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## A Bibliography of Charles Francis Laseron with an Index to his New Genera and Species

By Donald F. McMichael and Gilbert P. Whitley<br>(Contribution from the Australian Museum, Sydney.)

The Royal Zoological Society of New South Wales lost an old and valued member when Mr. Charles Francis Laseron, F.R.Z.S., died on 28 th June, 1959. He experienced a varied and interesting career which has been epitomised in obituary notices by his friends.* From these notices and with the kind help of his wife and son, for which we are grateful, as well as from other sources, apart from our personal knowledge of the late Charles Laseron, we can piece together this contribution towards a biography of this remarkable man, our unassuming late friend. We acknowledge, with thanks, assistance received from the Mitchell Library, Sydney; the Australian Museum, Sydney, and the War Memorial Museum, Canberra, and from Mr. A. H. Chisholm, O.B.E., F.R.Z.S.

## HIS LIFE.

Charles Laseron was born of British parents at Manitowoc, Wisconsin, U.S.A., on 9th December, 1887, the descendant of an old Lithuanian ancestry, originally of the Jewish faith. As an infant he came to Australia in the clipper ship Macquarie in 1890. His father, a Church of England minister, the Rev. David Laseron, served at Paddington and Lithgow, New South Wales. His grandfather, Dr. Michael Laseron, had been founder and first director of Tottenham Hospital, London. "Car"" Laseron was educated at Lithgow and was a chorister and student at the Cathedral School of St. Andrew, Sydney. He attended classes in geology and biology at the Sydney Technical College where he ater lectured in geology. Debarred for financial reasons from taking a University education, Laseron became a Collector for the Syaney Technological Museum in 1909, obtaining specimens of rocks, fauna and flora in most parts of New South Wales, and played a useful part in the famous studies on eucalyptus products made at that museum. Several papers on geology and fossils were published about this time.

In 1911, Douglas Mawson accepted him as assistant biologist on his famous Antarctic expedition which lasted until 1913 and Laseron was awarded the Polar Medal. Laseron was one of the supporting party to the journeyers to the Magnetic Pole and engaged in geological surveys along the coast of Antarctica. His book South with Mawson describes some of his hardships and experiences.

* Dr. Colin Roderick, writing anonymously in the Daily Telegraph newspaper, Sydney, of 30 June 1959 and Professor Griffith Taylor in the Sydney Morning Herald of 1st July 1959 as well as in Austr. J. Sciac. Soc. Austr. 3, 1959, p. 3.

C. F. LASERON.

He joined the Australian Imperial Forces (13th Battalion) on 9th September, 1914, landed at Gallipoli with the Anzacs early on 26th April, 1915, and was in the fight against the Turks. He was wounded in the foot on 28th April. From hospital in Alexandria he sent letters describing the Anzacs' exploits which were amongst the first accounts published in Australia about these most historic events, crystallised in 1916 in his published diary, From Australia to the Dardanelles. His portrait appeared amongst "Heroes of the Dardanelles" in the Sydney Morning Herald, 2nd June, 1915, page 14.

In 1917 he returned to Australia and two years later married Dora Mason of Albury. He was elected to membership of the Royal Society of appointed Officer in Charge and continued until about logical Museum after World War I until the position was abolished on his retirement in 1929. Several papers by him on ceramics and objects of art appeared in the 1920's. In about 1922-23, he published at Gore Hill, Sydney, a small, gratis paper called "The Northern Star." Charles Laseron was also a Foundation Member of Sydney Legacy, the organisation for the welfare of servicemen's dependents. During the depression he conducted a business as an antique dealer and stamp, coin and book auctioneer, and in his leisure wrote South with Mawson, which remained unpublished until 1947, with a second edition 10 years later.

During World War II, Staff Sergeant Charles Laseron was map-reading instructor in the A.I.F. and he invented a pocket sun-compass for the use of troops. He was much liked by his men-his painstaking lectures were the subject of much good-humoured banter which he enjoyed as much as his pupils. He contracted bronchitis, which affected his heart and was invalided out of the Army.

