



Edwin Wilson, Cambridge.

EXPLANATION OF THE PLATES.

PLATE XLIX.

Wynyardia bassiana.

- Fig. 1. Upper surface of the skull.
 2. Lower surface of the skull.
 3. Axis vertebra, from the left side.
 4. Portion of the pelvic girdle, showing the acetabulum and ischium.

PLATE L.

Wynyardia bassiana.

- Fig. 5. Side view of the skull.
 6. The left ramus of the mandible, from the inner side.
 7. The same, from the under surface.
 8. The coronoid process of the right side.
 9. The left tibia.
 10, 11. The left femur.

All the figures are drawn of the natural size.

2. On some Crustaceans from the South Pacific.—Part V.
*Arthrostracans and Barnacles*¹. By L. A. BORRADAILE,
 M.A., F.Z.S., Lecturer in Natural Sciences at Selwyn
 College, Cambridge.

[Received June 6, 1900.]

(Plate LI.)

The material on which the present report is based was collected in the islands of Funafuti (Ellice group), Rotuma, and Viti Levu, Fiji, by Mr. Stanley Gardiner, to whom the writer is much indebted for the opportunity of examining it.

The following species were furnished by the three localities respectively :—

From Rotuma.

ARTHROSTRACA.

Armadillidium pacificum, n. sp.

CIRRIPEDIA.

Tetraclita porosa (Gmelin), var. *viridis* Darwin.

From Funafuti.

ARTHROSTRACA.

Cirolana latistylis Dana.

Armadillidium pacificum, n. sp.

Leptochelia sp.

Hyale gracilis (Dana).

CIRRIPEDIA.

Lithotrya pacifica, n. sp.

¹ For Parts I.–IV., see P. Z. S. 1898, pp. 32, 457, and 1000, and 1900, p. 568.

From Fiji.

CIRRIPEDIA.

Lepas anatifera Linn.

Balanus tintinnabulum (Linn.), var. *occator* Darwin.

There are altogether four species of Arthrostraca, of which two are described as new, and four of Cirripedia, of which one is new.

Subclass *ARTHROSTRACA*.

Order ISOPODA.

Tribe ONISCOIDEA.

Family ARMADILLIDIIDÆ.

Genus ARMADILLIDIUM Brandt, 1833.

1. ARMADILLIDIUM PACIFICUM, n. sp. (Plate LI. figs. 1, 1 a.)

Diagnosis: "An *Armadillidium* with the body oblong-oval, more than twice as long as broad ($\frac{8}{3}$); the surface minutely pitted, not hairy; the head transverse, shorter and narrower than the thoracic segments, its fore edge straight as seen from above, its hind edge hollowed; the first free thoracic segment broader than any of the rest, its hind angle rounded and overhung by a squarish lobe, under which the fore edge of the next segment fits when the animal curls up; side plates of remaining segments narrow, those of segments 2, 5, 6, and 7 squared, those of 3 and 4 subacute; each segment with a row of small longitudinal furrows on each side; the abdomen short, broad, semicircular; the last segment broader at the base than it is long, hollowed at the sides, and thus narrowest in the middle of its length, broader and truncate at the end; the antennæ very short, their flagella shorter than the last joint of the stalk, with the first joint about one-fourth of the length of the end joint; the outer branch of the uropods rather shorter than the base, broad, its free edge completing the semicircular outline of the abdomen, but projecting slightly beyond this outline; the copulatory appendages on the first abdominal appendage of the male slightly diverging at the tip."

Colour in spirit, mottled grey.

Length of largest specimen, 8 mm.

The genus *Armadillidium* seems not to have been met with hitherto in the South Seas, if we except the world-wide *A. vulgare*, which has been found at Melbourne. The name of the present species is proposed in commemoration of this fact.

Funafuti; one male, seven females.

Rotuma; one male, one female.

Tribe FLABELLIFERA.

Family CYMOTHOIDÆ.

Subfamily CIROLANINÆ.

Genus CIROLANA Leach, 1818.

2. CIROLANA LATISTYLIS Dana, 1852.

Cirolana latistylis, Dana, U.S. Expl. Exped., Crust. ii. p. 772, pl. li. fig. 6 (1852); Whitelegge, Mem. Austral. Mus. iii. 2, p. 149 (1897).

Funafuti; three examples found on weed in the lagoon, one dredged in the lagoon in 15-25 fathoms of water.

