
SMITHSONIAN INSTITUTION LIBRARIES


SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION LIBRARIES

Texas CONCHOLOGIST

Volume IV, Number 1 August, 1967

NOTES & NEWS

August 23, 1967, will be our first meeting for the new year 1967-68.

TIME: 7:30 p.m.
PLACE: Southwest Service Center
4503 Beechnut

The program for the Conchology group will be a "Get Re-acquainted and Brag Night". Please bring your prize acquisition for the past summer (or year) and tell us about it (in 3 minutes or less). Also, each member present will be asked to mention the particular area, family or genus in which he or she is most interested. It is rumored that there will be a good door prize or two, (including some Strombus taurus) and a beauty from West Mexico donated by the late Ike Sheffield.

* * * * * * * * * * *

Forty members and guests were present at our final meeting held May 24, 1967. Lawrence Dexter, our new chairman, presided. Door prizes were given by Dr. W. W. Sutow. Dr. Sutow reported on the new books recently purchased. They may now be seen by members at the Harris County Public Library, 6108 Auden in West University Place. The library committee hopes to have these books available for checkout sometime in the very near future. Ask for Mrs. Anders, librarian.

Tom Kister gave a report on the Sharpstown Shell Exhibit which is written in more detail elsewhere in this paper.

MARSHALL ISLANDS - SHELLING AND SEASHELLS was the program given by Dr. Sutow while Don Kelly manned the slide projector. Don is not a member of our group but always willing to help out when needed. "THANK YOU, DON".

* * * * * * * * * * *

Constance Boone and Leola Glass while working with our library books have also set up a collection of Texas shells in the Harris County Library. Be sure to go by and see it.

During the month of July, shell exhibits by the folllwing club members were displayed at the Houston Public Library:

Mr. and Mrs. Lawrence Dexter
Mrs. Connie Boone
Dr. W. W. Sutow
Patsy Kister and Buzzy Sutow
Mrs. Ruth Junkin
Mrs. Leola Glass
Dr. Helmer Ode
Tom Kister

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR: Helmer Odé, MO4-9942
4811 Braeburn Drive
Bellaire, Texas

ASSOC.EDITOR: Dorothy Kister, PA3-2494
5302 Stillbrooke
Houston, Texas

REPORTER
Jeane Dashiell, SU1-2728

REPORTING and CIRCULATING
Connie Boone, Mo-8-8252

PROFESSIONAL CONSULTANT
Dr. T.E.Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

Family Pectinidae

The large scallop family has several representatives along Texas beaches, only one of which is common along the entire Texas Coast. In Texas, the genera Amusium, Pecten, Lyropecten and Aequipecten.

Amusium papyraceum Gabb 1873. Specimens of this quite characteristic species have been found on the outer beaches of South Padre Island, a few even alive (coll. Speers, Boca Chica, Nov. 1964). According to 17, abundant along the entire coast in outer shelf assemblage. Also reported from offshore waters in 18 and in 29 from many locations.

Figured in: No figures easily available.
Previous references: 17, 18, 19, 26, 29.
Localities: South Padre Island.

Pecten raveneli Dall 1898. This species is rarely found on Sargent beach (Odé) where old, worn flat valves wash ashore. More common on South Padre Island where both the flat and deeply cupped valves can be found. A few small, live specimens have been collected on the south tip of Padre Island when unusual deposits of offshore fauna were brought in by storms (coll. Speers). According to ref. 17 "few in central portion of intermediate shelf environment" and mentioned for offshore waters in 29.

Figured in: 1, 2, 3, 5, 6, 7, 17, 22.
Previous references: 17, 19, 29.
Localities: Sargent, South Padre Island

Lyropecten nodosus Linne 1758. This large species is rare on the Texas beaches except South Padre Island. Single valves have been found at Matagorda (coll. Sorrell), St. Joseph Isl. (11) and Padre Island. Most specimens look old and worn, but a few are colorful and fresh. One live specimen was collected near the jetty at Port Isabel (coll. B. Allen) and another live specimen was obtained by divers off Port Mansfield (coll. Hildebrand).

According to 17, "Few Texas to Mexico, sand, in outer shelf environment".

Figured in: 1, 2, 3, 5, 6, 7, 11. (figure in 17 mislabelled).
Previous references: 11, 17.
Localities: Matagorda Beach, St. Joseph Isl., Padre Isl.