After the war he performed clerical work for the Colonial Sugar Refining Company. In his leisure and during his years of retirement he wrote his well-known books on Australian physiography, The Face of Australia and Ancient Australia and returned to his old love, marine biology, concentrating on molluscs, mostly shells of minute size which he and his son had collected by dredging or on beaches. He also occasionally reviewed books for the Sydney Morning Herald, for he had to earn a living. Never a rich man, he nevertheless enjoyed a rich life.

He was a member of the Royal Zoological Society from 1st January, 1936. He joined the Council in 1938 and later became Honorary Treasurer. He was elected a Fellow in 1952. So highly were his services to the Society regarded that his widow was elected to Honorary Life Membership in September, 1959.

He worked assiduously on group after group of shells and there is no doubt that he enjoyed describing and figuring these beautiful objects and that this hobby kept him alive over recent years. At first, drawing was a great burden, but by patient application and practice he overcame technical difficulties. He never inked in his outlines freehand but relied on French Curves for steadiness and he developed an expert style in the end. His one-pointed concentration on whatever subject he had in mind was remarkable and his measured conversation and his care in the selection of words, whether speaking or writing, greatly impressed us when he visited the shell department of the Australian Museum of which he was an Honorary Correspondent.

Mr. Laseron is survived by his widow, a son, a daughter and three grandchildren.

## HIS CONCHOLOGICAL RESEARCHES.

It will have been observed that C. F. Laseron's experiences and interests were very broad, and he was an authority in three quite distinct fields of
learning-in geology, in ceramics and in conchology. It is especially the latter which interests us here, as it was principally conchology which occupied the last ten or twelve years of his life, and through which he was best known to members of this society.

Commencing in 1948 with an account of the taxonomy of the New South Wales Marginellidae, he followed up with studies on a series of the families of small shells of New South Wales, and soon turned his attentions further afield, with detailed studies of the northern Australian fauna. During the succeeding eleven years he proposed a multitude of new names for these largely unknown groups, and established a basis for the study of the minute mollusca of Australia which will stand for many years His bis paper, dealing with Northern Australian Pyramidellidae finished only a few weeks before his death, and published posthumously In it he has presented what are probably his best drawings, for during the mears between his "Marginellidae" and his death, he had become one of the finest illustrators of molluses of this generation.

A number of mollusca have been named after him, among which can be mentioned Lyreneta laseroni Iredale, an unusual volutid from New South Wales; Omphalorissa laseroni Iredale, a minute terrestrial gastropod which Laseron had discovered quite by accident, and Laseronia Cotton, a genus of Rissoidae. There are a few others, including Melanella laseron Hedley from Antarctica, Arizelostoma laseroni Iredale (a Cancellarid) Pellamora laseroni Iredale (a freshwater shell, Iravadiidae) and Torinista laseronorum (a Heliacid) and the genera Laseronula and Laseronetta in last year's "Proceedings.'

He collaborated in a paper with Tom Iredale, dealing with the genus Ctiloceras and wrote three short papers in collaboration with his son, John The latter deserves much credit for the success of Laseron's work, as he was responsible for the greater part of the collecting done in recent years, was responsible of it was based.

Laseron proposed many new scientific names, and in all cases, the types of species described by him were presented to the Australian Museum Sydney, together with all figured material. Australian malacology owes him a debt of gratitude for many years of valued service

This paper is the fifth of a series on the work of outstanding Australian conchologists by the present authors and by Tom Iredale, previous contributions having dealt with the writings of Angas, Brazier, Hedley and Iredale. We follow here the same system as used previously, with a strictly chronological list of papers, followed by an index to the names proposed as new the first number opposite each name representing the number of the paper in which the name appeared, and the second number representing the page in that publication. In Laseron's case, a few names were given to some fossil Fenestellid bryozoans, which are distinguished by asterisks in the index. Names for fossils are distinguished by an obelus ( $\dagger$ ). Otherwise his taxonomic activities dealt entirely with the mollusca.