Order ANISOPODA.

Family TANAIDÆ.

Genus LEPTOCHELIA Dana, 1849.

3. LEPTOCHELIA sp. (Plate LI. figs. 2-2 c.)

The collection contains seven female specimens of a *Leptochelia* near to, and perhaps identical with, *L. minuta* Dana, which was described from the male only. There are, however, well-marked differences between the present specimens and Dana's, besides that of the chelæ, which is known to be a sexual one. Of these differences the most prominent are those affecting the uropods. The following is a description of the animals:—

Head large, equal to the three succeeding segments.

First antennæ not longer than the head, of four simple joints.

Second antennæ of five joints and a minute end-joint; the second joint bearing on the inside a spine which is two-thirds the length of the much narrower third joint.

Chelipeds fairly strong, outreaching the head by the hand and wrist, about half the total length of the body; the hand as long as the wrist but rather narrower.

First walking-leg with the dactyle very long, longer than the preceding joint. The remaining dactyles not so long.

Uropods with the inner branch five-jointed, the outer one-jointed.

Colour in spirit, white.

Length of the longest specimen, 3.5 mm.

Order AMPHIPODA.

Family ORCHESTIIDÆ.

Genus HYALE Rathke, 1837.

4. HYALE GRACILIS (Dana), 1850.

Allorchestes gracilis, Dana, Proc. Am. Ac. Sci., Boston, ii. p. 205 (1850); U.S. Expl. Exped., Crust. ii. p. 890, pl. ix. fig. 5 (1852).

Funafuti; numerous individuals of both sexes.

Class ENTOMOSTRACA.

Order CIRRIPIEDIA.

Family LEPADIDÆ.

Genus LEPAS Linn., 1758.

5. LEPAS ANATIFERA Linn., 1758.

Lepas anatifera, Linnæus, Syst. Nat. 10th ed. p. 668 (1758); Darwin, Mon. Cirr. i. p. 73, pl. i. fig. 1 (1851).

The basal parts of the scuta are distinctly furrowed in the present specimens, but the line of quadrilateral depressions across the shell is entirely wanting.

Fiji; two examples.

Genus LITHOTRYA Sowerby, 1822.

6. LITHOTRYA PACIFICA, n. sp. (Plate LI. figs. 3, 3 a.)

Diagnosis: "A *Lithotrya* with the scuta triangular, somewhat narrowly overlapping the terga; the terga long, narrow, triangular, the ridges outside them short and straight; the laterals very long, more than three-fourths the length of the terga, the base of each of them marching with seven of the underlying scales; the carina long, rather narrow, curved somewhat strongly, inside hollow with, in the upper part, a middle row of triangular knobs corresponding to the external ridges; rostrum (which seems to be broken short in the present specimens) bordered by a curved row of five scales; peduncle long."

Colour in spirit, white.

Length of largest specimen, including stalk, 28 mm. Length of carina of same specimen, 6.5 mm.

Funafuti; two specimens from the outer reef.

Family BALANIDÆ.

Genus BALANUS Da Costa, 1778.

7. BALANUS TINTINNABULUM (Linn.), 1758, var. OCCATOR Darwin, 1854.

Balanus tintinnabulum, var. *occator*, Darwin, Mon. Cirr. ii. p. 196, pl. i. fig. k, pl. ii. fig. 1 b (1854).

The one specimen is of a white colour, with here and there faint traces of purple.

The only locality mentioned by Darwin for this variety is "South Seas."

Fiji; one specimen.

Genus TETRACLITA Schumacher, 1817.

8. TETRACLITA POROSA (Gmelin), 1789, var. VIRIDIS Darwin, 1854.

Tetracrita porosa, var. *viridis*, Darwin, Mon. Cirr. ii. p. 329 (1854).

Rotuma; thirteen specimens growing on rock.

In ending this series of papers on South Pacific Crustaceans the writer has to tender his best thanks to several gentlemen:—To Mr. J. Stanley Gardiner and Dr. A. Willey for permission to examine their collections, to Messrs. R. I. Pocock and F. Jeffrey Bell of the British Museum for much kind advice and assistance, and to Mr. Edwin Wilson for a great deal of trouble bestowed upon a number of very difficult drawings.