Aequipecten muscosus Wood 1828. Rather worn valves of this species are occasionally found at Sargent. Fresher material is not uncommon at South Padre Isl. Here a fairly large number of live specimens, mostly measuring less than an inch in diameter, were collected by several collectors during the fall and winter of 1964. Reported from the coral banks in offshore waters in 18.

Figured in: 1, 2, 3, 5, 6, 7, 17.
Previous references: 11, 12, 17, 18, 19.
Localities: Sargent, South Padre Island.

Aequipecten gibbus Linne 1758. Specimens of this species have except for one instance, all been collected south of St. Joseph Isl. During the summer of 1966, a worn single valve was obtained from beachdrift at San Luis Pass (Ode). Live specimens have been taken at Port Isabel, both on the beach and by dredging the channel. (coll. Speers). According to 17 common along the whole coast in intermediate shelf environment and taken offshore according to 29.

Figured in: 1, 2, 3, 5, 6, 7.
Previous references: 11, 12, 17, 19, 24, 26, 29, 37.
Localities: Galveston Isl., St. Joseph Isl., Port Aransas, Padre Isl., Port Isabel.

Aequipecten irradians amplicostatus Dall 1898. This is the common scallop of the Texas coast. Dead valves are washed up on all beaches. Live specimens in the bays from Galveston to Port Isabel: Galveston West Bay (coll. Geis) and Corpus Christi Bay, Laguna Madre, Rockport, Port Isabel (all coll. Speers). In 14 mentioned alive from Rockport and Laguna Madre and according to 17 common in open sound or open lagoon assemblages.

Figured in: 1, 6, 7, 11, 14, 17.
Previous references: 11, 14, 15, 17, 19, 20 (alive), 37.
Localities: Common along entire Texas Coast.
Remarks: Several other species have been reported from offshore waters:
Amusium dalli E. A. Smith 1886. Reported in 17 as rare in upper continental slope assemblage. Also in 29.
Chlamys benedicti Verrill and Bush 1897. Reported dead from offshore banks in 18. Also in 29.
Cyclopecten nanus Verrill and Bush 1897. According to 17 rare, west of Mississippi delta in upper continental slope assemblage.
Aequipecten glyptus Verrill 1882. A mislabelled figure in 17 ("L. nodosus") shows this species. Also listed in 19 and 29.

DUES ARE DUE at this time and payable to:
Mrs. J. M. Fennessy, 10222 Hollyglen, 77016 NE 3-4346
Members of the Outdoor Nature Club - $1.00. Subscribers - $2.00

MOLLUSCANA

by W. W. Sutow, M.D.

It is indeed time that someone took public notice of the highly professional contributions that have appeared elsewhere in this publication since its first issue. I refer to the series, "NOTES CONCERNING TEXAS BEACH SHELLS", by Dr. Helmer Odé and Mrs. Anne B. Speers, both well-known and qualified conchologists. The continuing series can be commended on several scores. First, the literature search that accompanies the writing of each section is obvious from the many valuable references given. Second, the authors append critical comments and evaluations that lift these paragraphs above the run-of-the-mill re-tabulation of reported data. Third, almost the entirety of the description and identification of the species is based on personal observations. These authors are taking a giant positive step toward the correction of the recognized paucity of publications dealing with Texas coast molluscan fauna.

(Footnote-style, I should point out that the editor of this publication has nothing to do with the contents of this column. The opinions expressed are mine alone. In this issue, I merely wanted to record one man's appreciation of a tough job being well done.)

****

Are you using our library?

In rapid order we have acquired a very professional set of books and published material and also a donated library service that cannot be beat for convenience. Elsewhere, there are listed the library purchases made by club funds and also the most generous and truly substantial gift to the library by Mr. Harold Geis. A glance at the titles should indicate the high quality of our library. The books, however, are not meant for shelf ornamentation. They are intended for USE. Please use them!

