the specimen could not be a *Lepidostrobus* "...which is confined to rocks of the Palaeozoic." He further observed: "I am unable to determine its characters sufficiently well to place it generically." Crespin cited M.R. Banks as regarding the specimen as the jaw of an amphibian, Rozefelds and Warren concur.

REPTILIA [SP?]

Dicynodontoidea incertae sedis

Dicynodontoidea incertae sedis Rozefelds, Warren, Whitfield and Bull 2011 Z3714, Z3715

Figured specimens

Locality: Near Koonya, south coast of Norfolk Bay, Tasman Peninsula

Formation: Upper Parmeener Supergroup

Age: Permo-Triassic

2011. Dicynodontoidea incertae sedis Rozefelds, Warren, Whitfield and Bull, p. 1158.

Remarks: Z3714, a maxillary fragment is figure 2A-I. Z3715, a possible radius, is figure 3A-F.

MONOTREMATA

Megalibgwilia ramsayi (Murray)

Zaglossus robusta Dun 1895

Z2031.1-29

Figured specimens

Locality: Montagu Cave

Formation:

Age: Pleistocene

1895. Echidna (Proechidna) robusta Dun, p.121, pl. 11 figs.5,6; pl.12.

1978a. *Zaglossus robusta*; Murray, p. 41, figs. 1, 3d, 4b, 10c, 11a,12c, 13a, 14a, 15d 16c, 17c, 18a; pl. 1a, c–f, 2a–i.

1978b. Zaglossus ramsayi (Owen); Murray, p. 49, fig. 2A-C, 4A,D, 5A, 6G-H, 10g.

1991. Megalibgwillia ramsayi; Griffiths, Wells and Barrie, pp. 87-89, fig. 6.

Remarks: This almost complete skeleton includes a cranium (Z2031.1) and 28 other bones or pieces of bone. Of these 11 are figured by Murray (1978a) and the cranium (ventral aspect) by Griffiths, Wells and Barrie (1991).

MARSUPIALIA

Wynyardia bassiana Spencer

Wynyardia bassiama Spencer 1900

Z237

Holotype

Z237.1, Z237.2, Z237.3, Z237.4, Z237.5, Z237.6, Z237.7

Bone fragments and ancillary materials

Z3504

Matrix from which skeleton was removed

Locality: Table Cape near Wynyard

Formation: Turritella Zone, Table Cape Beds

Age: Early Miocene

1900. Wynyardia bassiana Spencer, pp. 716–795, figs. 1–4, pls. 49–50; figs. 1–11.

1931. Wynyardia bassiana; Jones, F.W., pp. 96–115, pl. 5, text figs. 1–10.

1955. Wynyardia bassiana; Gill, 117.

1964. Wynyardia bassiana; Ride, pp. 97-131.

1964. Wynyardia bassiana; Crespin, p. 26

1977. Wynyardia bassiana; Kirsch, 152 pp.

1981. Wynyardia bassiana; Haight and Murray, pp. 17-36, 8 figs.

Remarks: The skull is complete except for teeth. Assorted and associated materials include: Z237.1 the wooden box originally containing the skeleton. Boxes Z237.2 and Z237.3 containing bone fragments. Box Z237.2 has 31 fragments and a note from W.J.L. Ride dated 9.10 May 1965 concerning missing bone fragments; Box Z237.3 contains remant materials from the fluorine tests described by Gill, 1955; of the six fragments listed only two remain in the box. Z237.4 and Z237.5 are poor quality casts of the entire skeleton and Z237.6 is the mould from which those casts were made. Z237.7 is an endocranial cast prepared by Peter Murray which

closely resembles, but is not, the cast figured by Haight and Murray, fig. 1. Z3504 is the matrix from which the skeleton was extracted.

INCERTAE SEDIS

Superfamily Petauroidea Family Incertae Sedis

The following describes a group of seven epoxy casts. These were made from specimens collected about 1865 by Mr. Morton Allport of Hobart from the Geilston marls. They were sent to the British Museum (Natural History) to Richard Owen who in 1867 identified them as "a small kind of *Hypsiprymnus*, with probably also *Perameles* and *Phalangista*." The specimens were re-discovered in 1973 by Mr. Jack Mahoney and reported on by Tedford et al. in 1975. This publication provides the history and provenance of the specimens. The casts each bear four sets of numbers: Tasmanian Museum and Art Gallery, American Museum of Natural History, British Museum (Natural History) and the Natural History Museum, London, where the actual specimens are residing. The equivalencies of the various numbers assigned to the specimens and casts are:

TMAG	NHM	AMNH	BM(NH)
Z3264.1	40157	105055	40157
Z3264.2	82000	105062	32000
Z3264.3	82001	105061	32001
Z3264.4	82002	105057	32002
Z3264.5	82003	105060	32003
Z3264.6	82004	105056	32004
Z3264.7	82006	105059	32006

Genus and species indet. A.

Z3264.2, Z3264.3, Z3264.5, Z3264.7

Casts of figured specimens

Locality: Geilston Bay, Southern Tasmania

Formation: Geilston Bay Travertine

Age: Late Oligocene

1973. Likely phalangerid; Tedford, R.H., M.R. Banks, N.R. Kemp, I. McDougall and F.L. Sutherland, p. 142.

1998. genus and species indet. A.; Tedford, R.H. and N.R. Kemp, p. 7, fig. 3-6.

Remarks: Z3264.2 is a left M1, fig. 3A,B; Z3264.3 is a left M2 or 3, Fig. 4 A, B. C; Z3264.5 is a left P3, fig. 5 A, B, C; Z3264.7 is a left ramal fragment, fig. 6, D, E, F.

Genus and species indet. B.

Z3264.1, Z3264.4, Z3264.6 Casts of figured specimens

Locality: Geilston Bay, Southern Tasmania

Formation: Geilston Bay Travertine

Age: Late Oligocene

1973. Likely phalangerid; Tedford, R.H., M.R. Banks, N.R. Kemp, I. McDougall and F.L. Sutherland, p. 142.

1998. genus and species indet. B.; Tedford, R.H. and N.R. Kemp, p. 14; figs. 10-12

Remarks: Z3264.1 is a fragment of a left ramus, fig. 10 a-c; Z3264.6 is a fragment of a left p3, fig 11 A, B, C; Z3264.4 is a right lower incisor, fig. 12 A,B,

Described as a Vertebrate, probably a Plant

Thureau's Microsaurian

Thureau's microsaurian in Johnston 1902 Z236

Figured Specimen (cast)

Locality: Spoil heap near Railton

Formation: Unknown

Age: Carboniferous-Late Permian

1902a. Thureau's microsaurus: Johnston, 1902, p. 9-10.

Remarks: Johnston recites the full history of the specimen. The original had been sent by Mr. G. Thureau to Professor F. McCoy, Melbourne Museum for identification. McCoy died before making the identification and the original specimen was not returned. The cast (Z236) had been prepared by Thureau prior to his sending the original to the Melbourne Museum. The original has since been apparently lost at the Melbourne Museum. Ann Warren (pers. comm. 21/5/2010) examined the specimen and advised it was probably a plant fossil, not a vertebrate fossil.

Botanical Palaeontology

Regrettably, at some time in the late 1920s or early 1930s, large segments of the fossil plant collections, especially those made by R. M. Johnston, were disposed of by Tasmanian Museum authorities. In particular all of the Cainozoic plants figured and described by Johnston in 1888 and later papers. Unknown quantities of the Triassic plant fossils were also disposed of including many that had been on loan, but returned after study, by Dr. A.B. Walkom. It is difficult to assess whether Carboniferous - Early Permian plant fossils may also have been lost. The difficulties associated with identifying types or figured specimens of plant fossils from poor quality drawings and/or composite illustrations makes assessment of specific early types difficult and must await expert revision of the extant collection.

PLEISTOCENE

Donatia novae-zelandiae Hook f. in Gibson, Kiernan and Macphail

Donatia novae-zelandiae Hook.f. in Gibson, Kiernan and Macphail, 1987 Z4390

Figured Specimen

Locality: Dante Site, King River at 230 m. ASL

Formation: Palaeosol

Age: Late Pleistocene (prior to Late Last Glacial Maxima)

1987. Donatia novae-zelandiae Hook. f. in Gibson, Kiernan and Macphail. pp. 35-42

Remarks: The specimen has an age of 21180+-370BP

Mesozoic

Ashicaulis broganii (Tidwell, Munzing and Banks) Tidwell

Millerocaulis broganii Tidwell, Munzing and Banks 1991

Z2372a-e. Holotype

Z2384

Paratype

Locality: holotype: locality 2 - gravels in road cut on Coles Bay Road 0.9 km north of Swanwick turnoff; paratype: locality 4 - gravels west of Mitchelmores Creek, east of River Road, little Swanport

Formation:

Age: Holocene gravel derived from older source rock, probably Mesozoic

1991. Millerocaulis broganii Tidwell, Munzing and Banks, p. 98, pl. 3, figs. 2-8; text figs. 1G, 2A.

1994. Ashicaulis broganii (Tidwell, Munzing and Banks) Tidwell, p. 256.

Remarks: The text uses the notation Z2372.1,2,3,4,5 while the specimens are labelled Z2372a,b,c,d,e. The holotype consists of a sawn piece (Z2372a) and four glass-mounted thin-sections from that piece (Z2372b,c,d,e). The paratype is a single entire specimen.

Ashicaulis johnstonii (Tidwell, Munzing and Banks) Tidwell

Millerocaulis johnstonii Tidwell, Munzing and Banks 1991

Z2366a,b

Holotype Z2367a-I

Paratype

Locality: Holotype: locality 1, Lake Leake Road gravel pit, northwest of Swansea. Paratype:
Locality 3, gravels on northwestern edge of floodplain of White Hut Creek, Little Swanport
Formation:

Age: In Holocene gravel derived from an older source rock, probably Mesozoic

1991. *Millerocaulis johnstonii* Tidwell, Munzing and Banks. p. 94, pl 2, figs. 1–6; text figs. 1F, 2D, 2E.

1994. Ashicaulis johnstonii (Tidwell, Munzing and Banks) Tidwell. p. 256.

Remarks: The text uses the notation Z2366.1,2 while the specimens are labelled Z2366a,b and similarly for the paratype. The holotype consists of a glass-mounted thin-section (Z2366a) and a sawn slab (Z2366b). The paratype (unfigured) consists of four glass mounted thin sections (Z2367a,b,c,d) [a curatorial note attached warns that slide Z2367d was broken in the past] and eight larger sawn slabs plus four fragments. Of these Z2367e has tape marked with the locality and the number 1B. Specimen Z2367g bears a similar tape with locality and the number 2.

Ashicaulis richmondii (Tidwell) Tidwell

Millerocaulis richmondii (Tidwell) Tidwell, 1994

Z2337

Holotype

Z2338

Paratype

Locality: Site 1, About 100 meters east and west of Lune River Road north of its juncture with Leprena Track, South Ida Bay

Formation:

Age: Early mid-Jurassic (Bromfield et al. 2007)

1993. Osmundacaulis richmondii , Tidwell and Pigg 1993, p. 145, pl. 2, fig. 8, pl. 3, text fig. 2A.

1994. Osmundacaulis richmondii; Tidwell and Ash, p. 422.

Remarks: The holotype consists of a single glass-mounted thin section (Z23372) and eight sawn slabs and fragments (Z2337b–i). The paratype consists of a single small slide (Z2338a) and a small sawn slab (Z2338b).

Ashicaulis spinksii (Tidwell, Munzing and Banks) Tidwell

Millerocaulis spinksii Tidwell, Munzig and Banks 1991

Z2368

Holotype

Z2368a-d, Z2370

Paratypes

Z2369a,b; Z2370a,b.