NOTE.—Errata in Parts II. and IV. of this paper:—On p. 458 of P. Z. S. 1898, for "BIRGUS LATRO (Linn.), 1766," read "BIRGUS LATRO (Linn.), 1767"; on p. 577 of P. Z. S. 1900, for "GONIO-CAPHYRINÆ" read "CATOPTRINÆ," and for "GONIOCAPHYRA TRUNCATIFRONS de Man, 1887," read "CATOPTRUS A. M.-Edw., 1870." This genus is placed by Milne-Edwards, Ortmann, and Alcock among the Gonoplacidae. De Man regards it as belonging to the Portunidae, where it is placed in the present work. For synonymy, see Alcock, Journ. As. Soc. Beng. lxxix. 2, iii. p. 307 (1900).

EXPLANATION OF PLATE LI.

Fig. 1. *Armadillidium pacificum*, ♂, × 8: p. 796.

1 a. " " " underside of abdomen, × 8.

1 b. " " " side of 1st free thoracic segment, × 8.

2. *Leptochelia* sp., ♀, × 16: p. 797.

2 a. " " " from the left side, × 16.

2 b. " " " 1st antenna, × 40.

2 c. " " " 2nd antenna, × 40.

3. *Lithotrya pacifica*, × 3: p. 798.

3 a. " " " carina, from within, × 3.

169572

PROCEEDINGS

OF THE

GENERAL MEETINGS FOR SCIENTIFIC BUSINESS

OF THE

ZOOLOGICAL SOCIETY OF LONDON

FOR THE YEAR

1900.

PART IV.

CONTAINING PAPERS READ IN

NOVEMBER AND DECEMBER.

APRIL 1st, 1901.

PRINTED FOR THE SOCIETY,
SOLD AT THEIR HOUSE IN HANOVER SQUARE.

LONDON :
MESSRS. LONGMANS, GREEN, AND CO.,
PATERNOSTER-ROW.

[*Price Twelve Shillings.*]

LIST OF CONTENTS.

PART IV.—1900.

November 20, 1900.

	Page
The Secretary. Report on the Additions to the Society's Menagerie during June, July, August, September, and October, 1900. (Plate XLVIII.)	771
Mr. Slater. Remarks on some of the objects noticed during a recent visit to the Zoological Gardens of Hamburg, Berlin, and Rotterdam	772
Mr. Slater. Remarks on the herd of Barbary Apes on the Rock of Gibraltar	773
Sir Harry Johnston, K.C.B. Letter from, containing an account of a supposed new species of Zebra inhabiting the Congo Forest.....	774
Mr. G. A. Boulenger. Exhibition of one of the type specimens of <i>Protopterus dolloi</i> from the Congo	775
Mr. W. T. Blanford, F.R.S. Exhibition of a skull and horns of the Central Asiatic Wapiti	775
Mr. F. E. Beddard, F.R.S. Notice of a memoir on the Osteology of the Pigmy Right Whale (<i>Neobalæna marginata</i>)	775
1. A Description of <i>Wynyardia bassiana</i> , a Fossil Marsupial from the Tertiary Beds of Table Cape, Tasmania. By BALDWIN SPENCER, M.A., F.R.S., C.M.Z.S., Professor of Biology in the University of Melbourne, Director of the National Museum, Melbourne. (Plates XLIX. & L.)	776
2. On some Crustaceans from the South Pacific.—Part V. <i>Arthrostracans</i> and <i>Barnacles</i> . By L. A. BORRADAILE, M.A., F.Z.S., Lecturer in Natural Sciences at Selwyn College, Cambridge. (Plate LI.)	795
3. List of Mammals obtained by Dr. Donaldson Smith during his recent Journey from Lake Rudolf to the Upper Nile. By OLDFIELD THOMAS	800
4. Revision of the Rhynchota belonging to the Family <i>Pentatomidæ</i> in the Hope Collection at Oxford. By W. L. DISTANT. (Plates LII. & LIII.)	807
5. On some Nemerteans from Torres Straits. By R. C. PUNNETT, B.A. (Plates LIV. & LV.)	825

December 4, 1900.

The Secretary. Letter from the Colonial Secretary on the introduction of Starlings into St. Kitts, West Indies	832
Mr. R. Lydekker. Exhibition of, and remarks upon, a mounted specimen of the Musk-Ox from East Greenland.....	832
Dr. Forsyth Major. Exhibition of, and remarks upon, some bones of a species of <i>Macacus</i> from the Mauritius	832
Dr. Forsyth Major. Remarks on remains of <i>Cyon sardous</i> from a cave in Sardinia	833
Mr. J. S. Budgett. Notice of a paper on the Breeding-habits of some West-African Fishes, with an Account of the External Features in the Development of <i>Protopterus annectens</i> , and a Description of the Larva of <i>Polypterus lapradii</i>	835

Contents continued on page 3 of Wrapper.