****

For many years, Mr. Karl Greene welcomed shelling enthusiasts to the Children's Museum in Honolulu. Upon Mr. Greene's retirement in September, 1961, Commander Christiansen became the custodian of the Museum. I met the Commander for the first time one day in February, 1967. He had important commitments but he still made enough time to chat about shells for over an hour. Among other things I learned that Commander Christiansen was in charge of the celebrated Golden Cowry Registry. As of the time of my visit, 282 of these rarities had been registered. The response has been world-wise but most of the registrations came from Fiji Islands. The largest known specimen was registered from the British Museum. The giant measured 114 mm (4.56 in.) in length, 72 mm (2.88 in.) in width, and 63.5 mm (2.54 in.) in height. (These figures were copied directly from the registry card.)

While on the subject of giants, I did remember to ask Commander Christiansen about the monstrous Cypraea tigris (Tiger Cowrie) that is found in the Hawaiian waters. There was a fragment of a shell at the Museum that measured 5 7/8 inches on length. I was told that the largest known Cypraea tigris taken alive measured 5 5/8 inches.

****

The seashell as a featured design continues to grace many new postage stamps. Just issued are two singles from the Ryukyu Islands, one displaying the beautiful Murex triremis, and the other, the colorful Mitra mitra. Three 1967 Summer Semipostal Stamps of the Netherlands show stylized presentations of molluscan subjects: the "whelk" (Buccinum undatum ?) on one value, the "eggs of the whelk" on another, and a "mussel" (Mytilus edulis ?) on the third.

LIBRARY REPORT . . . . . by Constance Boone

Undoubtedly, the Houston Conchology Club will have the most outstanding library for its members of all the clubs around! In addition to the $200.00 for books voted from the treasury, Harold Geis, one of our most ardent supporters, has given our new library a fabulous collection of publications. Through the generous offer of Mrs. Thelma Sanders, head librarian of the Harris County Branch Library in West University Place, the books are being kept separately for our members on a bookshelf in Mrs. Sanders' office. There has been no checkout this summer, but books have been available for use at the library. As soon as all the books are in (the second $100.00 order is due) and adequately carded, all books, magazines, monographs, and exchange papers will be available for checkout. Rules and regulations will be announced at that time. We hope to get everything in shape for you to use the books at home by early fall. Meanwhile, do feel free to go by the library and take your shells and use the books. There is plenty of room. The atmosphere makes you very welcome.

The books given us by Harold include the following:

Morris, Percy A., "A Field Guide to the Shells of Our Atlantic and Gulf Coasts"
Abbott, R. Tucker, "Sea Shells of the World"
Wagner, Robert J. L. and Abbott, R. Tucker, "Van Nostrand's Standard Catalog of Shells"
Abbott, R. Tucker, "Introducing Sea Shells"
A.M.U., "How to Collect Shells"
Smith, Maxwell, "Triton, Helmet and Harp Shells"
Smith, Maxwell, "East Coast Marine Shells"
Lankester, E. Ray (ed), "A Treatise on Zoology" Part V on "Mollusca" by Paul Pelseneer
Jacobson, Morris K, and Emerson, William K., "Shells of the New York City Area."
Clench, William J. (ed), "Occasional Papers on Mollusks", Volume I, 1945-1954.
American Association of Petroleum Geologists, "Recent Sediments, Northwest Gulf of Mexico."
Nowell-Usticke, G. W., "A Checklist of the Marine Shells of St. Croix, U.S. Virgin Islands with Random Annotations"
Clench, William J. and Turner, Ruth D., "The Western Atlantic Marine Mollusks Described by C. B. Adams"
Merrill, Arthur S., "A Comparison of Cyclopecten Nanus Verrill and Bush and Placopecten Magellanicus (Gmelin)"
Boss, Kenneth J., "New Species of Tellina from the Western Pacific."
Abbott, R. Tucker, "The Marine Mollusks of Grand Cayman Island, British West Indies."
Weisbord, Norman E., "Late Cenozoic Gastropods from Northern Venezuela" #193 Paleotological Research Institution
Weisbord, Norman E. "Late Cenozoic Pelecypods from Northern Venezuela" #204 Paleotological Research Institution

(to be continued)

