

XX
X
X THE CONCHOLOGICAL SOCIETY OF SOUTHERN AFRICA X
X X
XX

CIRCULAR NO. 74.

MAY, 1966

PAGE 1.

Edited by Leila Kerr.

MEETING.

The next meeting of the Society will be on Tuesday, 24th May, at 8.15 p.m. in the Lecture Hall of the S.A. Museum. The shells for display will be those on page 81, Plate IX of Barnard's Beginner's Guide. This is to give our new members a chance to participate in a display of our commoner shells. Please note that the name Purpura is now Thais. There will be a good film.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Minutes of Meeting held at the S.A. Museum, 19. 4. 1966

Mr. P. Elston took the Chair. Apologies were received from Mr. Kennelly, Dr. Grindley, Mr. & Mrs. Ackermann, Mrs. Lowry and Mrs. Prior. The Minutes published in Circular No. 73 were taken as read and adopted.

The following were elected as members of the society:-

Mr. G.C. le Roux, 1d Voortrekker Road, Bellville, Cape.
Mrs. B.M. Smith, East View, Birdham, Chichester, Sussex, England.

Master P.J. McGregor was proposed as a new member by D.H. Kennelly and seconded by H. Jefferies.

The three members who had shell exhibits, Mr. Elston, Mr. Dichmont and Mrs. Kerr each gave a short talk on their shells. These were examined during the tea break.

Three very chilly, but interesting, films were shown on the Eskimos and animals of the Arctic, ending with one on Newfoundland. All members present voted this one of the most enjoyable meetings we have had.

With regard to the April meeting, the writer was indeed pleased to observe more time devoted to our hobby than we have experienced for some time, exhibitors and members having the opportunity of studying the Mollusca on display.

Let us have more meetings like this, as to my way of thinking, this was the basic reason for which the Society was founded.

Mrs. Leila Kerr, our hard-working and much loved Secretary, showed and talked on her magnificent display of Cymatium, all collected by herself on her many collecting trips. The outstanding shells were, to me, Cymatium africanum (A. Adams) and Charonia mustulata (Euthymae). The former, in beautiful condition collected at Muizenberg, probably one of the largest obtained measuring $4\frac{1}{2}$ " x $2\frac{1}{2}$ ", and the latter ex Knysna Lagoon, remarkable for two reasons, its size and excellent condition for so large a specimen and that it was found in the area of the lagoon and not, as usual, on the rocky coastline, the measurements are 9" x 5". This mollusc is our largest gastropod and has been noted as large as 225 x 125 mm, which is the same size as Mrs. Kerr's.

The remainder of her numerous specimens of the species were well worth seeing. Our enthusiastic member "Jock" Dichmont followed with an excellent talk on his display, surely the most comprehensive collection of Cymatium, ranging from Angola to Mocambique and containing many good and uncommon specimens, we certainly again gained knowledge.

Least, but not least, Percy Elston, with pride may I say, displayed and gave a short talk on his complete exhibit of Plate 4. of Marsh and Rippingale's "Cone Shells of the World" plus a set of Cymatium pileare (Linnaeus) and agatille (Reeve) from many parts of the tropical seas, also quoting his

references and illustration. - An evening to be remembered - closing with a complete contrast, three short films of the Arctic Regions, kindly lent by the Canadian Trade Commissioner. Anon.

XXXXXXXXXXXXXXXXXXXX

IN MEMORIAM

We regret to record the death of Dr. E.C.N. van Hoepen of Hluhluwe, Zululand, on May 2nd. Dr. van Hoepen was a foundation member of our Society and was keenly interested in conchology. He was for many years Director of the National Museum in Bloemfontein. We extend our sympathy to his wife and family.

XXXXXXXXXXXXXXXXXXXX

NATAL GROUP

The next meeting of the Group will take place at the Durban Undersea Club, at the end of Erskine Terrace on Saturday afternoon, the 11th June, at 2.30 p.m.

The family for display and discussion will be Cypraedae, and Mr. Dee will give an explanatory talk on the South African species. Bring along any special specimens you have, or any you wish to have identified.

As this will also be our "Third Birthday Meeting" it is hoped that there will be an extra large attendance. Your friends who may be interested are welcome.

XXXXXXXXXXXXXXXXXXXX

TWO REMINDERS

1. Our Treasurer reminds members that June 30th, is D-Day for subs for 1966- 67. R1-50 plus exchange on cheques. Postal Orders not to be crossed and to be made payable at Newlands or Kenilworth.
2. We still have Mr. Cock's Natal Shell List at 54 cents, and Mr. Kennelly's Wild Coast List at 22 cents for sale.