1. The Geology of the Shoalhaven. Aust. Naturalist, 1, pp. 26-27, July, 1906.

1908
2. The Sedimentary Rocks of the Lower Shoalhaven River. J. Roy. Soc. N.S.W. 42, pp. 316-335,,pls. 44-48, 1908.

## 1909

3. Exhibition of Graptolites from near Cooma and new Pelecypod from Shoalhaven River. Proc. Linn. Soc. N.S.W. 34, p. 118, July 13, 1909.
4. Exhibition of Conularia laevigata showing aperture. Proc. Linn. Soc. N.S.W. 34, p. 590, Dec. 3, 1909.

## 1910

5. Exhibition of Carboniferous fossils. Proc. Linn. Soc. N.S.W. 35, p. 308, July 14, 1910.
6. Palaeontology of the Lower Shoalhaven River. J. Roy. Soc. N.S.W. 44, pp: 190-225, pls. 15-19, Dec. 12, 1910.

## 1912

7. Note on a new type of aperture in Conularia. J. Roy. Soc. N.S.W. 45, pp. 247-249, pl. 11, June 26, 1912.

## 1915

8. From Egypt to Egypt via Dardanelles. Fortunes of Our Gallipoli Braves from Transport to Trench. New Light Cast on Landing Sunday Times (newspaper, Sydney) July 11, 1915, whole of page 14, with portrait of Sgt. Laseron.

## 1916

9. From Australia to the Dardanelles: being some odd pages from the diary of C. F. Laseron. 8vo, pp. 80. J. Sands, Sydney, 1916. (Last two chapters earlier in Sunday Times, 1915, No. 8, above.)

## 1918

10. Notes on some Permo-Carboniferous Fenestellidae with descriptions of new species. J. Roy. Soc. N.S.W. 52, pp. 181-202, pls. 1-16, October 17, 1918.

## 1922

11. Descriptive Guide to the collection of Old Pottery and Porcelain donated to the Technological Museum by Thomas Handcock Lennard and Martha Lennard. N.S.W. Dept. Educ. Tech. Br. Series No. 26, 4 to, 34 pp. Acting Government Printer, Sydney, illustr., 1922.
12. The Lennard collection of old pottery and porcelain, recently donated to the Technological Museum by Thomas Handcock Lennard and Martha Lennard. (Part I) Old Pottery. Tech. Gaz. N.S.W., 12, Pt. 2, pp. 85-96, illustr., 1922.

## 1923

13. The Lennard collection of old pottery and porcelain, recently donated to the Technological Museum by Thomas Handcock Lennard and Martha Lennard. (Part II) Porcelain. Tech. Gaz. N.S.W. 13, Pt. 1, pp. 27-31, figs. 7-8, 1923.
14. Geological History of New South Wales: a summary of the changes in its physiography, climate and life, since the dawn of the Palaeozoic era. Tech. Gaz. N.S.W. 13, pt. 2, pp. 114-122, figs. 1-3 1923.
15. Some common New South Wales fossils pp. 21-31, pls. i-ii, text figs. 1-7, 1925.

## 1927

16. Guide to the first exhibition of the New South Wales Collection of Applied Art (the section on Malay silver by F. J. Benton). N.S.W. Applied Art Trust, Sydney; Farmer and Co. Ltd., pp. 32, illustr., 1927

## 1930

17. The Renaissance of English pottery, being a descriptive guide to the collection of Doulton Wares in the Sydney Technological Museum. N.S.W. Dept. Educ. Tech. Educ. Br. Series No. 27, pp. 27, illustr., 1930.

## 1934

18. The library and ethnological collection of the Late W. W. Thorpe (late Ethnologist of the Australian Museum) to be sold by auction in the Rooms, 56 Pitt Street, on Thursday, 8th March, 1934 C. F. Laseron. Fine Art Auctioneer. Roneod, pp. 1-10, $8 \frac{1}{4} \times 10 \frac{1}{4}$ in. 1934.