SHARPSTOWN SHELL SHOW . . . . . by Dorothy Kister

Sharpstown Center Mall once again was invaded by sealife and mollusks of every description during the recent shell exhibit held by members of the Houston Conchological Society. The main attractions were the live exhibits. Harold Geis and Wyatt Odom set up their wooden tank and filled it with oysters, clams, mussels, a horse conch or two, periwinkles (which refused to stay put and wandered around the mall, much to the delight of the youngsters finding them.) and other various and sundry molluscs. John Edstrom was in charge of exhibits and did a "bang-up" job including a very much-alive piranha fish. The shell store was a popular feature and reports are that from the shell sales more books will be purchased for the library. Dr. Cuebedeaux of the Harris County Pollution Office allowed us to use slides showing pollution in the bay areas in and around Houston. Mrs. Mildred Tate, Bryan Cooney, Rick Shaw, Norman Loeffler and Raymond Walley furnished displays from the Brazosport Youth Museum in Lake Jackson. We wish to thank each and everyone who worked so hard to make the show such a success. A list of exhibits and exhibitors are as follows:

Pollution by Harris County	Mrs. H. C. Boone
Snail Fever and Cannibals	Mrs. Elsie Shivers
Cones	Richard Rosenkranz
Deep Sea Beauties	Susan Kister
Echinoderms - Benefits to Man	Flower Follett-Florence Felder
Beauties of the Sea	Mrs. Ruth Junkin
Gulf of California	Mrs. H. C. Boone
3 1/2 Daze Shelling at Marathon, Fla.	Mary Sutow - Mildred Tate
Flotsam and Jetsam	Connie Boone-Dorothy Kister
Museum of Natural Science	Dr. Tom E. Pulley
Japanese Post Cards - Shells	Dorothy & Tom Kister
Shelling by Post Cards	Dorothy & Tom Kister
Pliocene Molluscs from Sanford, Fla.	Mr. Sidney Stubbs
Gulf Coast Shells	Mr. & Mrs. L. Dexter
Variations for a Collection	Brazosport Museum of Natural Science
Rocks and Minerals	Rick Shaw - Lake Jackson
What is a Fossil?	Bryan Cooney, Lake Jackson
What is Not a Fossil	" " "
Archaeology	Norman Loeffler and R. Walley
Poison Cone Shells	Dr. W. W. Sutow
Shelling 1,000,000 B. C.	Buzzy Sutow & Patsy Kister
Texas Conchologist	Dr. Helmer Odé
Shells in Miniature	" "
Florida Shells	Mrs. Leola Glass
Variations in the Murex fulvescens	" "
Albinos	" "
Color Variations of the Atlantic Bay Scallop	" "
A Study in Black and White	Mrs. Mildred Tate
Flower Arrangements by	Mrs. Chas. Francis
	Miss Dixie Harris
	Mrs. C. J. Collier
	Mrs. C. S. Duran

Carved Sand Dollars by Richard Toebelman	furnished by Mrs. Hackney and loaned by J. L. Mares, Jr.
Decorative Shells	Mr. & Mrs. John Edstrom
Shells from Around the World	Dr. Louis Brand
One Day's Shelling	Jeane Dashiell & Jean Riddle
Distribution Patterns of Marine Mollusks	Mildred Tate
Live Bay Fauna	Harold Geis and Wyatt Odom
Shell Plaque	Curtis Jones
Shellcraft, Novelties, Oil Paintings	Fern Heinke
A Character Study in Shells	Mr. & Mrs. Harry Short
Shell Pictures	Mrs. Al N. Grandee

ROPE TRICK. . . . . .by Constance Boone

Having learned to be a scavenger in search of shells in or attached to debris washed in at high tide, I spotted a three-foot long knotted and webbed ship's rope on the beach between Stewart Beach and South Jetties at Galveston on May 30, 1967, and gathered it to be examined at home. The webbing was about four inches wide and made of many strands of plastic. The knots were frazzled. I could see worm tubes, salmon hued and reddish-looking oysters. And on the way home in the car I spied a perfect tiny Pteria colymbus Röding. I simply couldn't wait to examine with magnifying glass!

At first I broke the fragile little shells enclosed in "nests" in the knots of plastic. After I learned to be more careful, I recovered 38 good specimens of Musculus lateralis Say. Abbott describes them as being about three-eighths inches. My biggest is one-fourth inch, but I have colors ranging from iridescent greenish-yellow to bright rose to dark purple. They were live specimens. In between the knots of the main webbing I found live specimens of Isognomon alatus, about ten. There were three Pteria colymbus. There were many live Ostrea equestris Say specimens. One tiny Arca zebra Swainson was discovered, as well as 20 specimens of Anadara ovalis Bruguière and 10 Arca transversa Say. The Chione grus Holmes specimens numbered ten. Deep in knots I found two specimens of Hiatella arctica Linne.