XXXXXXXXXXXXXXXXXXXX

EXCHANGE WANTED

1. Mrs. A. Rutherford, 13 Rudd Road, Rockhampton, Queensland, Australia. (A very keen beginner).
2. Mr. & Mrs. M. Hamachek, 333 Waterloo Street, N. Rockhampton, Queensland, Australia. (Medium stage collector).
3. Mrs I. Smith, 38 Card Street, N. Rockhampton, Queensland, Australia. (An advanced collector).

XXXXXXXXXXXXXXXXXXXX

ANOTHER NEW BOOK

I recently received the latest list of books now available, or announced for 1966, from Mr. John Q. Burch, 4206 Halldale Avenue, Los Angeles, California, U.S.A.

One item listed as published in March, 1966 is "Sea Shells of the World. With Values" by Gordon Melvin. The price quoted is \$7.50 U.S.A. currency.

This latest catalogue should be of interest to our members, as it is described as containing over 1000 photographs (half of them in colour), 27 full page colour photos, and Index etc. All species listed in this book are described briefly, and locality and purchase price given. Although not a scientific text book, the inclusion of so many illustrations would appear to make this publication a source of reference to some extent.

D.H. KENNELLY

BORDER NOTES

By D.H. Kennelly.

During the past month or six weeks, some discoveries of interest have been made by local members.

At Haga Haga, Mrs Hazel Jefferies collected a good specimen of Calliostoma africanum Bartsch. Alt. 22 m.m. Base Dia. 16 m.m.

The writer was given a specimen of Haliotis gusketii Smith, collected at Nahoon (E.L.) by Mr. M. Saunders, a non-member. A second example of this shell was found by Mrs. C. Hulley at Genubie. Both localities are extensions of the known range of this species, which is regarded as rare.

At Bonza Bay, Mrs M.A. Rix secured a small specimen of Oliya scitula Marrat, the most southerly record for this shell and the first example found. (Vide Cir. No. 50. South African Olividae, by R.N. Kilburn.)

Our P.E. member, A. Kennelly, possesses two specimens of Oliya scitula, said to have come from Jeffreys Bay. This locality is in doubt and steps are being taken to discover, if possible, the exact locality where these two shells were found.

Other finds at Bonza Bay by Mrs Rix are Cymatium tabulata Menke, (extension of known range). Cymatium durbanense Smith, (extension of known range), and live specimens of Patelloida profunda Deshayes, (also an extension of the known range).

At Haga Haga, a specimen of Cypraea marginalis Dillwyn 1827, was collected by Mrs. Rene Cook of the Natal Group, who is very pleased with her Easter visit to the locality mentioned.

These notes reflect what may be found by careful and persistent collecting and it is hoped the Members mentioned will continue their "Nice Work".

xxxxxxxxxxxxxxxxxxxxxxxxxxxx

NATAL GROUP

By Les Cook.

The usual two monthly meeting of the above Group was held on Saturday, 30th April, at the Durban Under-Sea Club, and we were particularly pleased to welcome Joan Weakley from Cape Town, who is on a visit to Natal. We were also pleased to welcome Mrs Jean Pearce from Amanzimtoti, a prospective new member.

Apologies were received from Mr. & Mrs Brunette, who are on a caravaning holiday down in the Eastern Cape, and are, we hope, making some good finds.

The two S.A. families for display were Patellidae and Volutidae, and the writer gave just a brief resume of each.

After tea, members discussed many matters "shelly", and it was good to see all taking part. Much is learned at these "after-tea" informal sessions, which have become quite an important feature of our meetings, and members are loath to leave, even though the meeting has been closed.

GENERAL NOTES

SOME OBSERVATIONS RELATIVE TO SOUTH AFRICAN SPECIES OF PATELLA & HALIOTIS.

By D.H. Kennelly.

My experience in shell collecting extends back over many years. Observations made during this period, have led me to consider what the main cause may be for the mortality of innumerable specimens belonging to the Genera mentioned, and an opinion is expressed in these notes.

At any locality more or less noted for its shells, collectors will find many fresh dead, and perfect, examples of various species of Patella. Close examination of such shells reveals they have not been bored by a carnivorous Mollusc, belonging to the Genus Murex or allied Genera. I have never seen a single fresh dead Patella shell, with the small, tell-tale hole

In my opinion this depredation is caused by Starfish. The method of attack by the Starfish is described in a separate paper, being too lengthy for inclusion here.