1937
18a. Notes by Members of the Marine Section. New Records of Shells from New South Wales. (By C. F. \& J. Laseron.) Proc. Roy. Zool. Soc. N. S. Wales 1936-37, pp. 17-18. August, 1937.
18b. A Simple Dredge. Proc. Roy. Zool Soc. N. S. Wales 1936-37, p. 18. August, 1937.

8c. Marine Zoological Section. Annual Report. (By C. F. Laseron \& Maisie Golding.) Proc. Roy. Zool. Soc. N. S. Wales 1937-38, pp. 13-14. August, 1938.
19. Shell collecting in New South Wales. Proc. Roy. Zool. Soc. N.S.W. 1937-38, pp. 22-27, August, 1938.
20. An Unusual Occurrence of Cowries (Cypraea) on the coast near Sydney. Aust. J. Sci. 1, No. 2: 63, October, 1938. [Records first big influx since 1895.]

## 1939

21. A Little-known Shell Fauna. Aust. J. Sci., 1, No. 5: pp. 158-159, 1939 1941
22. Maps and Topography. For the Australian Soldier. 8vo, pp. 1-65, 29 text-figs. Published and printed by Harold Murray, Sydney, July, 1941.

## 1942

23. Direction Finding by the Sun and Stars. Mingay Publishing Co (Radio Printing Press), Sydney, pp. 1-48, figures $1-10.4$ by $5 \frac{1}{4}$ in 1942.

## 1947

24. South with Mawson: reminiscences of the Australasian Antarctic Expedition, 1911-14. George Harrap, London, and Australasian Publishing Co., Sydney, pp. 224, illustr. + map as end papers. (2nd Ed. see below, item 51).
25. The Zoo-Geographical Problem of Port Jackson. IntroductionGeneral Principles. Part I-Physiography. Aust. Zool. 11, Part 2, pp. 115-128, figs. 1-2, June 20, 1947.
26. The Zoo-Geographical Problem of Port Jackson. Part 2-Classification of Habitats. Aust. Zool. 11, Pt. 3, pp. 190-203, text-figs. 1-2, February 11, 1948.
27. New South Wales Marginellidae. Rec. Aust. Mus. 22, No. 1, pp. 35-48, pls. 5-6, June 30, 1948.

1950
28. Review of the Rissoidae of New South Wales. Rec. Aust. Mus. 22, No. 3, pp. 257-287, figs. 1-94, January 27, 1950

## 1951

29. Revision of the New South Wales Cerithiopsidae. Aust. Zool. 11, Pt. 4, pp. 351-368, pls. 35-37, text figs. 37-41, July 31, 1951.
30. The New South Wales Pyramidellidae and the Genus Mathilda. Rec. Aust. Mus. 22, No. 4, pp. 298-334, figs. 1-98, "June" [三 Aug. 3], 1951.
31. Notes on the New South Wales Mitras, with special Reference to their protoconchs. Rec. Aust. Mus., 22, No. 4, pp. 335-343, text figs. 1-11, August 3, 1951.

1952
32. A Shell that Builds a House. (By C. F. and John Laseron). Proc. Roy. Zool. Soc. N.S.W. 1951-52, p. 39, Nov. 5, 1952.

1953
33. Minute Bivalves from New South Wales. Rec. Aust. Mus. 23, No. 2, pp. 33-53, text figs. 1-44, April 17, 1953.
34. The Face of Australia: the shaping of a continent . . . Angus \& Robertson, Sydney. Ed. 1, pp. i-xii, 1-244, plates and 13 text figures, June 1953. (Reprinted May 1954 and May 1957.)

## 1954

35. Revision of the Liotiidae of New South Wales. Aust. Zool. 12, Pt. 1, pp. 1-25, figs. 1-49a, March 24, 1954.
Revision of the New South Wales Triphoridae. Rec. Aust. Mus., 23, Revision of the New South Wales Triphoridae. Rec.
No. 4, pp. 139-158, text figs. 1-30, June 25, 1954.
36. Revision of the New South Wales Turridae (Mollusca). Royal Zoological Society of New South Wales. Australian Zoological HandZoological Society of New South Wales
book, pp. 1-56, pls. 1-12, July 31, 1954.
37. Ancient Australia: the story of its past geography and life. Angus and Robertson, Sydney, pp. i-xiv, 1-210, illustr., maps, October, 1954. Robertson, Sydney, pp.
Reprinted January, 1956.

