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	PAGE		PAGE
<i>Styphelia tubiflora</i> ...	325	<i>Typha angustifolia</i> ...	343
<i>virgata</i> ...	342		
<i>viridis</i> ...	334	U	
Sydney Water Supply ...	209	<i>Urda</i> ...	386
<i>Syncarida</i> ...	387	Use of botanical names for trade purposes ...	465
T			
<i>Taniopteris Daintreei</i> ...	145	V	
<i>Tarrietia argyrodendron</i> ...	438, 444	<i>Velleia lyrata</i> ...	319, 320
Terry-hie-hie, Bora ground at ...	423	<i>Villaresia (Chariessa) Moorei</i> ...	439
<i>Tetragonia expansa</i> ...	331	<i>Viminaria denudata</i> ...	340, 345
<i>nigrescens</i> var. <i>maritima</i> ...	346	<i>Viola hederacea</i> ...	351
<i>Themeda Forskalii</i> var. <i>imberbis</i> ...	306	Vitality of <i>Acacia</i> seeds in sea- water ...	389
<i>Thysanotus junceus</i> ...	351	<i>Vitis Baudiniana</i> ...	327
<i>Trachymene Billardieri</i> var. <i>crassifolia</i> ...	321	<i>clematidea</i> ...	353
<i>ericoides</i> ...	342	<i>hypoglauca</i> ...	327
<i>linearis</i> ...	325	Volcanism, Relation between, and the artesian supply ...	194
<i>Stephensonii</i> ...	353	W	
<i>Trametes carnea</i> ...	505	Water supply, Sydney 209, xi, xxii.	
<i>cubensis</i> ...	526	<i>Wedelia biflora</i> ...	306, 333
<i>cupreo-rosea</i> ...	526	<i>Weinmannia lachnocarpa</i> ...	441, 444
<i>Feei</i> ...	505	<i>Westringia rosmariniformis</i> ...	307
<i>lilacino-gilva</i> ...	506	<i>Wikstrœmia indica</i> ...	300
var. <i>eucalypti</i> ...	506	Williams, Margaret Mary, John Read and, A novel applica- tion of Bromine water in synthetic organic chemistry 558, xxxix.	
var. <i>Stowardi</i> ...	506	X	
<i>ochroleucus</i> ...	525	<i>Xanthosia pilosa</i> ...	316
<i>plebeia</i> ...	507	<i>Xerotes glauca</i> ...	311
<i>rosea</i> ...	507	<i>longifolia</i> ...	294, 355
<i>roseola</i> ...	507	<i>Xylostroma gigantea</i> ...	522, 523
<i>strigata</i> ...	513		
<i>Tricostularia pauciflora</i> ...	344	Z	
<i>Triglochin procera</i> ...	344	<i>Zieria laevigata</i> ...	325
<i>striata</i> ...	344	<i>revoluta</i> ...	325
<i>Tristania conferta</i> ...	437	<i>Zoysia pungens</i> 302, 305, 309, 332, 337	
Toit, A. L. du, The problem of the Great Australian Ar- tesian Basin ...	135		
Topographical, ecological and taxonomic notes on the ocean shore-line vegetation of the Port Jackson District	287		

A CHECK-LIST OF THE MARINE FAUNA OF NEW SOUTH WALES.

PART I.

PREFACE BY CHARLES HEDLEY, F.L.S.

[Supplement to Journal of the Royal Society of N.S.W., Vol. LI., 1917.]

In the absence of complete monographs, check lists are the most serviceable aids to investigators. The needs of the last generation of students were met by a useful catalogue of the Marine Fauna of Sydney Harbour by Mr. T. Whitelegge. This was published as a prize essay by our Society twenty-eight years ago. Since then, steady progress in zoology has increased the total of known species by from a quarter to a half in various groups. Application of the rules of nomenclature and the proposal of new generic names have changed the names of the original series past recognition.

Therefore a new catalogue is required by those engaged in the study of local fauna. This the Council of the Royal Society of New South Wales have undertaken to provide by instalments as means and materials permit. In this production Professor Haswell, Dr. S. J. Johnston, Mr. T. Whitelegge and other zoologists have kindly agreed to assist the writer.

It is considered convenient to expand the geographic limits to agree with State boundaries, to include both vertebrata and invertebrata, and to leave the fluviatile fauna for another occasion. Thus arranged, it is hoped that the forthcoming catalogue may prepare the way for a zoological survey of New South Wales.

The present section on the Mollusca is presented first because the manuscript happened to be ready when the opportunity for printing occurred.

Study of the sea shells of this coast was commenced in 1770 by that favourite pupil of Linné, the accomplished conchologist Solander. Collecting was pursued in early colonial days by many able and enthusiastic resident naturalists such as Humphrey, Macleay, Paterson, Stutchbury, King, Strange and Macgillivray, while visitors like Péron, Lesson, Quoy, Gaimard and Stimpson did excellent work.