Locality: locality 2. Gravels in road cut and surrounding area on Coles Bay Road, 0.9 km north of Swanwick turnoff

Formation:

Age: In Holocene gravel derived from older source rock, probably Triassic

1991. Millerocaulis spinksii Tidwell, Munzing and Banks, p. 96, pl. 4, figs. 1-3,6,7; text figs 1A, 2C.

1994. Ashicaulis spinksii (Tidwell, Munzing and Banks) Tidwell. p. 257.

Remarks: The text uses the notation Z1234,1,2, etc. while the specimens are labelled Z1234a,b, etc. The holotype consists of two glass-mounted thin-sections (Z2368c,d) and two parts of a small sawn slab (Z2368a,b). The paratype Z2369 consists of a glass-mounted thin-section (Z2369a) and a fragment from the cut specimen (Z2369b). The thin section, Z2369a (plate 4, figure 1) is located on the slide holding the holotype of *Millerocaulis brogaii* Tidwell et al. 1991 and is stored with the types of that species. Paratype Z2370a,b consists of two glass-mounted thin-sections and the slab from which they were cut. Z2370b is the basis for plate 4, figure 3.

Ashicaulis swanensis (Tidwell, Munzing and Banks) Tidwell

Millerocaulis swanensis, Tidwell Munzing and Banks 1991

Z2373a,b

Holotype

Z2374a,b,c

Paratype

Locality: locality 2 -Gravels in a road cutting and surrounding area on Coles Bay Road, 0.9 km north of the Swanwick turnoff

Formation:

Age: In Holocene gravel derived from older rock, probably Triassic Age

1991. *Millerocaulis swanensis* Tidwell, Munzing and Banks, p. 99, pl. 4, figs 4,5,8–11; pl. 5, figs. 1–8. 1994. *Ashicaulis swanensis* (Tidwell, Munzing and Banks) Tidwell, p. 257.

Remarks: The text uses the notation Z2373.1,2, etc. while the specimens are labelled Z2373a,b, etc. The holotype Z2373a (pl.4, fig. 4) is the entire specimen from which Z2373b was cut. It is a glass-mounted thin-section (pl. 4 figs. 9, 10; pl. 5, figs. 1–8). The paratype Z2374a,c are the fragments from which the sections Z2374b were made.

Ashicaulis websterii (Tidwell, Munzing and Banks) Tidwell

Millerocaulis websterii Tidwell, Munzing and Banks 1991

Z2371a.b

Holotype (original designation)

Locality: locality 2 - gravels in road cut and surrounding area on Coles Bay Road, 0.9 km north of Swanwick turnoff

Formation:

Age: Holocene gravel derived from older source rock, probably Mesozoic Age

1991. Millerocaulis websterii Tidwell, Munzing and Banks, p. 97, pl 3, fig. 1, text fig. 1C.

1994. Ashicaulis websterii (Tidwell, Munzing and Banks) Tidwell, p. 257.

Remarks: The text uses the notation Z2371.1,2,3 while the specimens are labelled Z2371a,b c. The holotype consists of a thin slab from which the glass-mounted thin-section was made.

Ashicaulis wrightii (Tidwell, Munzing and Banks) Tidwell

Millerocaulis wrightii Tidwell, Munzing and Banks 1991

Z2365

Holotype (original designation)

Locality: Near Lune River, south of Ida Bay, southern Tasmania

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1991. Millerocaulis wrightii Tidwell, Munzing and Banks, p. 93, pl. 1, text-figs 1B, 2B.

1994. Ashicaulis wrightii (Tidwell, Munzing and Banks) Tidwell, p. 257.

Remarks: The text uses the notation Z2365,1, 2, 3, etc. while the specimens are labelled Z2365a,b,c etc. The holotype consists of one glass mounted thin section (Z2365a) and a sawn section (Z2365b) with fragments (Z2365c).

Cladophlebis indica (Oldham and Morris) Sahni and Rao

Cladophlebis indica (Oldham and Morris) Sahni and Rao in Tidwell, Kim and Kimura 1987 Z2297, Z2298a,b.

Figured Specimens

Locality: Site 1. Junction of Lune River Road and Leprena Track, near Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1987. Cladophlebis indica; Tidwell, Kim and Kimura; p. 160, pl. 1, figs. 4, 7; pl. 2, figs. 5, 6; text-fig. 2A.

Remarks: Specimen Z2297 is figured on plate 1, fig. 7, pl. 2, fig. 6 and text-fig. 2A (ii-v).

Specimen Z2298a appears on pl. 1, fig. 4, pl. 2, fig. 5 and text-fig. 2A (i).

Coniopteris websterii Tidwell, Kim and Kimura

Coniopteris websterii Tidwell, Kim and Kimura 1987

Z2296

Holotype

Z2295

Paratype

Locality: Junction of Lune River Road and Leprena Track, near Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1987b. Coniopteris websterii Tidwell, Kim and Kimura. p. 159, pl. 2, figs. 1, 2; pl. 3; text figs 2B, 3C (i, ii).

Remarks: The holotype is an entire specimen. The paratype has been sawn but no chips or slides are extant.

Conites sp.

Conites sp. in Tidwell, Kim and Kimura 1987.

Z4727

Figured specimen

Locality: Site 1. Immediately north of Junction of Lune River Road and Leprena Track, near Ida Bay Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1987. Conites sp. in Tidwell, Kim and Kimura, p. 165, pl. 1, figs. 3,5.

Remarks: This specimen appears on the slab containing *Otozamites* sp. (Z2302) and on thin-section of *Otozamites* sp. Z2302b,c.

Heweria kempii Tidwell and Skog

Heweria kempii Tidwell and Skog 1992

Z2332a-h

Holotype

Locality: Salter's Flat, near Derwent River

Formation:

Age: Probably mid-Mesozoic, derived from Tertiary conglomerate 1992. *Heweria kempii* Tidwell & Skog, p. 267, pl. 2, 3, 4, figs. 1–4, text fig. 3.

Remarks: The holotype consists of one large and two smaller polished sawn pieces (Z2332a-c) and five glass-mounted thin-sections (Z2332d-h).

Lunea jonesii Tidwell

Lunea jonesii Tidwell 1991

Z2330a-i

Holotype

Z2331a-k; Z2333a-c

Paratypes

Locality: Near Lune River Road at site 1 south of Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1991. Lunea jonesii Tidwell, pp. 81–90, 2 text fig, pls. 1–4.

1994. Lunea jonesii Tidwell in Tidwell and Ash, p. 419.

Remarks: The holotype consists of six glass-mounted thin-sections (Z2330a-f) and three cut fragments (Z2330g-i). Z2330a has been broken around the edges of the mount; Z2330e has been broken across the specimen. The paratype, Z2331, consists of four glass-mounted thin-sections (Z2331a-d) and seven sawn fragments (Z2331e-k). All figures are of the holotype. Tidwell listed specimen Z2332 as a paratype. Through correction of a registration error that number has been changed to Z2333.

Oguracaulis banksii Tidwell, Nishida and Webster

Oguracaulis banksii Tidwell, Nishida and Webster 1989

Z2286a-e

Holotype

Z2287, Z2288a-f, Z2289, Z2290a-d

Paratypes

Locality: South Cape Road near junction with Leprena Track, near Lune River, Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1989. Oguraculis banksii Tidwell, Nishida and Webster, p. 15, pls. 1-5, text fig.

Remarks: The holotype consists of four glass-mounted thin-sections (Z2286a–c), a sawn polished block (Z2286d) and the larger block from which the preceding were cut (Z2286e). The paratype Z2287 is an uncut specimen. Paratype Z2288a–f consists of six sawn pieces. Paratype Z2290a–d consists of a glass-mounted thin-section (Z2290a - housed with holotype slides) and three sawn pieces (Z2290b–d).

Osmundacaulis andrewii Tidwell and Pigg

Osmundacaulis andrewii Tidwell and Pigg 1993

Z2382a-d

Holotype

Locality: Site 2. North of Ida Bay, between Coal Hill Road and Creekton Road

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1993. Osmundacaulis andrewii Tidwell and Pigg, p. 150; pl. 6, figs. 7–8; pl. 7, figs. 2, 5, 6; text figs. 2B, C.

1994. Osmundacaulis andrewsii Tidwell and Pigg in Tidwell and Ash, 1994. p. 422.

Remarks: The holotype consists of one small glass-mounted thin-section and three sawn fragments.

Osmundacaulis griggsii Tidwell and Pigg

Osmundacaulis griggsii Tidwell and Pigg 1993

Z2340

Holotype

Z2380

Paratype

Locality: Site 1. About 100 meters east and west of Lune River Road north of its juncture with Leprena Track, south Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1993. Osmundacaulis griggsii Tidwell and Pigg, p. 148; pl. 4, fig. 8; pl. 5, figs. 1-3; text fig. 2D.

1994. Osmundacaulis griggsii Tidwell and Pigg in Tidwell and Ash, p. 422.

Remarks: The holotype consists of a single large glass-mounted thin-section. The paratype is a single specimen polished on one end.

Osmundacaulis janii Tidwell and Pigg

Osmundacaulis janii Tidwell and Pigg 1993

Z2335

Holotype

Locality: Site 1. About 100 meters east and west of Lune River Road north of its juncture with Leprena Track

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1993. Osmundacaulis janii Tidwell and Pigg, p. 142, pl. 1, figs. 2–7, pl. 2, figs. 1–7, text figs. 1A, 1B, 3D.

1994. Osmundacaulis janii Tidwell and Pigg in Tidwell and Ash, p. 422.

Remarks: The Holotype consists of two sawn slabs (Z2335a,b) and two glass-mounted thinsections (Z2335c,d).

Osmundacaulis jonesii Tidwell

Osmundacaulis jonesii Tidwell 1987

Z2285a-m

Holotype

Locality: Approximate coordinates are 43° 28'S and 146°55'E, Southern Tasmania. Area contained within Tasmanian Lands Department Southport sheet 8211-II-S, zone 7 (Gould 1972) Formation:

Age: Possibly Upper Jurassic

1987. Osmundacaulis jonesii Tidwell 1987, p. 205, pls. I-IV; figs. 1-2.

1994. Osmundacaulis jonesii Tidwell in Tidwell and Ash, p. 422.

Remarks: The holotype consists of three glass-mounted thin-sections (Z2285a-c) and ten sawn pieces of the original (Z2285e-m). Z2285m is the largest piece of the original.

Osmundacaulis nerii Tidwell and Jones

Osmundacaulis nerii Tidwell and Jones 1987

Z2283a-f

Holotype

Locality: West of Catamaran Road near Donnelly's Creek

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1987. Osmundacaulis nerii Tidwell and Jones, pp. 181-191, pls. 1-3.

1994. Osmundacaulis nerii Tidwell and Jones in Tidwell and Ash, p. 422.

Remarks: The holotype (Z2283a) is a relatively large polished slab as shown in pl. 1, fig. 1. Five glass-mounted thin-sections (Z2283b-f) prepared from that specimen are the basis for pl. 1, 2–5; pl. 2, figs. 1–5; pl. 3, figs. 1–4.

Osmundacaulis pruchnickii Tidwell and Pigg

Osmundacaulis pruchnickii Tidwell and Pigg 1993

Z2339a,b

Holotype

Z2324a,b.

Paratype

Locality: Site 1. About 100 meters east and west of Lune River Road north of its juncture with Leprena Track, south Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1993. Osmundacaulis pruchnickii Tidwell and Pigg 1993, p. 147, pl. 4, figs. 1–7, text fig. 2C.

1994. Osmundacaulis pruchnickii Tidwell and Pigg in Tidwell and Ash, p. 422.

Remarks: The holotype consists of two glass-mounted thin-sections and the paratype of a single slide and the specimen from which it was prepared.

Osmundacaulis richmondii Tidwell and Pigg

Osmundacaulis richmondii Tidwell and Pigg 1993

Z2337

Holotype

Z2338

Paratype

Locality: Site 1. About 100 meters east and west of Lune River Road north of its juncture with Leprena Track, south Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1993. Osmundacaulis richmondii Tidwell and Pigg 1993, p.145, pl. 2, fig. 8, pl. 3, text fig.2A.

1994. Osmundacaulis richmondii Tidwell and Pigg in Tidwell and Ash, p. 422.

Remarks: The holotype consists of a single glass-mounted thin-section (Z2337a) and eight sawn slabs and fragments (Z2337b–i). The paratype consists of a single small slide (Z2338a) and a small slab (Z2338b).

Osmundacaulis tasmanensis Tidwell and Pigg

Osmundacaulis tasmanensis Tidwell and Pigg 1993

Z2381a-d.