CONTENTS (*continued*).

December 4, 1900 (*continued*).

	Page
1. Note on the Gestation of the Pine-Marten. By A. H. COCKS, F.Z.S.	836
2. Observations on the Habits and Natural Surroundings of Insects made during the "Skeat Expedition" to the Malay Peninsula, 1899-1900. By NELSON ANNANDALE, B.A.	837
3. On the Mammals collected during the "Skeat Expedition" to the Malay Peninsula, 1899-1900. By J. LEWIS BONHOTE, B.A. (Plate LVI.).....	869
4. On the Frogs collected during the "Skeat Expedition" to the Malay Peninsula, 1899-1900. By F. F. LAIDLAW, B.A. (Plate LVII.)	883
5. On the Earthworms collected during the "Skeat Expedition" to the Malay Peninsula, 1899-1900. By FRANK E. BEDDARD, M.A., F.R.S.....	891
6. On two Consignments of Butterflies collected by Mr. Richard Crawshay in the Kikuyu Country of British East Africa in 1899 and 1900. By ARTHUR G. BUTLER, Ph.D., F.L.S., F.Z.S., &c., Senior Assistant-Keeper, Zoological Department, British Museum. (Plate LVIII.)	911
7. On a new Scale-Insect from Zomba, British Central Africa. By R. NEWSTEAD, F.E.S. (Plate LIX.)	947

December 18, 1900.

The Secretary. Report on the Additions to the Society's Menagerie in November 1900 ..	949
Mr. Sclater. Exhibition of, and remarks upon, a skull and horns of the Square-mouthed Rhinoceros and mounted heads of two Antelopes, obtained by Major A. St. H. Gibbons on the Upper Nile	949
Mr. Sclater. Exhibition of, and remarks upon, two bandoliers made from the skin of a supposed new species of Zebra	950
1. Notes on the Fauna of the White Nile and its Tributaries. By Captain STANLEY SMYTH FLOWER, F.Z.S., 5th Fusiliers	950
2. An Account of a Large Branchiate Polynoid from New Zealand, <i>Lepidonotus giganteus</i> Kirk. By W. MALCOLM THOMSON, B.A. (N.Z.). With an Introduction by Professor W. BLAXLAND BENHAM, D.Sc., M.A., F.Z.S., Otago University. (Plates LX.-LXII.)..	974
3. On a new Genus of Flat-fishes from New Zealand. By H. M. KYLE, M.A., B.Sc., St. Andrews.....	986
4. On a rare Cuttlefish, <i>Ancistroteuthis robusta</i> (Dall) Steenstrup. By D'ARCY W. THOMPSON, C.B.	992
5. On a new Species of Earthworm from India belonging to the Genus <i>Amyntas</i> . By FRANK E. BEDDARD, M.A., F.R.S.	998
Appendix: List of Additions to the Society's Menagerie during the Year 1900	1003
Index	1627
Titlepage	i
List of Council and Officers	ii
List of Contributors	iii
List of Plates	xvii
List of Illustrations in the Text	xix
List of New Generic Terms	xxii

LIST OF PLATES.

1900.

PART IV.

Plate		Page
XLVIII.	<i>Connochætes taurina</i> , ♂ jr.	771
XLIX.	} <i>Wynyardia bassiana</i>	776
L.		
LI.	Crustaceans from the South Pacific	795
LII.	} Rhynchota of the Family <i>Pentatomidæ</i>	807
LIII.		
LIV.	} Nemerteans from Torres Straits	825
LV.		
LVI.	<i>Mus ciliata</i>	869
LVII.	Frogs from the Malay Peninsula	883
LVIII.	New Butterflies from East Africa	911
LIX.	<i>Walkeriana pertinax</i>	947
LX.	} <i>Lepidonotus giganteus</i>	974
LXI.		
LXII.		

NOTICE.

The 'Proceedings' are issued in *four* parts, as follows:—

Part	I.	containing papers read in January and February, on June 1st.
	II.	" " " March and April, on August 1st.
	III.	" " " May and June, on October 1st.
	IV.	" " " November and December, on April 1st.

35
9718 (17)