## 1955

39. The Genus Tolema and Its Allies (Class Mollusca). Proc. Roy. Zool. Soc. N.S.W. 1953-54, pp. 70-74, pl. 1, March 4, 1955.
40. The Identity of Phasianella virgo. Proc. Roy. Zool. Soc. N.S.W. 195354, pp. 77-78, text-figs. $1 \& 2$, March 4, 1955.
41. Revision of the New South Wales Eulimoid Shells. Aust. Zool. 12, Pt. 2, pp. 83-107, pls. 1-3, figs. 1-78, July 18, 1955.
42. The New South Wales Cancellariidae. Rec. Aust. Mus., 23, No. 5, pp. 267-272, text-figs. 1-13a, Sept. 1, 1955.

## 1956

43. A New Genus of the Nassariidae. (By C. F. and John Laseron.) Proc. Roy. Zool. Soc. N.S.W. 1954-55, pp. 71-72, text-figs. 1 \& 2, April 10, 1956
44. The Family Cerithiopsidae (Mollusca) from the Solanderian and Dampierian Zoogeographical Provinces. Aust. J. Mar. Freshw. Res. 7, No. 1, pp. 151-182, figs. 1-57, April, 1956.
45. New South Wales Mussels. Aust. Zoologist 12, Pt. 3, pp. 263-283, figs. 1-53, August 29, 1956.
46. The Smallest Shells in the World. Walkabout (Australian Geographical Magazine) 22, No. 8, pp. 16-17, text-figs. 1-4, August, 1956.
47. The Families Rissoinidae and Rissoidae (Mollusca) from the Solanderian and Dampierian Zoogeographical Provinces. Aust. J. Mar derian and Dampierian Zoogeographical 1-228, October, 1956.
48. A Revision of the New South Wales Leptonidae. Mollusca: Pelecypoda. Rec. Aust. Mus., 24, No. 2, pp. 7-21, text-figs. 1-27, November 23, 1956.
49. The Ancient Seas of Australia. Aust. Mus. Mag. 12, Pt. 4, pp. 105-108, 2 text-figs., Dec. 15, 1956.

## 1957

50. The Systematic Status of Ctiloceras and Some Comparative Genera. (By Tom Iredale \& C. F. Laseron.) Proc. Roy. Zool. Soc. N.S.W (By Tom Iredale \& C. F. Laseron.) Proc. Roy. Zool
$1955-56$, pp. 97-109, pls. 1-2, figs. 1-35, May 8, 1957.
51. South with Mawson: reminiscences of the Australasian Antarctic Expedition, 1911-14. (2nd Ed. of 1947 work, item 24 above, by diff. publisher.) Angus \& Robertson, Sydney. 2nd Ed., pp. i-xii, 1-195, with new illustr., maps as end papers, June, 1957.
52. A New Classification of the Australian Marginellidae (Mollusca), with a Review of Species from the Solanderian and Dampierian Zoogeographical Provinces. Aust. J. Mar. Freshw. Res. 8, No. 3, pp. 274-311, figs. 1-84, June, 1957.

## 1958

53. America Rediscovers Antarctica--an Australian Opinion. Pacific Discovery 11, pp. 14-15, fig., May-June issue.
54. The Care of Small Shells in the Collection. Proc. Roy. Zool. Soc. N.S.W. 1956-57, pp. 92-94, text-fig. 1, June 27, 1958.
55. Liotiidae and allied molluscs from the Dampierian Zoogeographical Province. Rec. Aust. Mus., 24, No. 11, pp. 165-182, figs. 1-87, Province. Rec.
October 7, 1958.
56. Sydney Scenery in the Making. Sydney Morning Herald, Oct. 25, 1958, p. 13, fig. [Review of G. Taylor's "Sydney Scenery."]
57. The Family Triphoridae (Mollusca) from Northern Australia, also Triphoridae from Christmas Island (Indian Ocean). Aust. J. Mar. Freshw. Res., 9, No. 4, pp. 569-658, figs. 1-255, December, 1958. (See also item 60 below.)
58. Life time of Industry, Sydney Morning Herald, December 27, 1958, p. 9. [Book Review of "Journeyman Taylor" by Griffith Taylor.]