Holotype

Locality: Site 1. About 100 meters east and west of Lune River Road north of its juncture with Leprena Track, south Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1993. Osmundacaulis tasmanensis Tidwell and Pigg, p. 149, pl. 5, figs. 4–6, pl. 6, figs. 1–6, text figs. 3A. 3B.

1994. Osmundacaulis tasmanensis Tidwell and Pigg in Tidwell and Ash, p. 422.

Remarks: The holotype consists of two large sawn slabs and two glass-mounted thin-sections.

Otozamites sp.

Otozamites sp. in Tidwell, Kim and Kimura 1987

Z2302a,b,c.

Figured Specimen

Locality: Site 1. Immediately north of Junction of Lune River Road and Leprena Track, near Ida Bay Formation:

Age: Early Mid-Jurassic (Bromfield et al, 2007)

1987. *Otozamites sp.* in Tidwell, Kim, and Kimura; p, 163, pl. 2, figs. 2, 3; text-figs. 2D (i–iv), 3A (i, ii).

Remarks: This specimen (Z2302a) has been sawn and two glass-mounted thin-sections prepared. The entire specimen, before cutting, is shown on pl. 2, fig. 3. *Conites* sp. (Z4727) is identified on this same piece (see pl. 1, fig. 2) and on the slides Z2302b, c.

Pachypteris sp. cf. indica (Oldham and Morris) Bose and Roy

Pachypteris sp. cf. indica (Oldham & Morris) Bose & Roy 1967 in Tidwell, Kim and Kimura 1987 Z2300, Z2301

Figured specimens

Locality: Junction of Lune River Road and Leprena Track, near Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1987. Pachypteris sp. cf. indica; Tidwell, Kim and Kimura, p. 162, pl. 2, fig. 4, text-figs. 2C (i–v), 3C (i,ii).

Remarks: Specimen Z2300 is figured at pl. 2, fig. 4 and at text-fig 2D (i–iv). Specimen Z2301 appears on text-fig.2C (i, vi, v) and text-fig. 3B (i,ii) . A third specimen, Z2299 is mentioned in the text but is not figured.

Pterophyllum? sp.

Pterophyllum? sp. in Tidwell, Kim and Kimura 1987

Z2303

Figured Specimen

Locality: Junction of Lune River Road and Leprena Track, near Ida Bay

Formation:

Age: Early Mid-Jurassic (Bromfield et al. 2007)

1987. Pterophyllum? sp. Tidwell, Kim and Kimura, p. 165, pl. 1, figs. 3, 5.

Remarks: The captions, pl. 1, fig. 3 and 5 are in error. For both fig. 3 and fig. 5, the specimen number should read Z2303.

Tasmanopteris richmondii Tidwell and Skog

Tasmanopteris richmondii Tidwell and Skog 1992

Z2328a-f, g-h

Holotype

Z2329a-c

Paratype

Locality: Site 1. Immediately north of Junction of Lune River Road and Leprena Track, near Ida Bay Formation: Early Mid-Jurassic (Bromfield et al. 2007)

1992. Tasmanopteris richmondii Tidwell & Skog, p. 264, pl 1, 4, figs. 6,7; text fig. 2.

Remarks: The holotype consists of a larger sawn block and fragments (Z2328a) and five glass mounted thin-sections(Z2328b-f). Thin section Z2328e has its number preceded with a query (?). As many of the specimens were numbered by the authors as well as others at the TMAG, the origin of the notation is unknown. Here are two large specimens bearing the number Z2328. Both have sawn faces and may be the sources of the slides. As these were not associated with the type in the collection, some doubt may be attached to their identity. Accordingly they have been identified as Z2328g and Z2328H. The paratype is represented by three thin-sections (Z2329a-c)

TRIASSIC

Note: There were four plates to accompany Johnston's 1887d paper (Papers and . Proceedings Royal Society of Tasmania, 1887 for 1886). However, they are often missing from the bound proceedings. Walkom (1926a, p. 69) states these plates were later re-figured in Johnston 1888. Walkom's notation is followed in citations of Johnston 1987d. The equivalency is as follows:

Johnston 1887d Johnston 1888
Pl. 1 Pl. 28
Pl. 2 Pl. 23
Pl. 3 Pl. 27
Pl. 4 Pl. 24

Dejerseya lunesis (Johnston) Anderson and Anderson

Pecopteris lunensis Johnston 1894

Z1012

Lectotype (by Anderson and Anderson, 1989)

Z4953

Figured Lectoparatype

Locality: Near Southport, Ida Bay Formation: Brady Fm. equivalent

Age: Triassic?

1886b. Pecopteris caudata Johnston, p. 373.

1888. Pecopteris caudata Johnston, pl. 25, fig. 13, figs. 1, 2, 6.

1894. Pecopteris lunensis Johnston p. 170, pl. 1 figs. 5, 6, not fig. 7 (see Remarks)

1925. Pecopteris lunensis Johnston; Walkom, p. 82.

1947. Rienitsia lobata Jones & De Jersey

1947. Rienitsia incisa Jones & De Jersey

1964. Pecopteris lunensis Johnston in Crespin, p. 8.

1977. Dejerseya lobata comb. nov., Herbst

1989. Dejerseya lunensis (Johnston); Anderson and Anderson, p. 259, pl. 322, fig. 3.

Remarks: The specimen is a slab 9 X 19 cm. which on its broadest faces bears the imprint of numerous superimposed leaves rendering identification of the leaves figured by Johnston 1894 problematic. The slab is identified by a paper label attached by string bearing the number TM 3173, one of the earliest Tasmanian Museum registration numbers and is the number cited by Crespin. The three leaves identified by Johnston were considered syntypes. However, a curatorial note on a recent label and also appearing on a photocopy of Johnston's text associated with the specimen states that Johnston's (1894)pl. 1, fig. 7 is *Johnstonia dutoitii* according to S.M. Forsyth, March 1984 (confirmed by a verbal communication). If that identification is accepted, there are two syntypes. The slab has been marked by an unknown person with the identifiers "C" and "D". It is uncertain if either relates to Johnston's figures. The lectotype (selected by Anderson and Anderson 1989, who re-figure Johnston's fig. 6), has been identified by the number Z1012 and the paratype by Z4953 (Johnston's figure 5). The specimen now identified as *Johnstonia dutoitii* is registered as Z4954 (see *Dicroidium coriaceaum* (Johnston 1887) Townrow 1957 subsp. *dutoitii* (Townrow 1957) Anderson and Anderson, 1982 comb. et stat. nov.) Walkom notes that if the species is associated with *Vertebraria australis* as was stated by Johnston, its age should be Permian. That association has not been investigated.

Dicroidium coriaceum (Johnston) var. coriaceum Holmes

Rhacophyllum coriaceum Johnston 1887d

Z1704

Holotype (Monotypy?, see Remarks)

Locality: Spring Hill

Age: Triassic Formation:

1887d. Rhacophyllum coriaceum Johnston, p. 170

1888. Rhacophyllum coriaceum Johnston, pl. 26, fig. 9 only.

1896. ? Strzeleckia tenuifolia Johnston, p. 58, fig. 8.

1925. Johnstonia coriacea (Johnston) com. nov. Walkom, p. 79, fig. 8 only.

1957. Dicroidium coriaceum (Johnston) comb. nov. Townrow, p. 45.

1982. Dicroidium coriaceum var. coriaceum comb. nov. Holmes, p.6, fig. 3B-D.

1983. *Dicroidium coriaceum* (Johnston) Townrow subsp. coriaceum; Anderson & Anderson, Tax. p.3.

2003. Dicroidium coriaceum (Johnston) Townrow; Anderson & Anderson, p.22.

Remarks: Specimen Z1704 bears a large green label giving the locality as "Spring Bay/ Tasmania" and an inked "B920". On the reverse side appears the number B920 and in red the TMAG number Z1704. This specimen is possibly, a consequence of the poor quality of the illustration, the basis for Johnston's 1888 figure 9 (*Rhacophyllum coriaceum*). More certainly it is the basis for Walkom's (1925) figure 8 given as the same species. Further, while Johnston's caption for plate 26, fig. 9 gives the locality as "Lord's Hill, Hobart, Tasmania" the specimen is marked and registered as being from Spring Bay. Walkom (1925, p. 73) observed: "Unfortunately, a large proportion of the specimens [ex R.M. Johnston collection] had lost their locality labels..." which may be the source of that confusion. Although Johnston's figured specimen (Z1704) might be considered as representing the type, Walkom's illustration of specimen Z1704 is more confidently accepted. Johnston may not have seen specimen Z1697= B1074) which could possibly be the basis for Johnston's figure 9. Anderson and Anderson (1983) state that the type specimen had been lost from the Tasmanian Museum and Art Gallery.

Dicroidium odontopteroides (Morris) Gothan

Thinnfeldia odontopteroides (Morris) var. superba Johnston 1886b

Z350

Figured Specimen,

Locality: Spring Bay

Formation: Age: Triassic

1845. Thinnfeldia odontopteroides Morris

1886b. Thinnfeldia odontopteroides (Morris) var. superba Johnston, p. 372

1888. Thinnfeldia superba Johnston, new comb. pl. 26, figs. 4, 5.

1925, Thinnfeldia lancifolia (Morris) in Walkom, p. 78

1926. Thinnfeldia lancifolia (Morris) in Walkom, p. 69

1957. Dicroidium odontopteroides Townrow, p.

1983. Dicroidium odontoptoides (Morris) Gothan 1912 forma odontopteroides Anderson & Anderson p. 99.

2003. Dicoridium odontoptoides (Morris) Gothan [in Anderson and Anderson (2003) p. 22.]

Remarks: The specimen is clearly that illustrated by Johnston (1888). It is the only specimen figured by Johnston and fits the description given in the original paper although Johnston notes that it is not rare. Therefore its status as holotype of the variety (by monotypy) is questioned. The specimen has TMAG numbers Z350 (= B890) in ink. According to the 1913 register, Walkom examined this specimen. He did not comment upon it but may have identified it as *Thinnfeldia lancifolia* as does the label accompanying the specimen. Townrow (1957) who reviews this species, clearly sets the type of *Dicoridium odontopteroides* as that of Morris (1845). Anderson and Anderson (1983, p. 99) agreed

Gontriglossa sp. Anderson and Anderson

Glossopteris (?) moribundisE Johnston 1887d

Z1011 Syntypes

Locality: Lord's Hill, Hobart Formation: Grey Shales

Age: Triassic

1887d. Glossopteris (?) moribundis Johnston, p. 169.

1888. ? Glossopteris moribunda Johnston; Johnston, pl. 28, fig. 5, 5a.

1926. Sagenopteris moribunda (Johnston); Walkom, p.72.

1989. Gontriglossa sp. Anderson & Anderson, p. 505.

Remarks: This species was not figured in Johnston 1887d but two fragments on the same slab were described. A curatorial notation on a modern label states that the dimensions of the specimen agree with those given by Johnston. This has been confirmed. The specimens therefore represent syntypes. Johnston had doubts about the generic assignment of the species believing that it "may yet prove to be a form of *Sagenopteris*..." (Johnston 1887d, p. 169). Various of the older labels accompanying the specimen refer to this suggestion with the name *Sagenopteris* being inscribed. Several labels incorrectly refer to the specimen as having been figured on pl. I, fig. 5. Those plates appeared in Johnston (1888) plate 28, figure 5 and 5a. (See note herein on p.140). Anderson and Anderson note the existence of the Johnston specimens on Table 4.98 and 4.99, but do not assign it to a species. This may be because neither the apex or the base of the two leaves is preserved. H.Anderson agrees with this observation (H. Anderson, pers. comm.7/3/2012).

Moltenia feistmantelli (Johnston) Anderson and Anderson.

Sphenozamites feistmantelli Johnston, 1888

Z4442

Figured Specimen, possible paratype.

Locality: Spring Hill, near Oatlands, Tasmania

Formation: Shales Age: Triassic

1886b. Rhacopteris (?) feistmantelli Johnston, p. 368.

1887b. *Sphenozamites feistmantelli* Johnston comb. nov., pl. 4, fig. 1,not 2 (See note herein p.140 re the figures in Johnston 1887).