It is well known and proved that Starfish invade beds of Oysters under cultivation in England, America and other countries and do a great deal of damage by opening the shells and eating the succulent body of the Oyster. This is done with ease by a Starfish and the latter could - and probably does - pull Patella and Halictis from their resting places, in order to feast on the bodies. In localities where Oysters and Pecten are very scarce, or altogether absent, the Starfish would naturally turn to other species of shells for a supply of food.

Some adult shells of various species of Patella, have a growth of seaweed on the dorsal surface - and the older the shell, the greater the length and density of the seaweed. To some extent this may be a protection against attack by Starfish, but not in every case. I have noted half-grown examples of Patella, e.g. longicosta, with a small growth of seaweed attached and fresh dead, which may have been overcome by Starfish. A Patella without a growth of weed, would be an easy victim.

Regarding fresh dead shells of Halictis midae and H. sanguinea, my notes record details which differ a little from those on Patella. I have never found a fresh dead adult shell of midae on the beach. This species attains a length of five to six inches, when fully grown, and lives in fairly deep water. After death through any agency other than man, the heavy shells would remain in the deep water, and not be readily washed ashore by rough seas occasioned by bad weather. Further comment therefore cannot be made regarding these adult shells.

In the past I have collected a very great many juvenile and half-grown shells in various stages, of midae. Only a very small percentage had been destroyed by a boring carnivore, death of the balance being attributed to Starfish.

On one particular section of the Jeffreys Bay beach, you may find many perfect fresh dead specimens of sanguinea. During the few years I lived at Jeffreys Bay, I collected scores of this species, ranging from babies to fully adults. Of all these shells not a single juvenile had been destroyed by a carnivore, so the Starfish must be held responsible.

On the other hand, one adult shell in every five or six collected showed the tiny hole bored by a carnivorous Mollusc.

Referring again to the Patellidae, I have before me a copy of the Conchologists Newsletter, No. 1. In this issue, Mr. G.W. Pitchford records his observations of an English Sea bird - the Oyster Catcher - knocking living shells of Patella vulgata from their hold on rocks at low water mark. After which the bird would retrieve its victim from the water, carry it ashore to a convenient spot, and proceed to eat the body.

I have never read, or heard, of any South African seabird, performing this feat and I hope this matter will be referred to a Museum for further information on the subject.

You now have my observations in detail, also my opinion that Starfish are responsible for a lot of the mortality in our Mollusca, more particularly in regard to our Patellidae and Halictidae.

I hope some of our Members will communicate their opinions, and/or observations on this subject to our Editor for publication, and so further enlighten our Members. My opinion must not be regarded as final, and may be proved as being incorrect. That would not matter at all.

Please do not leave this alone, in the hope that some other Member is sure to write. That mysterious individual - the other Member - never does write and our Editor will wait in vain for something of interest for the Circulars.

Editor's Comment : having contacted Dr. G. Broekhuysen of the University of Cape Town on this subject, he informs me that our Oyster Catcher (a misnomer as it does not catch oysters) would not have the strength to knock off Patella from the rocks. The Starfish lives on bivalves and may also eat Patella etc. as the long continual pull would detach them from the rocks.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

ECHINODERMATA AND MOLLUSCA

By D.H. Kennelly

The Order Echinodermata (Spiny-skinned Animals), includes the Sea-Urchins, Starfish, Brittlestars, and the Sea-Cucumbers.

There are reliable records that species of Cassis and Tonna, eat Sea-Urchins, and this will apply to South African species of the two Genera mentioned. Both Cassis and Tonna have a large fleshy foot, which is said to be used to smother the Urchin before eating it.

In life, the common South African Urchin is covered with spines, which may be either red or purple in colour. These spines are attached to the test (outer cover) of the Urchin by a sort of ball and socket joint, and are extremely movable, thereby enabling the owner to move slowly about on the reef.

After death the test, denuded of spines, is often found on beaches, and much resemble a small green coloured bun. The upper side shows a small hole through which waste matter is ejected. The under surface has a larger hole, where in life, the mouth and jaws of the Urchin were situated.

Beginner collectors find these dead, spineless tests, and assuming they are shells, produce examples for identification.

Starfish are carnivores, and are known to prey upon several species of Molluscs. The under surface of the arms of a Starfish is studded with hundreds of very small tube feet, which in miniature, correspond to the cups on the arms of an Octopus, and function in the same manner. The tube feet enable the Starfish to move about, and assist when an attack is made on any Mollusc desired for food.