58a. Obituary. Sir Douglas Mawson. Aust. J. Sci. 21, pp. 134-135, December, 1958

## 1959

59. Island Journeys (Book Review of "Mountains in the Sea" by Martin Holdgate), Sydney Morning Herald, January 3, 1959, p. 10.
60. South Sea Savages (Book Review of "Among the Savages of the South Seas" by Alfred Tetens). Sydney Morning Herald, January 24, 1959, p. 11
61. Corrigendum to "Laseron 1958, Triphoridae (Mollusca) from Northern Australia
to "Laser ron 1958, Triphoridae (Mollusca) from Northern
Aust. J. Mar. Freshw. Res. 9: 569-657." Aust J. Mar. Freshw. Res. 10, Pt. 1, p. 124, May, 1959
62. The Family Pyramidellidae (Mollusca) from Northern Australia. Aust. J. Mar. Freshw. Res. 10, pp. 177-267, figs. 1-213, October, 1959.

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# Two New Species and a New Genus of Opisthobranch Molluscs from New South Wales 

By Robert Burn*

In the preliminary studies to a comprehensive revision of the New South Wales opisthobranch molluscs, the writer has come across many new species and new records. Only two species are described here and by them I wish to acknowledge the assistance given to me whilst on collecting trips by two of my Sydney friends. For Mr. Mervyn Burrows of Matraville I describe Philine burrowsi sp. nov. from dredgings in Broken Bay, N.S.W ; and for Mr. Phillip Colman of Narrabeen I describe Narraeolida colmani gen et sp nov from Long Reef N.S.W

Family PHILINIDAE.
Genus PHILINE Ascanius, 1772.
PHILINE BURROWSI sp. nov.
(Figures 1-3.)
Remarks:
A single living specimen of a strange Philine was obtained recently in shallow-water dredgings in Broken Bay. Unfortunately the shell is smashed beyond reconstruction, apparently caused by crushing in the dredge and later attempts to remove the shell from the animal. From the minute pieces of shell still to be had, and the animal, it is at once possible to state that the species is not $P$. angasi (Crosse and Fischer, 1864) which is of common occurrence along the southern coastline of Australia, and, more thar likely not any of the deep-water species recorded from N.S.W It is of cuurse possible that this is a species from the tropical waters of Queensland but I have not been able to trace any Philinids from that area.

## Description:

Philinid species, 15 mm . long and 8.5 mm . broad, with a nearly mooth shell of unknown shape, with the parapodia broad and thin, having definite narrow head and constricted posterior or terminal mantle flaps; with the head shield of the body longer than the terminal; the radula with denticulate teeth to the formula of 20-21 x 1.0.1, the three gastral plates mall, the lower nearly equal in size to the upper two, with the outer surfaces little concave; ctenidium small, of few plumes; body-colour cream with the margins of the parapodia and terminal flaps tinted yellow.

Type locality: Brisbane Waters, near Killcare, Broken Bay, N.S.W., dredged in 3-4 fathoms on a sandy bottom, collected by Miss G. Thornley and Mr. Mervyn Burrows, $4 / \mathrm{x} / 1958$. Holotype in the Australian Museum, Sydney, registered No. C.62871.

## Distinguishing Characters:

$P$. burrowsi has been compared with the animal of $P$. angasi and was found to differ considerably from that species. In the latter species the body often attains a length of 60 mm . and the shell a length of 35 mm . or, in other words, the posterior shield exceeds the dimensions of the anterior. Also the parapodia are thick and muscular, and close to the body so that the shape of the whole animal is regularly oval. The ctenidium of P. angasi is very large, extending right across the body cavity whereas in the new species it occupies but a little of the right-hand side of the cavity.