1888. Sphenozamities? feistmantelli Johnston, p.186, pl. 24, fig. 1, not 2.

1925. ?Otozamites feistmantelli (Johnston) Walkom, p. 88

1926. Sphenozamites feistmantelli (Johnston) Walkom, p. 73.

1989. Moltenia feistmantelli (Johnston) Anderson & Anderson comb. nov. p. 350.

Remarks: The specimen is associated with no original labels. A pencilled label of unknown origin accompanied the specimen on its return from loan which provided the identification and suggested reference. The lectotype, nominated by Anderson and Anderson 1989, is figure 2 of Johnston 1888, but this specimen has not, at this time, been located in the collection. Z4442 is the basis for figure 1 only and so is considered a paralectotype.

?Phlebopteris alethopteroides Etheridge jr.

? Phlebopteris alethopteroides Etheridge jr. in Walkom, 1925

Z969

Figured Specimen

Locality: Unknown, possibly Lords Hill, North Hobart

Formation: Shale Age: Triassic?

1888. Phlebopteris alethopteroides Etheridge jr., p. 1306, pl. 38, figs. 1,2.

1925. ? Phlebopteris alethopteroides Etheridge jr. in Walkom, p. 76, fig. 3, 3a.

1964. ? Phlebopteris alethopteroides Etheridge jr. in Crespin, p. 8.

Remarks: Z969 bears the old number B1363.

Pseudoctenis sp.

? Pseudoctenis sp. in Walkom, 1925

Z613

Figured Specimen Locality: Unknown

Formation: Age: Triassic?

1925. ? Pseudoctenis sp. Walkom: p. 84, fig. 13.

1989. Pseudoctenis sp. indet.; Anderson and Anderson, p. 284.

Remarks: Z613 bears the old number B982, as cited by Walkom. It is a slab with numerous plant impressions. A label associated with the specimen gives the identification as *Cladophlebis australis*

and *Pseudoctenis*. Walkom identifies the specimen as a portion of a cycadean frond "which in all probability belongs to *Pseudoctenis*".

Pterophyllum inconstans (Johnston) Walkom

Odontopteris crispata Johnston, 1887d

Z4452 Holotype

Locality: Lord's Hill, Augusta Road, New Town

Formation: Shales Age: Triassic

1887d. Odontopteris crispata Johnston, p. 173.

1888. Odontopteris crispata Johnston, pl. 27, fig. 5.

1890. Anomozamites inconstans (Johnston) Feistmantel, pl. 9, fig. 3.

1926. Pterophyllum inconstans (Johnston) Walkom, p. 70.

Remarks: There is no original label. A pencilled label accompanying the specimen gives the following information: "Anomozamites inconstans/? Figured by Johnston/ Roy Soc Tas pl. 3, fig. 5 as/ Odontopteris crispata." The figure in Johnston's 1888, pl. 27, fig. 5, closely matches the specimen recorded here.

Pteruchus johnstonii (Feistmantel) Townrow

Pteruchus johnstonii (Feistmantel) Townrow, 1962c

Z4956

Holotype

Locality: Lord's Hill at Elizabeth St. Opposite Augusta Road, North Hobart

Formation:

Age: Mid-Triassic

1887d. Baiera tenuifolia Johnston, p. 176 (See note herein p. 140 re plates for this paper).

1888. Baiera tenuifolia Johnston, pl. 27, figs 2D, 2E non figs. 2B, 2C

1890. Trichopitys johnstonii Feistmantel, p. 173, pl. 10, fig. 5.

1925. Baiera tenuifolia Johnston; Walkom, part, p. 85, Figs. 15–16.

1962b. Pteruchus johnstonii (Feistmantel) Townrow com. nov.

2003. Pteruchus ? africanus Thomas; Anderson and Anderson, p.252

Remarks: The specimen is a small slab with numerous impressions of different plant leaves. Johnston (1887d) identified and described *Baiera tennifolia* (sic) as a new species commenting that "...with larger fragments I was fortunate in obtaining the male and female fructification, which perfectly corresponds with the characteristic description given under the genus." These were illustrated in his 1888 compendium, pl. 27, figures 2a–2e. Townrow (1962b) asserts Johnston believed the fructification to be attached to a leaf of *Czekanowskia tenuifolia* Feistmantel 1890). Walkom (1925, not 1924 per Townrow) had already raised doubt about the reality of the connection between pinnule and fructification. That separateness was confirmed by Townrow (1962b) who created *Pteruchus johnstoni* (Feistmantel) comb. nov. for the pollen organs. As the specimen would, as a result of this, be the holotype of two species, a new Registration Z4956 has been assigned to *Pteruchus johnstonii*. However, Anderson and Anderson (2003, p. 252) "felt that the original specimen was too poor to be sure and so added it with a "?" and did not accept *the synonymy*." (H.Anderson (Pers. Comm.4/16/2012).

Rochipteris tasmanica (Walkom) Herbst, Troncosa & Snaedinger)

Chiropteris tasmanica Walkom 1926

Z4445

? Holotype (by monotypy) Locality: Lord's Hill, New Town

Formation: Age: Triassic

1926. Chiropteris tasmanica Walkom, p. 72, pl. 9, fig. 2.

2001. Rochipteris tasmanica (Walkom); Herbst, Troncosa and Snaedinger, p.

Remarks: *The specimen* is probably from the R.M. Johnston Collection and was later examined by S. Forsyth, Tasmanian Department of Mines, who identified it as "*?Chiropteris tasmanica*, n. sp. apparently quoting Walkom, 1926.

? Sphenobaiera pontifolia Anderson and Anderson

Baiera tenuifolia Johnston, 1887d

Z968

Holotype

1887d. Baiera tenuifolia Johnston, p. 176 (See note herein on p.123 re plates for this paper)

1888. Baiera tenuifolia Johnston, part, pl. 27, figs 2, 2a, 2b, 2c.

1890. Trichopitys johnstoni Feistmantel, p. 113, pl. 10, fig. 5 in Walkom, 1925, p. 86

1898. Stachyopitys annularioides Shirley, p. 13, pl. 18, fig.1

1925. Baiera tenuifolia Johnston in Walkom, p.85, figs. 14-16

1947. Czekanowskia tenuifolia (Johnston) Jones and de Jersey nov. comb.

1962. Czekanowskia tenuifolia (Johnston) Jones and de Jersey in Townrow, p. 92

1964. Czekanowskia tenuifolia (Johnston) Townrow in Crespin, p. 7.

1967. Sphenobaiera tenuifolia (Johnston) Jain & Delevoryas nov. comb.

1989. ? Sphenobaiera pontifolia Anderson and Anderson sp. nov., p. 140.

Remarks: The specimen, a small slab containing numerous plant impressions, also bears the old number B1049. Johnston noted the presence of a fructification in describing this species, illustrating it in plate 25, figures 2d and 2e but missed that it was not connected to the leaf of *Sphenobaiera*. Walkom recognized the separation but believed the two parts to belong to the same species. Townrow (1962) erected *Pteruchus johnstoni* for the pollen-organ-bearing-specimen now registered as Z4956. See also discussion of *Pteruchus johnstoni*. Anderson and Anderson (1989) placed the species, with a query, in *Sphenobaiera* and nominated a Molteno specimen as the type for *Spenobaiera pontifolia*.

PERMIAN

Glossopteris sp.

Glossopteris sp. in Lewis, 1940

Z233

Figured Specimen

Locality: Heaney's Mine, Cygnet

Formation:

Age: Upper Permian

1940. Glossopteris sp; in Lewis, p. 95, pl. 13

1967. Glossopteris sp.; Crespin, p. 8.

Remarks:

MISCELLANEOUS

Cycadaceous leaf; Walkom

cycadaceous leaf in Walkom, 1925

Z4458

Figured Specimen

Locality: Lord's Hill, opposite Augusta Road, Hobart, Tasmania

Formation:

Age: Mid-Triassic

1925. cycadaceous leaf in Walkon, p. 87, fig. 17.

Remarks: The specimen is on the reverse side of Z967, *Thinnfeldia odontopteroides*, and was formerly numbered Z967b. It was previously registered in the 1913 register as B1045. H.A. Holmes has suggested thast this specimen is probably "cycadaceous leaf *sp. indet*. (H.Anderson, pers. Comm. 7/3/2012.)

NON-PLANT, DESCRIBED AS PLANT

Cryptophyllites tasmanica Johnston

Cryptophyllites tasmanica Johnston, 1888

Z1013

Figured Specimen

Locality: Springs, Mt. Wellington, Hobart

Formation:

Age: mid-Triassic

1888. Cryptophyllites tasmanica Johnston, pl. 22, fig. 13.

1964. Cryptophyllites tasmanica; Crespin, p. 7

Remarks: Crespin lists this under the heading "fossil leaves". She appends the following note: "(M. R. Banks has informed the writer verbally that he considers this specimen to be not a fossil but the marks made by modern roots or branches.)" The specimen also bears the old number TM 9610 on a paper label.

Lepidostrobus muelleri Johnston

Lepidostrobus muelleri Johnston, 1885d

Z1376

Holotype

Locality: Campania

Formation: Knocklofty Formation or its stratigraphic equivalents.

Age: Triassic

1885d. Lepidostrobus muelleri Johnston, p. 225, fig. 1-6.

1888. Lepidostrobus muelleri Johnston, pl. 22, fig. 12.

1925. Lepidostrobus muelleri Johnston in Walkom, p. 88.

1964. Lepidostrobus muelleri Johnston in Crespin, p. 26.

2011. Temnospondyl labrinthodont mandible Johnston in Rozefelds and Warren, pp. 459-452, fig.

Remarks: The specimen has a large paper label affixed to one side of the slab. Its content is unreadable because of fading. The specimen also bears the number B1361. Walkom was the first to question the placement of this specimen both in stratigraphy and taxonomy. Crespin removed *Lepidostrobus* from her listing of plant types and placed it with Marsupalia quoting M.R. Banks' suggestion that it was the jaw of an Amphibian. Rozefelds and Warren have confirmed that it is part of a skull of an temnospondyl amphibian (which see).

Eukaryota Palaeontology

KINGDOM, PHYLUM UNCERTAIN

Horodyskia wlliamsii Grey, Yochelson, Fedonkin and Martin

Horodyskia williamsii Grey, Yochelson, Fedonkin and Martin, 2010 Z3701–Z3706

Figured Specimens

Locality: Blackwater Road Quarry, Balfour Formation: Cassiterite Creek Quartzite

Age: Mesoproterozoic to early Neoproterozoic (1300-800 Ma)

2010. Horodyskia williamsii Grey, Yochelson, Fedonkin and Martin, p. 17, figs. 2-7

2010. Horodyskia williamsii, Calver. Grey and Laan, p. 22, figs. 5-8.

Remarks: There are two large part and counterpart slabs (Z3701, Z3702) illustrated in Figures 5A and 5B. Figures 6A and 6B are of specimens Z3703 and Z3704 respectively. Figure 7A is of specimen Z3705 with detail shown in Figures 7B and 7C. Figure 8 is specimen Z3706

Bibliography

- Ackerman K and Rozefelds AC (2011).-Message in a Bottle—A Tale of two Triassic Temnospondyl (Labyrinthodont) Femora from Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* 145, 5–7, figs.
- Aldinger H (1937) Permische ganoidfische aus Ostgrönland. Meddelelser om Grønland 102(3), 1–392.
- Anderson J M & Anderson HM (1983). *Palaeoflora of Southern Africa. Molteno Formation (Triassic)*. Volume 1, Part 1. Introduction; Part 2, *Dicroidium*. ix -I- 227 pp. (A. A. Balkema: Rotterdam)
- Anderson-JM & Anderson HM (1985), Palaeoflora of southern Africa: Prodromus of South African megafloras, Devonian to Lower Cretaceous.A.A. Balkema, Rotterdam. 423pp.
- Anderson JM & Anderson HM (1989) Palaeoflora of Southern Africa. Molteno Formation. (Triassic), Volume 2, Gymnosperms (excluding Dicroidium), 567 pp. 331 pls. 1107 figs. (A. A. Balkema: Rotterdam).
- Anderson-JM-&-Anderson HM(2003) Heyday of the gymnosperms: systematics and biodiversity of the Late Triassic Molteno fructifications. *Strelitzia* National Botanical Institute, Pretoria pp. 398.
- Angelin NP (1851) *Palaeontologia Suecia I. Iconographica crustaceorum formationis transitionis*. Fasc. 1, pp. 1–24. (Sansom and Wallin: Lund).
- Apollonov MK and Chugaeva MN (1983) Some trilobites from the Cambrian-Ordovician boundary, Batyrbaisai Valley, Maly Karatau. In 'The Lower Paleozoic stratigraphy and palaeontology of Kazakhstan'. (Eds MK Apollonov, SM Bandeletov and NK Ivshin (eds.) pp. 66–90. (Akademiya Nauk Respubliki Kazakhstan: Alma-Ata).
- Armstrong JD (1968) Synonymy of the Australian Permian spiriferid genera *Trigonotreta* Koenig, 1825 and *Grantonia* Brown, 1953. *Journal of the Geological Society of Australia* 15,79–86.
- Armstrong JD (1970) Syringothyrid brachiopods from the Permian of eastern Australia. *Neues Jahrbuch fur Geologie und Palaeontologie. Abhandlungen* 136(2), 135–165
- Banks MR and Clarke MJ (1973) Tasmania: Parmeener Supergroup, in Field Trip 1, Upper Carboniferous to Triassic Rocks in south-eastern Australia. In *Proceedings of the Third International Gondwana Symposium'*, Canberra Australia, August 1973, pp 47
- Banks MR and Clarke MJ (1987) Changes in the Geography of the Tasmania Basin in the Late Paleozoic. In 'Gondwana Six: Stratigraphy, Sedimentology and Palaeontology' (Ed MacKensie GD) pp. 1–14 (American Geophysical Union: Washington DC).
- Bao JS and Jago JB (2000) Late Late Cambrian Trilobites from near Birch Inlet, south-western Tasmania. *Palaeontology* 43(5), 881–917, 4 pls.