NOTES ON PEN SHELLS by Anne Speers

Try putting a fresh pen shell in formalin solution (get it from a Biology teacher if druggist doesn't have it) for about one day - this will harden the tissue. Store in alcohol till ready to display. It should dry and keep quite well.

Try soaking fresh shells in a solution of one part glycerine to 2 parts water for two days or more - then dry carefully - this should keep them from drying out and cracking, however, it may also darken them.

MEXICAN SERVICHE made from the muscle of the Pen Shell

Clean shells and cut large center adductor muscle into bite size pieces. Place in bowl and just cover with fresh lime juice. Add very thin slices of onion, slivers of green pepper, salt, pepper, a dash of tobasco, or finely chopped piece of jalepeno pepper (use these last two items according to your taste for hot dishes), also a dash of "Accent" and worcestershire. Let this stand for about thirty minutes or longer. Just before serving, add freshly chopped tomatoes and or pieces of avocado . . . . . .the lime juice cooks the muscle.

Mr. Chas. McKnight, a member of our group since its beginning and president of the Outdoor Nature Club, passed away recently. Mr. McKnight had not been particularly active in recent years but nevertheless we will miss him.

We wish to thank Mrs. Louise Bland for a year "well done" in distributing the Texas Conchologist. Mrs. Constance Boone is replacing her and anyone wishing to change an address, paper not received, etc. should contact her at:

3706 Rice Blvd. - MO. 8-8252

Dorothy Kister has already bagged boxes of shells for another sale and is asking members to bring in extra shells, sea life, etc. so the members working on the shell store project will be able to aackage them ahead of time.

Door prizes are need by Dr. W. W. Sutow and he asks that members desiring to donate "extras" give him a call at JA 8-3319.

Ernie Libby busy orgainizing a shell club on Saipan and would like to set up exchanges of seashells, tapes, programs, etc. (people - too?). He says there is a great deal of activity and enthusiasm on the above island.

A newly formed group presided over by Lt. Col. Corinne E. Edwards, Miami Malacological Society, has just been formed and will welcome hearing from anyone interested in joining them. Correspondence should be addressed to one of them listed below:

Lt. Col. Corinne E. Edwards
Box 691, Coconut Grove Sta.
Miami, Florida, 33133

Mrs. L. E. Crovo
2915 S.W. 102 Avenue
Miami, Florida, 33165

The International League of Young Shell Collectors has just been formed for young people and more information about this organization may be had by writing

Mr. Steven Britz
13 Plymouth Road
Cherry Hill, New Jersey, 08034

REPRINTS

The Famous Blake Mollusca by W. H. Dall in two volumes has been reprinted and available from Richard Petit.

First issue of the publication of THE COWRY has been reprinted and is available now by Hono's, New York City. The first volume of this publication has just been completed. Those interested in cowries should be happy to receive this bit of news

Also available is a reprint of F. A. Schilder and M. Schilder's classic cypraidae publication, PRODROME OF A MONOGRAPH ON LIVING CYPRAIDAE from the same studio.

The long-awaited book on LIVING COWRIES by Burgess will be out by early fall.

Edmundson's classic book, REEF AND SHORE FAUNA OF HAWAII, is being revised by Dr. Alison Kay of the University of Hawaii.

S. W. Tinker's book on Pacific crustaceans has just been published and his book on Hawaiian Seashells is being revised.

Texas CONCHOLOGIST

Volume IV, Number 2 September, 1967

NOTES & NEWS

Dr. Helmer Odé will speak on "Ecologic Assemblages of the Texas Coast" at our regular monthly meeting to be held September 27, 1967, 7:30 p.m., Southwest Service Center, 4503 Beechnut. Door prizes of some highly desirable seashell specimens collected by Mrs. Sheffield and the late Ike Sheffield will be given.

* * * * * * * * * * * * * * * * * * *

Lawrence Dexter called the meeting to order for the 1967-68 season and welcomed members and guests. This first meeting was held August 23, 1967. Minutes of the May meeting and treasurer's report were read by Mrs. Anella Dexter as Mrs. Helene Fennessy was in Mexico shelling.