[^0]In both species the anus emerges posterior to the ctenidium upon the wall of the shell skin, and the common genital aperture opens on the roof of the body cavity just forward and to the right of the ctenidium.

Internally the teeth of the radula are similar in shape, but in $P$. angasi they are smooth where in $P$. burrow'si they are denticulate on the inner margin with a few pseudo-denticulations or serrations above and below the denticulations proper. The denticulations are irregular in size and shape and vary from one side of the radular strip to the other; in newly formed teeth denticulations are large, crass and few in number. Each denticle of a normal tooth is claw-shaped, some have larger hooks at the tips than others, but in each case the tip is curved slightly towards the base of the tooth. The gastral plates of $P$. burrowsi are very much shorter and relatively smaller than those of $P$. angasi (vide Hedley 1912, pl. 44), they neither terminate in such narrow extremities nor are they as concave on the outer sides. Here also the ventral plate is nearly the same length as the upper two whereas in $P$. angasi the ventral one may equal as little as two-thirds the length of the upper ones but Hedley's example is probably an exception from the general rule. A Victorian specimen in front of me shows very little difference in size of any of the plates except that the shows very little difference in size of any of the plates except that the in Hedley's figure. In both species there are two small pores in the in Hedley's figure. In both species there are two small pores in the gastral plates with the exception of the ventral one of P. burrowsi; there $P$. angasi has large deep ones at mid-length and the new species has shallow, indistinct ones towards the rear of the plates.

Of the genital organs only the prostate gland and the seminal groove were examined in both species. For its small size $P$. burrowsi has a large glomerate prostate gland formed of minute narrow tubes and ducts. $P$. angasi has an even larger gland which is much coarser and less compact in its extensions about the anterior visceral cavity. The seminal groove is less noticeable in the new species than in its congener, it has thickened and raised margins and is situated higher up under the lateral rim of the anterior shield than in $P$. angasi.

Figure 1. Philine burrowsi Burn.
$a$-Dorsal view of the living animal, the alimentary shaded (after a sketch by the collector, M. Burrows).
$b-$ Ventral view of the preserved animal, SG-seminal groove, CGAcommon genital aperture, CT-ctenidium, A-anus, S-shell.

Figure 2. Philine burrowsi Burn.
$a$-Lateral view of a fully developed radular tooth.
$b$-Detail of denticulations on inner margin of $a$.
$c$-Lateral view of a newly formed radular tooth with crass denticles.
Figure 3. Philine burrowsi Burn.
$a-$ Right dorso-lateral and $b$-ventral gastral plates.
Figure 4. Narraeolida colmani Burn.
$a$-Dorsal view of living animal.
$h$-Schematic diagnosis of the liver system, GA-genital apertures, N nephroproct, A-anus.
c-LLateral view of a single radular tooth.


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To my knowledge, of the 8 or so species of Philine recorded from Australia, only $P$. angasi and $P$. burrowsi have ever been taken alive.

The second species to be described here is a minute eolid nudibranch of very distinctive form, differing from any of the eolid genera at present known from Australia. Thus I venture to describe the species as Narraeolida colmani gen. et sp. nov.

## Family CUTHONIDAE.

NARRAEOLIDA gen. nov.
Diagnosis: Aclieoproct Eolidacea with a uniseriate radula in which each tooth has a large central cusp and four shorter lateral denticles either side; with simple rhinophores, backward pointing cephalic tentacles and rounded foot corners; with two simple liver canals in the right liver in which the cerata are inserted singly and are few in number; having the jaw processes smooth; penis unarmed.

Type species: Narraeolida colmani sp. nov.