- Bender P (2008) A review of the Early Triassic fish remains from Tasmania. *Kanunnah*. 3, 27–40, 7 figs.
- Brady GS (1886) Notes on Entomostraca from South Australia. *Proceedings of the Zoological Society of London* 1886, 82–93.
- Bromfield KE, Burrett CF, Leslie, RA and Meffre S (2007) Jurassic volcaniclastic-basaltic andesite - dolerite sequence in Tasmania: New age constraints for fossil plants from Lune River. *Australian Journal of Earth Sciences*. 54, 965–974, figs.
- Brown IA (1948) Lower Ordovician brachiopods from Junee District, Tasmania. *Journal of Palentology* 22(1), 35–39, pl. 9, text figs.
- Brown IA (1953) Permian spirifers from Tasmania. *Journal* and Proceedings of the Royal Society of New South Wales 86, 55–63.
- Brunton CHC (2007) Productina *in* Treatise on Invertebrate Paleontology, Part H. Revised. Brachiopoda (supplement) 6, 2637–2667, figs. 1751–1782.
- Calver, CR, K Grey, M Laan. (2010) The 'string of beads' fossil (*Horodyskia*) in the mid-Proterozoic of Tasmania. *Precambrian Research* 180, 18–25.
- Campbell KSW (1953) The fauna of the Permo-Carboniferous *Ingelara* beds of Queensland. *University of Queensland Papers*, *Dept. of Geology* 4(3), 3–43.
- Campbell KSW (1960) The brachiopod genera Ingelarella and Notospirifer in the Permian of Queensland. Journal of Paleontology 34, 1106–1123.
- Campbell KSW (1961) New species of the Permian spiriferoids *Ingelarella* and *Notospirifer* from Queensland and their stratigraphic implications. *Palaeontographica* Abt A. 117, 159–192.
- Campbell KSW (1965) Australian Permian terebratuloids. Australia Bureau of Mineral Resources, Geology, and Geophysics Bulletin 68, 1–146.
- Carter, JL (2006) Spiriferoidea *in* Treatise on Invertebrate Paleontology Pt. H, Revised, Rhynchonelliformea (part) 5, 1769–1811, figs. figs.1165–1200.
- Carter JL and Gourvennec R (2006) Martinioidea *in* Treatise on Invertebrate Paleontology Pt. H Brachiopoda, Revised, Rhynchonelliformea (part) 5, 1747–1768, figs, 1147–1164.
- Chapman F (1914) Notes on Testacea from Pleistocene marl of Mowbray Swamp, North West Tasmania. *Memoirs of the National Museum of Victoria* 5, 55–61.
- Chapman F (1919) On some hydroid remains of Lower Paleozoic age from Monegetta, near Lancefield. Proceedings of the Royal Society of Victoria 31, 388–393.

- Chapman F and Singleton FA (1925) Cainozoic Species of Glycymeris. Proceedings of the Royal Society of Victoria 37(1), 18–60, 4 pls.
- Chapman F and Singleton FA (1927) Descriptive notes on Tertiary Mollusca from Fyansford and other Australian localities, Part 1. *Proceedings Royal Society Victoria* 39(2), 113–124, pls. 8, 9.
- Chapman F and Thomas DE (1936) The Cambrian hydroida of the Heathcote and Monegetta districts. *Proceedings Royal Society Victoria* 48, 193–212.
- Clark SA, Miller AC and Ponder WF (2003) Revision of the snail genus *Austropyrgus* (Gastropoda: Hydrobiidae). *Records of the Australian Museum, Supplement* 28, 109, 63 figs.
- Clarke MJ (1968a) A reappraisal of a Lower Permian type section, Golden Valley, Tasmania. *Geological Survey of Tasmania, Records* 7.
- Clarke MJ (1968b) Faunal horizons in the Lower Permian of the Kingston area. *Tasmania Department of Mines, Techical Report* 12, 142–145.
- Clarke MJ (1969a) Tasmanian Strophalosiidae. *Geological Survey of Tasmania, Records* 10, 1–51, 8 pls.
- Clarke MJ (1969b) Preliminary notes on the occurrence of the Allandale and Ulladulla faunas in Tasmania. Tasmania Department of Mines, Techical Report 13, 128–138.
- Clarke MJ (1971) The Fauna and Age of Malbina A. Tasmania Department of Mines, Techical Report 14, 151–157.
- Clarke MJ (1972) The growth position and post-mortem asymmetrical distortion of some Tasmanian Neospiriferids. *Tasmania Department of Mines, Techical Report* 15, 139–143.
- Clarke MJ (1973) Faunas from the Ferntree Group of southeastern Tasmania. *Tasmania Department of Mines, Techical Report* 16, 50–65.
- Clarke MJ (1979) The Tasmanian spiriferoid brachiopods. *Trigonotreta stokesi* Koenig 1825; *Grantonia hobartensis* Brown 1953 and *Spirifer tasmaniensis* Morris 1845. *Journal of Paleontology* 53, 197–204, pls. 1–4.
- Clarke MJ (1987) Late Permian (late Lymingtonian = ? Kazanian) brachiopods from Tasmania. *Alcheringa* 11(4), 261–290.
- Clarke MJ (1990) Late Paleozoic (Tamarian; Late Carboniferous-Early Permian) cold-water brachiopods from Tasmania. *Alcheringa* 14(1), 53–76.
- Clarke MJ (1991) *Notospirifer* Harrington, 1955 and related spiriferid genera from the Permian of eastern Australia and New Zealand. In 'Brachiopods Through Time: Proceedings of the Second International Brachiopod Congress', Dunedin, New Zealand, February 1990 (Eds DI MacKinnon, DE Lee and JD Campbell) pp. 253–260. pp. 63–66.
- Clarke MJ (1992a) A new Notospiriferine genus (Spiriferida: Brachiopoda) from the Permian of Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* 126, 73–76, pl. 1, figs. A–J.

- Clarke MJ (1992b) Hellyerian and Tamarian (Late Carboniferous Lower Permian) invertebrate faunas from Tasmania. Geological Survey of Tasmania, Bulletin 69, 52 pp. 29, figs.
- Clarke MJ and Baillie PW (1984) Geological survey explanatory report: geological atlas 1:50000 series, sheet 77. (Tasmanian Department of Mines: Hobart).
- Clarke MJ and Banks MR (1975) The stratigraphy of the lower (Permo-Carboniferous) parts of the Parmeener Super-Group, Tasmania. In 'Proceedings of the Third International Gondwanan Symposium', Canberra, Australia (Ed Campbell KSW) pp. 453–467.
- Clarke MJ and Farmer N (1973) The Fisher Tunnel Permian Section and its relation to the Kansas Creek Section. Tasmania Department of Mines, Techical Report 16, 41–49
- Clarke MJ and Farmer N (1976) Biostratigraphic nomenclature for Late Palaeozoic rocks in Tasmania. *Papers* and *Proceedings of the Royal Society of Tasmania* 110, 91–109.
- Clarke MJ, Forsyth SM, Bacon CA, Banks MR, Calver CR, Everard JL (1989) Late Carboniferous Triassic. In 'Geology and Mineral Resources of Tasmania' (Eds Burrett CF and Martin EL) pp. 293–338 (Geological Society of Australia. Special Publication 15: Brisbane).
- Cosgriff JW (1965) A new genus of Temnospondyli from the Triassic of Western Australia. *Journal and Proceedings of the Royal Society of Western Australia* 48, 65–90.
- Cosgriff JW (1969) *Blinasaurus*, a brachyopid genus from Western Australia and New South Wales. *Journal and Proceedings of the Royal Society of Western Australia* 52, 65–88.
- Cosgriff JW (1974) Lower Triassic Temnospondyli of Tasmania. *Geological Society of America Special Paper* 149, 1–134, figs.
- Cossmann M (1897) The Gastropods of the older Tertiary of Australia Les Opisthobranches. *Transactions of the Royal Society of South Australia* 21, 1–21, pls. 1, 2.
- Cossmann M (1901) Essais de Paleoconchologie comparée, Volume 4. (Self-published: Paris).
- Cossmann M (1903) Essais de Paleoconchologie compare, Volume 5. (Self-published: Paris).
- Cotton BC (1947) Some Tertiary fossil molluscs from the Adelaidean Stage (Pliocene) of South Australia. *Records of the South Australian Museum* 8(4), 653–670, pls. 20–22.
- Cotton BC (1949a) Australian Recent and Tertiary Mollusca, Family Volutidae. *Records of the South Australian Museum* 9(2),181–196, pls. 13–15.
- Cotton BC (1949b) Australian Recent and Tertiary, Mollusca. Family Marginellidae. Records of the South Australian Museum 9(2), 197–224, pls. 17–20.
- Cotton BC and Woods NH (1935) The correlation of Recent and fossil Turritellidae of Southern Australia. *Records of* the South Australian Museum 5(3), 369–387, figs. 1–9.

- Crespin I (1964) Catalogue of fossil type and figured specimens in Tasmania. Australia Bureau of Mineral Resources, Geology, and Geophysics Bulletin 60, 30.
- Dana JD (1847) Description of fossil shells of the collections of the exploring expedition under the command of Charles Wilkes, U.S.N., obtained in Australia from the lower layers of the coal formation in Illawarra, and from a deposit probably nearly the same age at Harpers Hill, Valley of the Hunter. *The American Journal of Science and Arts* 4, 151–160.
- Dana JD (1849) In United States exploring expedition during the years 1838–1842 under the command of Charles Wilkes, U.S.N. *Geology* 10, 681–713.
- Darragh TA (1965) Revision of the species of *Eucrassatella* in the Tertiary of Victoria and Tasmania. *Proceedings of the Royal Society of Victoria* 78(1), 75–114, pls. 12–15.
- Darragh TA (1970) Catalogue of Australian Tertiary Mollusca (except Chitons). Memoirs of the National Museum of Victoria 31, 125–212.
- Darragh TA (1988) A Revision of the Tertiary Volutidae (Mollusca; Gastropoda) of south-eastern Australia. *Memoirs of the National Museum of Victoria* 49(2), 195–277, pls. 1–30.
- David TWE (1950) The Geology of the Commonwealth of Australia. (Edward Arnold & Co: London).
- De Deckker P (1981a) Taxonomy and ecological notes for some ostracods from Australian inland waters. *Transactions of the Royal Society of South Australia* 103, 91–138.
- De Deckker P (1981b) Ostracoda from Australian inland waters - notes on ecology and taxonomy *Proceedings* of the Royal Society of Victoria 93, 43–85.
- De Deckker P (1982) Non-marine ostracods from two Quaternary profiles at Pulbeena and Mowbray swamps, Tasmania. *Alcheringa* 6(4) 249–274,16 figs.
- Dickins JM (1960) The Permian leiopteriid *Merismopteria* and the origin of the Pteriidae. *Palaeontology* 3, 387–391.
- Dickins JM (1963) Permian pelecypods and gastropods from Western Australia. *Australia Bureau of Mineral Resources, Geology, and Geophysics Bulletin* 63, 1–203.
- Dickins JM (1981) A Permian invertebrate fauna from the Warwick area, Queensland. *Australia Bureau of Mineral Resources, Geology, and Geophysics Bulletin* 209, 23–43.
- Dun WS (1895) Notes on the occurrence of monotreme remains in the Pliocene of New South Wales. *Records of the Geological Survey of New South Wales* 4, 118–126.
- Dun WS (1913) Marine Fossils of the Marine Tasmanite Spore Beds of the Mersey River. *Geological Survey Record Number 1*.
- Dziewa TG (1980) Early Triassic osteichthyans from the Knocklofty Formation of Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* 114, 151–160, pls. 1–8.