The American Malacological Union will meet in Corpus Christi, Texas, July 15 or 22, 1968, and Dr. W. W. Sutow will represent our group in this venture. A check of $50.00 will be forwarded to the hostess club in Corpus Christi to help defray their expenses.

Dr. Sutow brought in new books members' inspection

Mrs. Connie Boone explained rules and regulations with regard to the use of our library books. Books may now be checked out.

Plans to invite Mrs. Anne Speers to a future meeting as a speaker are now being made.

Mr. Harold Geis said that the mollusk population of the Gulf Coast is increasing rapidly and he needs everyone's help in cataloging. Please contact him for more information on this project. Harold plans to try and work with the shell clubs along the Gulf Coast in making a listing of Texas fauna in brackish water.

A field trip to be led by Helmer Odé is in the planning stage.

Door prizes were won by John Edstrom, Jeane Dashiell, Dr. Zeis, Leola Glass, J. G. Heinke, Susan Fletcher and Mrs. Zeis. The prizes were donated by W. W. Sutow, Nita Sheffield and Dorothy Kister.

Mr. Sidney Stubbs lectured on fossils.

* * * * * * * * * * * * * * * * * * *

We wish to thank Mrs. Pamela Gates, Alhambra, California, for her donation to our club of a booklet on California Abalones.

Cox, Keith W., California Abalones, Family Haliotidae, (1962), Resources Agency of California, Fish Bulletin 118, 133 p.

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR
Helmer Ode' - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas

ASSOCIATE EDITOR
Dorothy Kister - PA 3-2494
5302 Stillbrooke
Houston, Texas

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING and CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

Fam. Potamididae

In Texas two species occur, one of which possibly is now extinct in Texas.

Cerithidea pliculosa Menke 1829. This common species lives at many places in the bays along the Texas coast. (alive in Galveston West Bay, Port Lavaca, Indianola, etc.). It appears that the best developed specimens live close inland, away from inlet areas. Dead specimens not uncommon in beachdrift on the outer beaches. According to 17, common close to shore.

Figured in: 1, 13, 11, 14, 17, 21.
Previous references: 11, 14, 15, 17, 19, 20
Locations: Alive in bays along entire Texas coast.

Batillaria minima Gmelin 1792. This common West Indian and Caribbean species has only rarely been found in Texas. Once a single dead specimen was taken along the Port Aransas Causeway (coll. Ode). In spite of a diligent search at many subsequent visits the species was never found again. A few beach worn shells, possibly fossils, have been collected at Port Isabel (coll. Speers).

Figured in: 1, 3, 5, 6, 7, 21, 31.
Previous references: Reported by Reed (see 11).
Localities: Port Aransas Causeway, Port Isabel.
Remarks: It is possible that Cerithidea scalariformis occurs at Port Isabel (coll. Speers). The species has been reported from the Pleistocen in 24.

Family Cavolinidae

Of this family of pelagic snails so far five species have been identified from the Texas beaches. Only two of them are common in beachdrift. In Texas the genera: Creseis, Clio and Cavolina. Apparently little is known about this family in the Gulf of Mexico and only few references are in existence. For Texas reference 60 is of interest.

Creseis acicula Rang 1828. This very fragile species is occasionally found dead in large numbers in beachdrift along the Texas Coast. So far it has attracted little attention and it has seldom been mentioned in faunal lists. Reported alive in (23) from Port Aransas. It occurs occasionally alive in the surf

at Port Aransas and these shells may cause discomfort by getting into bathing suits where they irritate the skin.

Figured in: 1, 3, 6.
Previous references: 11 (Reed), 19, 23.
Localities: Dead shells occasionally common along all Texas Gulf beaches.

Clio pyramidata Linne 1767. Dead shells of this species have been rarely found on the south end of Padre Isl. (coll. Speers). One specimen was dredged off Mustang Island.

Figured in: 1, 6.
Previous references: 11 (Reed), 19.
Localities: Padre Isl.

Cavolina longirostris Lesueur 1821. A common little shell, often found dead in beachdrift along the high tide line on all Texas Gulf beaches. A live specimen from Galveston beach (coll. Glass) was probably this species. Surprisingly few references to this species for Texas seem to exist.