## Remarks:

This genus is referred to the family CUTHONIDAE, subfamily TERGIPEDINAE and is closely related to the genera Tergipes Cuvier 1805, Embletonia Alder and Hancock 1851, Ennoia Bergh 1896 and Myja Bergh 1896. Perhaps it is closest to Ennoia but lacks the large broad foot corners, the elongate cerata and the numerous (20-25) denticles either side of the central cusp of each radular tooth. In accordance with Ennoia, as opposed to both Tergipes and Embletonia, the jaw processes are smooth. The subfamily TERGIPEDINAE is distinguished from the CUTHONIDAE proper in that the right liver contains at the most two canals and occasionally contains but the one canal terminating in a single ceras (Tergipes) or several cerata (Myja). Embletonia differs from the other three genera in that the cephalic tentacles have been replacd by a broad velum; except for this external discrepancy Narraeolida could be classed as that genus.

With a new species of Tergipes from Portarlington, Victoria (as yet undescribed) this species represents the TERGIPEDINAE in Australia. Other Cuthonid genera represented along our coastline are Cuthona Alder Torquay, Victoria, but in each case the three liver canals in the right liver separate them from Tergipedinid genera.

NARRAEOLIDA COLMANI sp. nov.
(Figure 4.)
Remarks:
I am indebted to Mr. Phillip Colman for the discovery of this minute species in the large rock pools of Long Reef, Narrabeen, N.S.W. Mr. Colman and I collected quite a number of specimens but unfortunately we failed to keep them separated from some of the larger carnivorous nudibranchs and so many of them disappeared. All that remain are five specimens, one of which has had the radula removed for examination.
Description:
The body attains a length of 5 mm . and contracts in preservative to 4 mm ., in each case the body width remains about 1 mm . The body is attenuated and rather slender, the cephalic tentacles are short and stout, their ends are rounded and curl out and rearwards. The foot corners are slightly expanded and rounded. The rhinophores are simple and somewhat short, they tend to lie back upon the dorsum of the animal. The right liver and its left partner each contain two simple canals, quite close together but distinctly separate at their dorsal ends. The interhepatic space is at least
twice as long as the distance between the canals of the right liver. Behind the interhepatic space there are three simple short canals each side of the dorsum. The cerata are inserted singly in each canal and in sequence from fusiform with very broad bases, the distal end side. The cerata are stoutly stricted and much resembles the teat of a baby's milk bectle is between the second and third liver canals on the right side (ise anu interhepatic space), about equal to the middle ceras of the postanal in the the nephroproct is just in front of the anus and The genital apertures are lateral to and immediately below the first canal of the right side, they are large and readily noticeable. Much of the dorsum is bare for the cerata tend to stand rear-laterally.

The penis, while everted in the living specimens, was observed to be simply conical, shallowly curved rearwards and unarmed. It arises from the anterior side of the genital aperture.

The radula contained 40 teeth of the formula 0.1 .0 , there being about 15 teeth on the underside of the strip, three of these were in the process of being discarded from the tip of strip. Each tooth has a prominent central cusp and four large strong denticles either side. The jaw processes are smooth although they were hard to observe clearly in the specimen examined.

The body-colour was pale cream everywhere covered with small patches of gold speckles. The cerata were similarly gold speckled, the bases on the outer sides were black, the digestive glands were fawn, the cnidosacs were white and the distal constriction on each ceras carried a narrow band of red or orange. The cephalic tentacles carried a similar red band at mid-length.

Type locality-Long Reef, Narrabeen, N.S.W., collected on the tips of the seaweed Pocockiella (Gymnosorus) variegatus in a large rock pool at the seaward extremity of the Reef. This rock pool is high above low water level but at high tide the waves break over a ledge and the water pours into the pool, excess water flows out over the lower shoreward edge of the pool. Collected by Messrs. P. Colman and R. Burn, 31/x/1959. Holotype, No. C.63000, and three paratypes, No. C.63001, are in the Australian Museum, Sydney. One paratype is in the National Museum of Victoria, Melbourne.

## Additional Remarks:

This species is at present the smallest eolid known from Australia, the large number of teeth in the radula is indicative of the fact that the specimens are adults. This is also the first eolid to be described from N.S.W. for over 75 years, since the last one was Rizzolia ( $=$ Godiva) australis Bergh 1884 from Sydney Harbour. There are about twelve eolid species in the writer's own collection of N.S.W. Nudibranchia, some of which are undoubtedly new species or records.

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