- Etheridge R, Jr. (1883) A Description of the Remains of Trilobites from the Lower Silurian Rocks of the Mersey River District, Tasmania, *Papers and Proceedings of the Royal Society of Tasmania*, 1882, 150–163, pls. 1,2.
- Etheridge R, Jr. (1888) Additions to the Fossil Flora of Eastern Australia. *Proceedings of the Linnean Society of New South Wales* 13, 1300–1309, pls. 37, 38.
- Etheridge R, Jr. (1892) Monograph of the Carboniferous and Permo-Carboniferous invertebrata of New South Wales, Part II. Echinodermata, Annelida and Crustacea. *Memoirs of the Geological Survey of New South Wales.* Palaeontology 5, 65–131, pls. 12–22.
- Etheridge R, Jr. (1902) Occasional descriptions of New South Wales fossils. *Records of the Geological Survey of New South Wales* 7, 66–69.
- Etheridge R, Jr. (1905) Trilobite remains collected in the Florentine Valley, west Tasmania, by Mr. T Stephens, M.A. Records of the Australian Museum 5(2), 98–101, pl. 10.
- Etheridge R, Jr. (1919) Palaeontologia Novae Cambriae Meridionalis occasional descriptions of New South Wales fossils no. 7. Records of the Australian Museum 12(9), 9. Pls.
- Feistmantel O (1890) Uhlonosne utvary v Tasmanii. Spiis. Poc. Jub. Spol. Nauk. Praze, 3(7), 162.
- Finlay HJ (1927) New specific names for Austral Mollusca. Transactions and Proceedings of the New Zealand Institute 57, 488–533.
- Finlay HJ (1930) Invalid molluscan names. *Transactions and Proceedings of the New Zealand Institute* 61, 37–48.
- Finlay HJ (1931) On Austrosassia, Austroharpa, and Austrolithes. Transactions and Proceedings of the New Zealand Institute 62(1), 7–19.
- Fletcher HO (1929) Contributions to the Permo-Carboniferous Aviculopectinidae of New South Wales. *Records of the Australian Museum* 17(1), 1–34, pls. 1–16.
- Fletcher HO (1929) A Revision of the Genus Astartila. Records of the Australian Museum 17(2), 53–75, pls. 25–29.
- Fletcher HO (1938) A revision of the Australian Conulariae. Records of the Australian Museum 20, 235–255.
- Fletcher HO (1958) The Permian Gastropods of New South Wales. *Records of the Australian Museum* 24(10), 115–164, pls. 7–21.
- Forbes E (1848) On the Asterinidae found fossil in British strata. *Memoirs of the Geological Survey of the United Kingdom* 2, 457–482.
- Garrard TA (1972) A revision of Australian Recent and Tertiary Turritellidae (Gastropoda: Mollusca). Malacological Society of Australia Journal 2(3), 267–338, pls. 26–30.
- Gibson N, Kiernan KW and Macphail MK (1987) A fossil bolster plant from the King River, Tasmania. *Papers* and *Proceedings of the Royal Society of Tasmania* 121, 35–42, 3 pls.

- Gill E (1950) Preliminary account of the palaeontology and palaeoecology of the Eldon Group Formation of the Zeehan area, Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1949), 231–258, pl.1.
- Gill E (1955) Fluorine-Phosphate ratios in relation to the age of the Keilor skull, a Tertiary marsupial, and other fossils from western Victoria. *Memoirs of the National Museum* of Victoria 19, 106–124, pl.1.
- Gouvennec, R and JL Carter (2007) Spiriferida and Spiriferina in Treatise on Invertebrate Paleontology, Part H, Brachiopoda Revised, (Supplement) 6, 2773–2796, Fig. 1854–1873.
- Grey K, Yochelson EL, Fedonkin MA, Martin D McB (2010) i *Horodyksia williamsil* new species, a Mesoproterozoic macrofossil from Western Australia. *Precambrian* 180, 1–17
- Griffiths M, Wells RT and Barrie DJ (1991) Observations on the skulls of fossil and extant Echidnas (Monotremata: Tachyglossidae). *Australian Mammalogy* 14, 87–101,figs. 1–12.
- Haight JR and Murray PF (1981) The cranial endocast of the early Miocene Marsupial, Wynyardia bassiana: an assessment of taxonomic relationships based upon comparisons with recent forms. Brain, Behavior and Evolution 19, 17–36, figs.
- Harris WJ and Thomas DE (1948) Victorian Graptolites, New Series. Part XI. *Journal of Mining and Geology* 3(3), 43–45.
- Herbst R (1977) Sobre Marattiales (Filicopsida) Triasicas de Argentina y Australia, Parte II. Los generous Dainaeopsis y Rienitsia. Ameghiniana 14, 19–32.
- Herbst R. Troncoso A. & Gnaedinger S. (2001) *Rochipteris* nov. gen., hojas incertae sedis (= *Chiropteris* pro parte) del Triassico Superior de Argentina y Chile. *Ameghiniana* 42(2),.257–269.
- Hintze LJ (1953) Lower Ordovician trilobites from western Utah and eastern Nevada. *Utah Geological and Mineralogical Survey Bulletin* 48, 1–249.
- Holloway DJ and Sandford A (1993) An Early Silurian trilobite fauna from Tasmania. *Memoirs of the Association of Australasian Palaeontologists* 15, 85–102, figs. 1–7.
- Holmes WBK (1982) The Middle Triassic flora from Benolong, near Dubbo, central-western New South Wales. *Alcheringa*, 6(1), 1–33, 11 figs.
- Hornibrook N de B (1955) Ostracoda in the deposits of Pyramid Valley Swamp. *Records of the Canterbury Museum* 6, 267–278.
- Hussainy SU (1969) A new species of *Gomphocythere* (Limnocytheridae, Ostracoda) from Australia. *Proceedings of the Royal Society of Victoria* 82, 299–304.
- Jago JB (1974) Glyptagnosta reticulatus from the Huskisson River, Tasmania. Papers and Proceedings of the Royal Society of Tasmania 107, 117–127.
- Jago JB (1978) Later Cambrian fossils from the Climie Formation, western Tasmania. *Papers and Proceedings* of the Royal Society of Tasmania 112, 137–153.

- Jago JB (1987) Idamean (Late Cambrian) trilobites from the Denison Range, south-west Tasmania. *Palaeontology* 30, 207–231.
- Jago JB (1991) Charchaquia halli, a new species of Late Cambrian Trilobite from south-western Tasmania. *Memoirs of the Geological Society of India* 20, 131–139, 1 pl.
- Jago JB and Brown AV (1992) Early Idamean (Late Cambrian) Agnostoid Trilobites from the Huskisson River, Tasmania. Papers and Proceedings of the Royal Society of Tasmania 126, 59–65, pls. 1, 2.
- Jain RK and Delevoryas T (1967) A middle Triassic flora of the Cacheuta Formation from Minas de Petroleo, Argentina. *Palaeontogy* 10(4), 564–589.
- Jell P and Baillie P (1984) Stenaster obtusus (Forbes, 1848) from the early Silurian of Tasmania. Journ. Palaeontogy 58(1), 272–273,
- Jell PA, Burrett C and Banks M (1985) Cambrian and Ordovician echinoderms from eastern Australia. Alcheringa 9(3), 183–208, 18 figs.
- Jell PA, Hughes NC and Brown AV (1991) Late Cambrian (Post-Idamean) Trilobites from the Higgins Creek area, Western Tasmania, Memoirs of the Queensland Museum 30(3), 455–485, 13 figs.
- Jell PA and Stait B (1985a) Tremadoc Trilobites from the Florentine Valley Formation, Tim Shea Area, Tasmania. *Memoirs of the Museum of Victoria* 46(1), 1–34, pls. 1–13.
- Jell PA and Stait B (1985b) Revision of an Early Arenig Trilobite Faunule from the Caroline Creek Sandstone, Near LaTrobe, Tasmania. *Memoirs of the Museum of Victoria* 46(1), 35–51, pls. 14–18.
- Johnston RM (1877) Further notes on the Tertiary marine beds of Table Cape. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1876), 79–90, table pp. 90a–90f.
- Johnston RM (1879a) Further notes on the fresh-water shells of Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1878), 19–29.
- Johnston RM (1879b) Notes on certain Tertiary and Post Tertiary Deposits on Flinders, Barren, Badger and other islands in Bass' Straits. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1878), 41–51.
- Johnston RM (1880) Third contribution to the natural history of Tertiary marine beds of Table Cape with a description of thirty new species of Mollusca. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1879), 21–41.
- JohnstonRM (1885b) Description of a new species of Vitrina from the travertine beds, Geiton. Papers and Proceedings of the Royal Society of Tasmania (for the year 1884), 219.
- Johnston RM (1885c) Additions to the list of Table Cape fossils, together with further remarks upon certain fossil shells supposed to be identical with living species. Papers and Proceedings of the Royal Society of Tasmania (for the year 1884), 220–224.

- Johnston RM (1885d) Discovery of a cone, probably of a species of Lepidostrobus, in the sandstones of Campania. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1884), 225.
- Johnston RM (1885e) Description of a new species of Crepidula from the Eocene beds, Table Cape. *Papers* and *Proceedings of the Royal Society of Tasmania* (for the year 1884), 232–233, figs.
- Johnston RM (1885f) Description of a new fossil shell from the Eocene beds, Table Cape. Papers and Proceedings of the Royal Society of Tasmania (for the year 1884), 282
- Johnston RM (1886a) Note regarding the Silurian Fossils of the Gordon Limestones, with Generic Descriptions and a Specific List of the Organisms already named and classified. *Papers and Proceedings of the Royal Society* of Tasmania (for the year 1885), 313–318.
- Johnston RM (1886b) General observations regarding the classification of the upper Palaeozoic and Mesozoic rocks of Tasmania, together with a full description of all the known Tasmanian coal plants, including a considerable number of new species. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1885), 343–387.
- Johnston RM (1887a) Note on the discovery of plant remains in the Tertiary marine beds at Table Cape, Tasmania. *Papers and Proceedings of the Royal Society* of Tasmania (for the year 1886), p. xx, Pl. A.
- Johnston RM (1887b) Contribution to the Palaeontology of the Upper Palaeozoic Rocks of Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1886), 4–18.
- Johnston RM (1887d) Fresh Contribution to our knowledge of the plants of Mesozoic age of Tasmania, *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1886), 160–182, 4 pls.
- Johnston RM (1887e) Notes and descriptions of Crinoidea from the upper Palaeozoic rocks of Tasmania *Papers* and *Proceedings of the Royal Society of Tasmania* (for the year 1886), 231–233, figs.
- Johnston RM (1888) Systematic Account of the Geology of Tasmania. (J. Walch & Sons/Government Printer: Hobart).
- Johnston RM (1889) Critical observations on recent contributions to our knowledge of the fresh water shells of Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1888), 84–90, figs., table.
- Johnston RM (1891) Provisional aid to the study of the Tasmanian Mollusca *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1890), 57–151, figs.
- Johnston RM (1894) Further contribution to the fossil flora of Tasmania. Part I. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1893), 170–178, 2 pls.
- Johnston RM (1895) Further contributions to the fossil flora of Tasmania, Part 1. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1874), 170–178, 2 pls.