Tenacity of life is a marked characteristic in Starfish. If one is chopped in half, and returned to the sea, the two halves in due time become two separate and very much alive individuals. At one time Oyster farmers did this, assured they were reducing the Starfish population infesting the beds of cultivated Oysters. When informed to the contrary by Marine Biologists, the farmers were really taken aback, and now employ other methods of destruction.

Though the Starfish has a small mouth, this is compensated for in the possession of a most unusual stomach. The latter is extrusible, and enables the Starfish to eat a mollusc too big to be taken inside its mouth.

Having found an edible bivalve, e.g. an Oyster, the Starfish straddles it - humped like an open umbrella. A firm grasp is made by the tube feet at the extremities of the arms on the surrounding surface, and at the same time more tube feet round the central part of the Starfish are attached to the upper valve of the Oyster. A strong continuous pull by the Starfish soon overcomes resistance, for the Oyster becomes tired and relaxes the muscle holding the shell firmly closed. Whereupon the Starfish pulls up the valve of the shell, pushes his stomach out to engulf and digest the body of the victim. When finished the stomach is retracted and the Starfish moves on leaving behind a clean and undamaged shell.

Pecten and Chlamys species are also attached and eaten in the same manner, small examples being taken into the mouth and there digested, the shell being ejected after the meal.

Experiments have shown that although a bivalve may be capable of resisting a sudden pull upon its valves of four thousand grammes, it has to yield to a long continued pull of about nine hundred grammes. It has been proved that a Starfish will pull a shell like this

Little wonder then that the unlucky bivalve succumbs to the attack.

One species of South African Starfish, often to be seen alive in rock pools, or dead on the beach, does not appear to grow very large.

The largest seen by the writer would measure about four to five inches across from tip to tip of opposite arms.

A much larger species does occur on our coast, but is seldom seen, as its habitat is probably in deep water.

An example of this large Starfish was found at Jeffreys Bay some years ago, just after a heavy south easter had raged for two or three days, causing a very rough sea. This example was blue in colour, and the circumference of the arms was estimated as being nearly that of a dinner plate.

A dinner plate is ten inches in diameter, and a Starfish of nearly similar size would be capable of overpowering our large Pearl Oyster (Pinctada capensis Sowerby). Barnard states the latter attains about 130 x 130 m.m. (five inches across).

The writer now regrets not having preserved this Jeffreys Bay specimen, for identification and accurate measurement. The moral is to collect when you have the opportunity, as a second chance may never come your way.

After consideration of all available information, it appears quite feasible that Starfish - in localities where Oysters or Pecten Spp. are scarce or entirely absent - would be prone to attack Patella and Haliotis to obtain a supply of food. The strong sustained pull of the Starfish would surely overcome the resistance offered by members of the two Genera mentioned.

This appears to be a logical conclusion. Available literature reveals nothing recorded of attack by Starfish on Patella and Haliotis, and it appears to be something worthy of future investigation and report.

References: Barnard, Dr. K.H. 1954 South African Shore Life
(Illustrated.)
Duncan, F. Martin (No date) Animals of the Sea.
(The writer's copy was purchased in 1944)
Shell Oil Company. 1957. The Scallop (Illustrated)
Chapter on Scallops and Starfish.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

ADDITIONAL LOCALITY FOR THREE SOUTH AFRICAN SHELLS

By D.H. Kennelly

The undermentioned species have been taken by our keen Border member, Mrs M.A. Rix, at Bonza Bay.

Euthria ponsobyi Sowerby. Murex ramosus Linn, and Nerita albicilla Linn.

The Nerita examples were taken alive. Mrs Rix has two examples of the Murex, which is rare at Bonza Bay, all that have been found over a period of four years.

In addition Mrs Rix was fortunate enough to collect another example of Dinoplax gigas Chemnitz with only seven valves, a half grown shell and the best specimen of the abnormality the writer has seen. This makes the seventh specimen with seven valves to be recorded over a period of many years. (Vide Circular 62, page 5).

The specimens of Murex ramosus, and the Dinoplax gigas, were exhibited at the Border Group meeting on the 23rd January.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

SECRETARY:

Mrs L. Kerr,
37, Kenilworth Rd.

TREASURER:

Miss M. Kempthorne,
15, Upper Whelan St.

LIBRARIAN:

Mr. S. Kruger,
26, Kloof Nek Road