The first consecutive account of the marine mollusca of New South Wales was given by George French Angas. He based it on a collection gathered by himself during a residence of several years, in Sydney, and subsequently identified in London by the aid of metropolitan specialists, museums and libraries. Under the title of "A List of Species of Marine Mollusca found in Port Jackson Harbour, New South Wales, and on the adjacent Coasts, with Notes on their Habits, &c.", it was issued in two parts in 1867 by the Zoological Society of London. About four hundred and fifty species were included.

On this foundation, Dr. J. C. Cox of Sydney compiled in 1868, "A list of species of Marine Mollusca found in Port Jackson Harbour and on the adjacent coasts." To the catalogue of Angas, he added about twenty names previously overlooked or subsequently discovered. Though privately printed, it was extensively circulated and has been quoted by von Martens and others as Cox's Exchange List.

In a first supplement (Proc. Zool. Soc. 1871, pp. 87-101) Angas added 108 species, and in a second (op. cit. 1877, pp. 178-194) he gave 186 more, thus raising the molluscan fauna known at that time to a total of 746 species.

Combining the discoveries of the Challenger Expedition with the work of Angas, Mr. T. Whitelegge in 1889

enumerated 802 marine mollusca in his list of Port Jackson invertebrata. No later list appeared. The present catalogue increases this to a total of above twelve hundred. The list has also been purified by formally discharging a number of species erroneously attributed to this fauna. Noteworthy among these is a block of Atlantic species which, by a mistake of Sir John Murray, was included in the Challenger series of 410 fathoms off Sydney. It is a moderate estimate to suppose that future research will recognise two thousand species of mollusca from the waters of this State. The time is at hand when local observers may ascend from enumeration and nomenclature to a study of habits and structure.

I am much indebted to Mr. T. Iredale for advice on nomenclature, and for notes on preoccupied names, such as *Bulla australis* and *Purpura neglecta*.

Sub-Kingdom MOLLUSCA.

Class PELECYPODA. (1-319).

Order PRIONODESMACEA. (1-101)

Family NUCULIDÆ.

PRONUCULA Hedley, Mem. Austr. Mus., iv., 1902, p. 290.

1—*decorosa* Hedley, Mem. Austr. Mus., 1902, p. 290, f. 39.

2—*hedleyi* Pritchard and Gatliff, Proc. Roy. Soc., Viet., xvii., 1904, p. 237; *Nucula minuta* Ten-Woods, Proc. Roy. Soc. Tasm., 1876 (1877), p. 156; Hedley, Mem. Austr. Mus., iv., 1902, p. 291, f. 40.

NUCULA Lamarek, Mem. Soc. N.H., Paris, 1799, p. 87.

3—*consobrina* Adams and Angas, Proc. Zool. Soc., 1863, p. 427; Hedley, P.L.S.N.S.W., xxxviii, 1913, pl. 16, f. 1-3.

4—*obliqua* Lamarek, An. s. vert., vi. (i.), 1819, p. 59; Chenu, Man. Conch., ii, 1862, p. 179, f. 897; Hedley, P.L.S.N.S.W., xxviii, 1913, p. 263, pl. 16, f. 4-6; = *N. simplex* Adams, 1856, = anti-