- Johnston RM (1896) Further contributions to the history of the fossil flora of Tasmania. Part II. Papers and Proceedings of the Royal Society of Tasmania (for the year 1895), 57–63, 17 figs.
- Johnston RM (1902a) Observations regarding the recent discovery by G. Thureau, F.G.S., of a fossil reptile in the Mersey Coal Measures at Railton. Papers and Proceedings of the Royal Society of Tasmania (for the years 1900–1901), 9–10, fig.
- Johnston RM (1902b) Further notes on the "Permo-Carboniferous Fossil Cliffs" at Darlington, Maria Island. Papers and Proceedings of the Royal Society of Tasmania (for the year 1900), 11–20.
- Johnston RM and Morton A (1890) Notes on the discovery of a ganoid fish in the Knocklofty Sandstones, Hobart. Papers and Proceedings of the Royal Society of Tasmania (for the year 1889), 102–104, figs 1–2.
- Johnston RM and Morton A (1891) Description of a second ganoid fish from the lower Mesozoic sandstone near Tinder-Box Bay. Papers and Proceedings of the Royal Society of Tasmania (for the year 1890), 152–154.
- Jones FW (1931) A re-examination of the skeletal characters of *Wynyardia bassiana*, an extinct Tasmanian Marsupial. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1930), 96–115, pl. 5, text figs. 1–10
- Jones OA and De Jersey NJ (1947) The flora of Ipswich Coal Measures - morphology and floral succession. University of Queensland Department of Geology Papers 3(3), 1–88.
- Keen AM and Campbell GB (1964) Ten new species of Typhinae (Gastropoda; Muricidae). *The Veliger* 7(1), 46–57, pls. 8–11, 3 text figs.
- Kirsch JAW (1977) The comparative serology of Marsupialia and a classification of marsupials. *Australian Journal of Zoology: Supplementary Series* 52, 152 pp.
- Kobayashi T (1936) Three contributions to the Cambro-Ordovician faunas. *Japanese Journal of Geology and Geography* 13, 163–184.
- Kobayashi T (1940a) Lower Ordovician Fossils from Junee, Tasmania, Papers and Proceedings of the Royal Society of Tasmania (for the year 1939), 61–66.
- Kobayashi T (1940b) Lower Ordovician Fossils from Caroline Creek, near Latrobe, Mersey River District, Tasmania. Papers and Proceedings of the Royal Society of Tasmania (for the year 1939), 67–76. pl. 12, figs. 1–22.
- Koenig C (1825) *Icones Fossilium Sectiles*. (The British Museum: London).
- Koninck L G De (1877) Recherchess sur les fossils Paléozoïques de la Nouvelle-Galles du Sud (Australie). Mémoires de la Société Royale des Scien-ces de Liege, 2^{eme} série, 4, 1–140.
- Lewis AN (1940) Record of *Glossopteris* from Cygnet. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1939), 95–96, pl. 13.

- Ludbrook NH (1955) The molluscan fauna of the Pliocene strata underlying the Adelaide Plains. Part II, Pelecypoda. *Transactions Of The Royal Society Of South Australia* 80, 18–87, pls. 1–6.
- Ludbrook NH (1957) The molluscan fauna of the Pliocene strata underlying the Adelaide Plains. Part IV Turritellidae to Struthiolariidae). *Transactions Of The Royal Society* Of South Australia 81, 43–114, pls. 1–5.
- Ludbrook NH (1958) The molluscan fauna of the Pliocene strata underlying the Adelaide Plains. Part V (Eratoidea to Scaphandridae). *Transactions Of The Royal Society Of South Australia* 81, 48–111, pls. 1–6.
- Ludbrook NH (1965) Revision of the Tate molluscan types, Pt. 3, Limopsidae, Glycymeridae, Arcidae, Cucullaeidae. *Transactions Of The Royal Society Of South Australia* 89, 81–115, pls. 1–5.
- Ludbrook NH (1967) Tertiary molluscan types from Table Cape in the Tasmanian Museum, Hobart. *Papers and Proceedings of the Royal Society of Tasmania* 101, 65–69, pls. 1–3.
- Macpherson JH (1957) A review of the genus *Coxiella* Smith, 1894, *sensu I* lato. *West Australian Naturalist* 5, 191–204.
- Maxwell WGH (1954) Strophalosia in the Permian of Queensland. Journ. *Paleontology* 28, 533–559
- Maxwell WGH (1964) The geology of the Yarrol Region. Pt. 1. Biostratigraphy. *University of Queensland Department of Geology Papers* 5(9), 1–79.
- May WL (1903) On Tenison-Woods types in the Tasmanian Museum, Hobart. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1902), 106–114, figs.
- May WL (1919a) Critical remarks on the Table Cape fossil Mollusca in the Johnston collection. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1918), 69–73, pls. 8–11.
- May WL (1919b) A revised census of the mollusca and Brachiopoda in the Table Cape beds. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1918), 101–117.
- May WL (1922) New species of fossil shells from Table Cape. Papers and Proceedings of the Royal Society of Tasmania (for the year 1921), 9–12, pl. 4.
- McClung G (1978) Morphology, palaeoecology and biostratigraphy of *Ingelarella* (Brachiopoda: Spiriferida) in the Bowen and Sydney Basins of Eastern Australia. *Geological Survey of Queensland, Publication No. 365, Palaeontological Papers* 40, 17–60.
- McClung G and Armstrong JD (1975) New species of *Martiniopsis* (Brachiopoda Spiriferida) from the Permian of eastern Australia. *Queensland Mining Journal* 76, 231–234.
- McClung G and Armstrong JD (1978) Species of *Glendonia* gen. Nov. (Ingelarellinae-Spiriferida) in the Permian of Eastern Australia. *Geological Survey of Queensland*, *Publication No. 365*, *Palaeontological Papers* 39, 1–5.

- McCoy F (1847) On the fossil botany and zoology of the rocks associated with the coal of Australia. *Annals and Magazine Natural History Series* 1(20), 145–157, 226–236, 298–312.
- McPherson JH (1957) A Review of the Genus Coxiella Smith, 1894, sensu lato. The Western Australian Naturalist 5(7), 191–204.
- Morris J (1845) Fossil fauna, Mollusca. In 'P. E. de Strzelecki, Physical description of New South Wales and Van Dieman's Land' (Longman, Brown, Green and Longmans: London).
- Muir-Wood HM and Cooper GA (1960) Morphology, classification and life habits of the Productoidea (Brachiopoda). *Geological Society of America, Memoir* 81, 1–447.
- Muller GW (1912) Crustacea: Ostracoda. Das Tierreich 31, 1–434
- Murray P (1978a) A Pleistocene spiny anteater from Tasmania (Monotremata: Tachyglossidae, Zaglossus). Papers and Proceedings of the Royal Society of Tasmania 112, 39–68, 2 pls, 18, figs.
- Murray P (1978b) Late Cenozoic Monotreme Anteaters. *The Australian Zoologist* 20(1) 29–55, 11 figs.
- Obut AM (1964) Podtip Stomochordata Stomokhordovye. In 'Osnovy paleontogii: Echinodermata Yu'. (Ed A Orlo) pp. 279–337 (Pogonophora i Chaetognatha Neda Press: Moskva).
- Opik AA (1967) The Mindyallan Fauna of North-Western Queensland. Australia Bureau of Mineral Resources, Geology, and Geophysics Bulletin 74, 1–404.
- Palmer A (1955) Upper Cambrian agnostidae of the Eureka district, Nevada. *Journal of Palaeontology* 29, 86–101.
- Palmer A (1962) *Glyptagnostus* and associated trilobites in the United States. *United States Geological Survey Professional Paper* 374-F, 45.
- Palmer A (1968) Cambrian trilobites of East-Central Alaska. United States Geological Survey Professional Paper 559–B, 115 15 pls.
- Parfrey SM (1982) Palaeozoic conularids from Tasmania. *Alcheringa*, 6(1), 69–77, figs.
- Parfrey SM (1983) Redescription of the Permian Aulostegid brachiopod *Taeniothaerus subquacratus* (Morris 1845), the type Species of *Taeniothaerus* Whitehouse. *Memoirs of the Association of Australasian Palaeontologists* 1, 289–296 4 figs.
- Ponder WF (1973) A review of the Australian species of *Penion* Fischer (Neogastropoda:Buccinidae), *Malacological Society of Australia Journal* 3(4), 401–428, pls. 40–45.
- Powell AWB (1944) The Australian Tertiary Mollusca of the Family Turridae. *Records of the Auckland Museum* 3(1), pp. 1–68, pls. 1–7.
- Powell AWB (1964) The family Turridae in the Indo-Pacific. Indo-Pacific Mollusca 1(5), 227–346.

- Pritchard GB (1896) A revision of the fossil fauna of the Table Cape beds, Tasmania with descriptions of new species. *Proceedings of the Royal Society of Victoria* 8, 74–150, pls. 2–4
- Pritchard GB (1913) A revision of the fossil Volutes of the Table Cape Beds, Tasmania, with descriptions of new species and varieties. *Proceedings of the Royal Society of Victoria* 26, 172–201, pls. 20, 21.
- Prout WA (1851) Third series of descriptions of bryozoa from the Palaeozoic rocks of the western states and territories. *American Journal of Science* 11, 187–191.
- Ratte F (1885) On Tribrachycrinus corrugatus (F. Ratte) Spec. Nov. from the Carboniferous Sandstone of New South Wales. *Proceedings of the Linnean Society of New South Wales* (for the year 1884) 9(4), 1158–1164, pl. 68.
- Retallack GJ (1977) Reconstructing Triassic vegetation of eastern Australasia: a new approach for the biostratigraphy of Gondwanaland. *Alcheringa* 1, 247–277.
- Rickards RB, Baillie PW and Jago JG (1990) An Upper Cambrian (Idamean)dendroid assemblage from near Smithton, northwestern Tasmania. *Alcheringa* 14(3), 207–232, 16 figs.
- Ride WDL (1964) A review of the Australian fossil marsupials. *Journal of the Royal Society of Western Australia* 47, 97–131.
- Rozefelds, A and A Warren (2011) *Lepidostrobus muelleri* Johnston is a skull fragment of a temnospondyl amphibian. *Alcheringa* 35(3), 459–452, 1 fig.
- Rozefelds, A Warren, A Whitfield and S. Bull (2011) New evidence of large Permo-Triassic Dicynodonts (Synapsida) from Australia. *Journal of Vertebrate Paleontology* 31(5), 1158–1162.
- Ruedemann R (1947) Graptolites of North America. Geological Society of America Memoirs 19, 1–652.
- Runnegar BN (1965) The Bivalves *Megadesmus* Sowerby and *Astartila* Dana from the Permian of Eastern Australia. *Journal of the Geological Society of Australia* 12(2), 227–252, pls. 12–15.
- Runnegar BN (1967) Desmodont bivalves from the Permian of eastern Australia. *Australia Bureau of Mineral Resources, Geology, and Geophysics Bulletin* 96, 1–108.
- Runnegar BN (1969) The Permian faunal succession in eastern Australia. *Journal of the Geological Society of Australia* (Special Publication) 2, 73–98.
- Runnegar BN (1970) *Eurydesma* and *Glendella* gen. nov. (Bivalvia) in the Permian of eastern Australia. *Australia Bureau of Mineral Resources, Geology, and Geophysics Bulletin* 116, 83–117, pls. 13–18.
- Runnegar BN (1972) Late Palaeozoic Bivalvia from South America: provincial affinities and age. *Anais da Academia Brasileira de Ciências* 44, 295–312.
- Runnegar BN (1979) Ecology of *Eurydesma* and the *Eurydesma* fauna, Permian of eastern Australia. *Alcheringa* 3, 261–285.