- 787—*mustellina* Angas, Proc. Zool. Soc., 1871, p. 14, pl. 1, f. 5; Hedley, P.L.S.N.S.W., xli., 1917, p. 709, pl. 50, f. 31.
- 788—*nympha* Brazier, P.L.S.N.S.W., xix., 1894, p. 168, pl. 14, f. 2.
- 789—*ochracea*, Angas, Proc. Zool. Soc., 1871, p. 14, pl. 1, f. 6; *M. metcalfei*, Angas, Proc. Zool. Soc., 1877, p. 173, pl. 26, f. 9; Smith, Journ. of Malac., xi., 1904, p. 31.
- 790—*olivella* Reeve, Conch. Icon., xv., 1865, pl. 25, f. 140.
- 791—*infelix* Jousseau, Rev. Mag. Zool. (3), iii., 1875, p. 238; *procella* May, Proc. Roy. Soc. Tasm., 1915, p. 87, pl. 2, f. 10.
- 792—*ovulum* Sowerby, Thes. Conch., i., 1846, p. 401, pl. 78, f. 188; Angas, Proc. Zool. Soc., 1867, p. 196; May, Proc. Roy. Soc. Tasm., 1915, p. 82.
- 793—*pumilio* Tate & May, P.L.S.N.S.W., xxvi., 1901, p. 363, pl. 26, f. 79; Hedley, Mem. Austr. Mus., iv., 1903, p. 368.
- 794—*stilla* Hedley, Mem. Austr. Mus., iv., 1903, p. 367, f. 90.
- 795—*strangei*, Angas, Proc. Zool. Soc., 1877, p. 172, pl. 26, f. 8; Hedley, P.L.S.N.S.W., xxvii., 1902, p. 18, text fig.
- 796—*subbulbosa* Tate, Trans. Roy. Soc. S.A., i., 1878, p. 86; Hedley, P.L.S.N.S.W., xxvii., 1902, p. 18, text fig.
- 797—*translucida* Sowerby, Thes. Conch., i., 1846, p. 376, pl. 75, f. 62, 63; Hedley, P.L.S.N.S.W., xxxix., 1915, p. 725, pl. 82, f. 67.
- 798—*turbinata* Sowerby, Thes. Conch., i., 1846, p. 385, pl. 75, f. 70, 71; Watson, Chall. Zool., xv., 1886, p. 265.
- 799—*victoriae* Gatliff & Gabriel, Proc. Roy. Soc. Vict., xxi., 1908, p. 365, pl. 21, f. 5; Hedley, P.L.S.N.S.W., xxxix., 1915, p. 726.
- 800—*whani* Pritchard & Gatliff, Proc. Roy. Soc. Vict., xiii., 1900, p. 137, pl. 21, f. 5, 6; Hedley, Mem. Austr. Mus., iv., 1903, p. 369.
- Reeve erroneously recorded (vide P.L.S.N.S.W., xxxviii., 1913, p. 303) *M. attenuata* from Sydney. Brazier misidentified (P.L.S.N.S.W., xviii., 1894, p. 305) *Mar-*

ginella pulchella Kiener, from Sydney. And *M. kemblensis* taken by the Challenger in 25 fathoms off Sydney was by Angas (Proc. Zool. Soc., 1877, p. 182) mistaken for *M. rufula*, Gaskoin.

Family CANCELLARIDÆ.

- CANCELLARIA**, Lamarek, Mem. Soc. N.H. Paris, 1799, p. 71.
- 801—*antiquata* Hinds, Sulphur Zool., 1844, p. 43, pl. 12, f. 17, 18; Angas, Proc. Zool. Soc., 1877, p. 186.
- 802—*australis* Sowerby, Conch. Illustr., 1832, f. 23; *C. undulata* Sowerby, Proc. Zool. Soc., 1848, p. 136; Hedley, P.L.S.N.S.W., xxxviii., 1913, p. 304.
- 803—*costifera* Sowerby, Conch. Illustr., 1832, f. 31; Angas, Proc. Zool. Soc., 1877, p. 186.
- 804—*exigua* Smith, Proc. Zool. Soc., 1891, p. 439, pl. 34, f. 11.

To New South Wales, its author erroneously attributes *Cancellaria lævigata*, Sowerby, Thes. Conch., ii., 1849, p. 448.

ADMETE, Moller, Naturhist. Tidskr., iv., 1842, p. 88.

- 805—*micra scobina* Hedley & Petterd, Rec. Austr. Mus., vi., 1906, p. 222, pl. 38, f. 12; vi., 1907, p. 360.
- 806—*stricta* Hedley, Rec. Austr. Mus., vi., 1907, p. 295, pl. 54, f. 10.

Family TEREBRIDÆ.

- TEREBRA**, Lamarek, Mem. Soc. Hist. Nat. Paris, 1799, p. 71.
- 807—*bicolor* Angas, Acus, Proc. Zool. Soc., 1867, p. 111, pl. 13, f. 7.
- 808—*brazieri* Angas, Proc. Zool. Soc., 1871, p. 16, pl. 1, f. 15.
- 809—*fictilis* Hinds, Thes. Conch., i., 1844, p. 183, pl. 45, f. 109, 110; Hedley, P.L.S.N.S.W., xxv., 1900, p. 509, pl. 26, f. 14; *A. assimilis*, Angas, Proc. Zool. Soc., 1867, p. 111, pl. 13, f. 8.
- 810—*lauretanae* Ten. Woods, P.L.S.N.S.W., ii., 1877 (1878), p. 262; Hedley & Petterd, Rec. Austr. Mus., iv., 1906, p. 222, pl. 37, f. 9.

- 811—*marmorata* Deshayes, Proc. Zool. Soc., 1859, p. 279; Reeve, Conch. Icon., xii., 1860, pl. 19, f. 91; Angas, Proc. Zool. Soc., 1877, p. 185.
- 812—*triseriata* Gray, Proc. Zool. Soc., 1834, p. 62; Thes. Conch., i., 1844, p. 171, pl. 45, f. 119; Dall, Bull. Mus. Comp. Zool., xliii., 1908, p. 248; T. *prælonga*, Deshayes, Proc. Zool. Soc., 1859, p. 315.
- 813—*venila* Ten. Woods, P.L.S.N.S.W., iv., 1879, p. 23, pl. 4, f. 2; Tryon, Man. Conch., vii., 1885, p. 21, pl. 5, f. 88.

DUPLICARIA Dall, Nautilus, xxii., 1908, p. 125.

- 814—*ballina* Hedley, P.L.S.N.S.W., xxxix., 1915, p. 729, pl. 84, f. 86.
- 815—*vallesia* Hedley, Rec. Austr. Mus., viii., 1912, p. 147, pl. 43, f. 31, and P.L.S.N.S.W., xxxviii., 1913, p. 306.

Angas has erroneously recorded (Proc. Zool. Soc., 1877, p. 185) *Acus spectabilis* Hinds from the Redbank River.

PARVITEREBRA, Pilsbry, Proc. Acad. N. Sci. Philad., 1904, p. 5.

- 816—*brazieri* Angas, Euryta, Proc. Zool. Soc., 1875, p. 390, pl. 45, f. 5; *Mangelia harrissoni*, Ten. Woods, Proc. Roy. Soc., 1877, p. 890.
- 817—*trilineata* Adams & Angas, Euryta, Proc. Zool. Soc., 1863, p. 418, pl. 37, f. 13.

Family CONIDÆ.

CONUS, Linné, Syst. Nat., x., 1758, p. 712.

- 818—*angasi* Tryon, Man. Conch., vi., 1884, p. 62, pl. 19, f. 99; *C. sydneyensis*, Sowerby, Thes. Conch., v., 1887, p. 260, pl. 510, f. 694; *C. metcalfei* Angas (not Reeve, 1843), Proc. Zool. Soc., 1877, p. 173, pl. 26, f. 13.
- 819—*aplustre* Reeve, Conch., Icon., i., 1843, pl. 30, f. 170; Hedley, P.L.S.N.S.W., xxxviii., 1913, p. 308; *C. cookii*, Brazier, Proc. Zool. Soc., 1870, p. 109.
- 820—*capitaneus* Linné, Syst. Nat., x., 1758, p. 713; Reeve, Conch. Icon., i., 1843, pl. 11, f. 54; Hedley, P.L.S.N.S.W., xxvi., 1902, p. 631; *Voluta zonaria* Martyn, Univ. Conch., 1787, pl. 129.

- 821—*coronatus* Gmelin, Syst. Nat., xiii., 1791, p. 3389; Hedley, P.L.S.N.S.W., xli., 1917, p. 709; *C. minimus* Sowerby, Thes. Conch., iii., 1853, pl. 189, f. 54, 55.
- 822—*cyanoostoma* Adams, Proc. Zool. Soc., 1853 (1854), p. 116; Hedley, P.L.S.N.S.W., xxxviii., 1913, p. 309; *C. innotabilis*, Smith, Proc. Zool. Soc., 1891, p. 487, pl. 40, f. 1.
- 823—*maculosus* Sowerby, Thes. Conch., iii., 1859, p. 31, pl. 199, f. 296; *C. jukesii*, Reeve, Conch. Icon., i., suppl., 1848, pl. 2, f. 278; *C. rossiteri* Brazier, Proc. Zool. Soc., 1870, p. 109.
- 824—*rutilus* Menke, Spm. Moll. Nov. Holl., 1843, p. 27; *C. smithi* Angas, Proc. Zool. Soc., 1877, p. 36, pl. 5, f. 8.
- Angas has erroneously recorded (Proc. Zool. Soc., 1867, p. 205) *Conus grayi* from Middle Harbour.

Family TURRIDÆ.

A detailed account of Australian Turridæ, now in preparation is anticipated by a declaration of the following new generic names:—

- AUSTRODRILLIA**, Hedley, 1918, type, *Pleurotoma angasi* Crosse, 1863.
- EPIDEIRA**, Hedley, 1918, type, *Clavatula striata*, Gray, 1827.
- ETREMA**, Hedley, 1918, type, *Glyphostoma aliciae* Melv. Stand., 1895.
- EXOMILUS**, Hedley, 1918, type, *Mangelia lutaria* Hedley, 1907.
- GURALEUS**, Hedley, 1918, type, *Mangelia picta*, Ad. & Ang., 1864.
- HEMIDAPHNE**, Hedley, 1918, type, *Pleurotoma souverbiei*, Smith, 1882.
- INQUISITOR**, Hedley, 1918, type, *Pleurotoma sterrha* Watson, 1881.
- MACTEOLA**, Hedley, 1918, type, *Purpura anomala*, Angas, 1877.
- NEPOTILLA**, Hedley, 1918, type, *Daphnella bathentoma* Verco, 1909.
- SCABRELLA**, Hedley, 1918, type, *Daphnella versivestita* Hedley, 1912.