- Sars GO (1894) Contributions to the knowledge of the freshwater Entomostraca of New Zealand as shown by artificial hatching from dried mud. Forsch. Vidensk. Krist. 1894 no. 5,pp. 1–62.
- Sars GO (1896) On some freshwater Entomostraca from the neighbourhood of Sydney, partly raised from dried mud. Archiv for Mathematik og Naturvidenskab 18, 1–81
- Shergold JH (1972) The late Upper Cambrian trilobites from the Gola Beds, western Queensland. *Australia Bureau* of *Mineral Resources, Geology, and Geophysics Bulletin* 112, 1–127.
- Shergold JH (1977) Classification of the trilobite Pseudagnostus, Palaeontology 20, 69–100.
- Shirley J (1898) Additions to the fossil flora of Queensland, mainly from the Ipswich Formation, Trias-Jura system. Bulletin of the Geological Survey of Queensland 7, 1–25
- Skwarko SK (1962) Graptolites of the Cobb River-Mount Arthur area, northwest Nelson, New Zealand. Transactions of the Royal Society of New Zealand 7, 215–247.
- Sowerby GB (1844) Description of Palaeozoic shells from Van Dieman's Land. In 'Geological Observations on the Volcanic Islands, Visited During the Voyage of H.M.S. Beagle' (Author, C Darwin) pp 158–160. (Smith, Elder and Co: London).
- Sowerby J (1838) A description of fossil shells. In 'Three expeditions into the interior of eastern Australia with descriptions of the recently Explored region of Australia Felix and of the present colony of New South Wales'. (Author, TL Mitchell) pp. 153–160. (Boone: London).
- Spencer B (1900) A description of *Wynyardia bassiana* a fossil marsupial from the Tertiary beds of Table Cape, Tasmania. *Proceedings of the Zoological Society of London* (for the year 1900), 776–794, figs.1–4, pls. 49–50, figs. 1–11.
- Spry A and Banks MR (1962) The Geology of Tasmania. Journal of the Geological Society of Australia 9(2),362 pp.
- Strzelecki PE de (1945) Physical description of N.S.W. and Van Dieman's Land, accompanied by a geological map, sections and diagrams, and Figures of the organic remains. (BiblioBazaar: London).
- Stait B and Laurie J Lithostratigraphy and Biostratigraphy of the Florentine Valley Formation in the Tim Shea Area, Southwest Tasmania. *Papers and Proceedings of the Royal Society of Tasmania* 114, 201–207.
- Tassell C (2008) Upper Ordovician Gastropods from the Gordon Group, Western Tasmania. *Queen Victoria Museum Records* 114, 1–17, 3 pls.
- Tate R (1885a) Notes of a critical examination of the mollusca of the older Tertiary of Tasmania, alleged to have living representatives. Papers and Proceedings of the Royal Society of Tasmania (for the year 1884) 207–214.

- Tate R (1885b) Description of new species of mollusca of the Upper Eocene beds at Table Cape. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1884), 226–231.
- Tate R (1886)The lamellibranchs of the Older Tertiary of Australia (Pt. 1) *Transactions of the Royal Society of South Australia* 8, 96–158, pls. 2–12.
- Tate R (1887) The lamellibranchs of the Older Tertiary of Australia (pt. 2). *Transactions of the Royal Society of South Australia* 9, 142–200, pls. 14–20.
- Tate R (1888) The Gastropods of the older Tertiary of Australia (Pt. 1). *Transactions of the Royal Society of South Australia* (for the years 1886–7) 10, 91–176, pls.1–13.
- Tate R (1889a) The Gastropods of the older Tertiary of Australia (pt. 2). Transactions of the Royal Society of South Australia (for the years 1887–8) 11, 116–174, pls. 2–10.
- Tate R (1889b) The Gastropods of the older Tertiary of Australia (pt. 3). Transactions of the Royal Society of South Australia (for the year1889) 13, 185–235. (For plates see Tate, 1892)
- Tate R (1892) Nine plates illustrative of Professor Tate's paper on the Gasteropoda of the Tertiary of AustraliaóPart 3 in Volume 13 of the society's Transactions. Transactions of the Royal Society of South Australia 15, pls. 5–13.
- Tate R (1893) The Gasteropods of the older Tertiary of Australia (pt.4). *Transactions of the Royal Society of South Australia* 17, 316–345, pls. 6–10.
- Tate R (1898) A second supplement to a census of the fauna of the Older Tertiary of Australia. Journal and Proceedings of the Royal Society of New South Wales 31, 381–416, pls. 19, 20.
- Tedford RH, Banks MR, Kemp NR, McDougall I, Sutherland FL (1975) Recognition of the oldest known fossil marsupials from Australia. *Nature*, 255, 141–142.
- Tedford RH and Kemp NR (1998) Oligocene Marsupials of the Geilston Bay Local Fauna, Tasmania. *American Museum Novitates*, no. 3244.
- Teichert C and Glenister BF (1952) Fossil Nautiloid Faunas from Australia. *Journal of Paleontology* 26(5), 730–752, pls 104–108, 2 text figs.
- Teichert C and Glenister BF (1953) Ordovician and Silurian Cephalopods from Tasmania, Australia. *Bulletins of American Paleontology* 34(144), 5–66, pls. 1–6.
- Tenison-Woods JE (1876) On some Tertiary fossils from Table Cape. *Papers and Proceedings of the Royal Society* of Tasmania (for the year 1875), 13–26, figs 1–14.
- Tenison-Woods JE (1877) Notes on the fossils referred to in the foregoing paper. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1876), 91–116.
- Tidwell WD (1986) *Millerocaulis*, a new genus with species formerly in *Osmundacaulis* Miller (fossils: Osmundacaa). Sida 11, 401–405.

- Tidwell WD (1987) A new species of Osmundacaulis (O. *jonesii* sp. nov.) from Tasmania, Australia. *Review of Palaeobotany and Palynology* 52, 205–216, text figs., 4 pls.
- Tidwell WD (1991) *Lunea jonesii* Gen. et sp. nov., a new member of Guaireaceae from the mid-Mesozoic of Tasmania, Australia. *Palaeontographica*, Abteilung B 223, 81–90.
- Tidwell WD (1992) Millerocaulis richmondii sp. nov., an Osmundaceous Fern from Mesozoic Strata near Little Swanport, Tasmania, Australia. Papers and Proceedings of the Royal Society of Tasmania 126, 1–7.
- Tidwell WD (1994) *Ashicaulis*, a new genus for some species of *Millercaulis* (Osmundaceae), *Sida* 16(2), 253–261.
- Tidwell WD and Ash SR (1994) A Review of Selected Triassic to Early Cretaceous Ferns. *Journal of Plant Research* 107, 417–442.
- Tidwell WD and Jones R (1987) Osmundacaulis nerii, a new Osmundaceous species from Tasmania, Australia. Palaeontographica, Abteilung B 204,s181–191.
- Tidwell WD, Kim JH and Kimura T (1987) Mid-Mesozoic leaves from near Ida Bay, Southern Tasmania, Australia. Papers and Proceedings of the Royal Society of Tasmania, 121,159–170.
- Tidwell WD, Munzing GE and Banks MR (1991) Millerocaulis species (Osmundaceae) from Tasmania, Australia. Palaeontographica, Abteilung B 223, 91–105, 5 pls.
- Tidwell WD, Nishida H and Webster N (1989) Oguracaulis banksii Gen. et Sp. nov., a mid-Mesozoic Tree-fern stem from Tasmania, Australia. Papers and Proceedings of the Royal Society of Tasmania 123, 15–25.
- Tidwell WD and Pigg KB (1993) New species of Osmundacaulis emend. from Tasmania, Australia. Palaeontographica, Abteilung B 230, 141–158. text figs., 7, pls.15–132,
- Tidwell WD and Skog JE (1992) Two new matoniaceous stem genera from Tasmania, Australia. *Review of Palaeobotany and Palynology* 70, 263–277.
- Townrow JA (1957) On *Dicroidium*, probably a Pteridospermous Leaf, and other Leaves now Removed from this Genus. *Geological Society of South Africa* 60, 21–56.
- Townrow JA (1962a) On Pteruchus, a Microsporophyll of the Corystospermaceae. Bulletin of the British Museum (Natural History). Geology 6(2), 291–320.
- Townrow JA (1962b) On the Nomenclature of *Pteruchus Johnstoni* (Feistmantel) com. nov. *Papers and Proceedings of the Royal Society of Tasmania*, 96, 91–93.
- Townrow, J. A. 1966b. On *Dicroidium odontopteroides* and *D. obtusifolium* in Tasmania. n 'Symposium on floristics and stratigraphy of Gondwanaland'. pp. 128–136 (Birbal Sahni Institute of Palaeobotany: Lucknow).

- Twelvetrees WH and Petterd WF (1900) Note on humeri of Tasmanian Labyrinthodonts. *Papers and Proceedings of the Royal Society of Tasmania* (for the years 1898–1899), 27–31.
- Vella P (1961) Australasian Typhianae (Gastropoda) with notes on the subfamily. *Palaeontology*, 4(3), 362–391.
- Wade RT (1930) The fossil fishes of the Australian Mesozoic rocks. *Journal and Proceedings of the Royal Society of New South Wales* 64, 115–147.
- Walcott CD (1925) *Dikelocephalus* and other genera of the Dikelocephalinae. *Smithsonian miscellaneous collections* 57, 345–412.
- Walkom AB (1919) Queensland Fossil Floras. *Proceedings* of the Royal Society of Queensland 31(1), 1–20.
- Walkom AB (1925) Notes on some Tasmanian Mesozoic plants, Part I. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1924), 73–89.
- Walkom AB (1926) Notes on some Tasmanian Mesozoic plants, Part II. *Papers and Proceedings of the Royal Society of Tasmania* (for the year 1925), 63–74.
- Warren A and Marsicano C (1998) A reappraisal of the members of the Family Brachyopidae from the Triassic of the Sydney, Carnarvon and Tasmania Basins, Australia. *Alcheringa* 22, 329–342.
- Warren A and Marsicano C (2000) *Banksiops*, a replacement name for *Banksia townrowi* (Amphibia, Temnospondyli). *Journal of Vertebrate Paleontology* 20(1), 186.
- Warren A, AC Rozefelds and S Bull (2011) Tupilakosaur-like vertebrae in *Bothriceps australis*, an Australian Brachyopid Stereospondyl. *Journal of Vertebrate Paleontology* 31(4), 738–753.
- Waterhouse JB (1964) Permian brachiopods of New Zealand. New Zealand Geological Survey Paleontological Bulletin 35, 287
- Waterhouse JB (1967a) Upper Permian (Tatarian) brachiopods from New Zealand, New Zealand Journal of Geology and Geophysics 10(1), 74–118.
- Waterhouse JB (1968) The classification and descriptions of Permian Spiriferida (Brachiopoda) from New Zealand. *Palaeontographica*, Abteilung A 129, 1–94.
- Waterhouse JB (1969) The Permian Bivalve Genera Myonia, Megadesmus, Vacunella and their allies, and their Occurrences in New Zealand. *Palaeontological Bulletin* 41, 1–141.
- Waterhouse JB (1979) Permian and Triassic conulariid species from New Zealand. *Journal of the Royal Society of New Zealand* 9, 475–489.
- Waterhouse JB (1982a) New Zealand Permian brachiopod systematic, zonation and paleoecology. New Zealand Geological Survey Paleontological Bulletin 48, 158.
- Waterhouse JB (1982b) Pectinacea and Limacea (Bivalvia) from New Zealand. *New Zealand Geological Survey Paleontological Bulletin* 49, 75.

- Waterhouse JB (1988) Division of the Bivalve Mollusca
 Described by James Dwight Dana 1947–1849 from the
 Permian of Eastern Australia. *University of Queensland*Department of Geology Papers 12(2), 165–227.
- Waterhouse JB.(2004) Permian and Triassic stratigraphy and fossils of the Himalaya in northern Nepal. *Earthwise* (6)1-259, 13 pls.
- Webster GD and Jell PA (1999) New Permian crinoids from Australia. *Memoirs of the Queensland Museum* 43(1), 279–339.
- Wright AJ and Garratt MJ (1990) *Notoconchidium*, a bizarre Late Silurian uncinulide rhynchonellid brachiopod from Australia. In 'Brachiopods Through Time' (Eds DI MacKinnon, DE Lee and JD Campbell) pp 23–30. (Balkema: Rotterdam).

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