Figured in: 1, 3, 6, 17.
Previous references: 12, 17.
Localities: Dead shells common along all Texas Gulf beaches.

Cavolina uncinata Rang 1836. Much scarcer than the previous species, but dead shells have been found at Galveston, (coll. Glass), Port Aransas, and Port Isabel.

Figured in: 1, 3, 6, 22.
Previous references: 19.
Localities: Galveston, Port Aransas, Port Isabel.

Cavolina quadridentata Lesueur 1821. Once a few dead specimens were taken on the beach of Mustang Island (coll. Speers).

Figured in: 1, 3.
Previous references: 19.
Localities: Padre Island.
Remarks: It is not improbable that the following species mentioned in (11) will be found on Texas beaches:
Creseis virgula Rang 1828 (reported by Reed)
Cuvierina columnella Rang 1827: in (22)
Styliola subula Quoy and Gaymard 1827: in (22)
In reference 17 is mentioned Cavolina tridentata Linne 1758 but figured is Cavolina trispinosa.

REFERENCES

60 Burken Road M. D. (1933) Pteropoda from Louisiana, Nautilus, Vol. 47, p. 54-57.

1. Rowett, C. L. (1957), A Quarternary Molluscan assemblage from New Orleans Parish. Trans. Gulf Coast Ass. Geol. Soc. Vol. 7, p. 53-162.

2. Pulley, T. E. (1952), A new species of Chione from the Western Gulf of Mexico. Tex. Journ. Sci. 4(2), p. 61-62.

3. Schwengel, J. S. (1951). New Marine Mollusks from British West Indies and Florida Keys, Nautilus 64 (4), p. 116-119.

by W. W. Sutow, M. D.

In their NOTES CONCERNING TEXAS COAST SHELLS last month, Ode and Speers referred to four genera of the Family Pectinidae found in this geographic region. Here seems to be another Family in which there is no uniform taxonomic agreement as to the genus and subgenus designations.

Abbott (AMERICAN SEASHELLS, 1954, p. 361) states that more than 50 genera and subgenera have been proposed for this family. On an arbitrary basis, Abbott employs only six genera: Pecten, Aequipecten, Chlamys, Placopecten, Lyropecten, and Hinnites. Abbott includes in his book a rueful admission that this classification cannot be justified biologically.

Some years ago, John Q. Burch, before his retirement, distributed with his specimen lists his comments on the Family Pectinidae. At the time, he recommended simplification of the generic designations within the Family. I wrote to Mr. Burch and asked him about his present thinking on this subject. With his usual, thoughtful consideration for a fellow hobbyist, he promptly replied. His answer, a 2-page letter, is printed elsewhere in this issue of the TEXAS CONCHOLOGIST.

****

Two years ago, there were published in these pages some astounding chronicles by two Texas shell collectors in the Marshall Islands. Now, Ernie Libby has taken up permanent residence in the South Pacific as ambassador extraordinary of the Houston Conchology Group and Dean of Boondock Hall. As the club members know, we had a reunion this spring - out there in the Tropics.

The tides this year did not favor productive reef shelling so Ernie and I spent considerable time with the Family Paguridae. Members of this ubiquitous group (more commonly and collectively called "hermit crabs") parade a host of seashell homes up and down the beach and on the reefs.

Quite some creatures - these Paguridae! They have been called misfits among the decapods - resembling soft-bodied lobsters which they are not rather than crabs which they are. The sixth pair or the hind legs have been altered into a hook which curls around the axis of seashells. This securely anchors the animal. The strength of this attachment is immediately apparent to anyone who has tried to pull the animals away from the shells. The fifth pair of legs are hook-tipped and these are used to grip and brace the crab against the inside of the aperture. The majority of the creatures are right-handed with a larger right claw. The claws fold against each other, the smaller locking the larger in place. The apertural opening is securely closed off by the folded claws when the animal withdraws into the shell.

According to Holthuis (Enumeration of the Decapod and Stomatopod Crustacea from Pacific Coral Islands, Pacific Science Board, National Research Council, Nov. 15, 1953), there are at least 19 species of hermit crabs in the waters around the Marshall Islands.

I became curious about the relative popularity of molluscan species among these perpetual house-seekers. One might suppose that the frequency with which certain types of seashells are selected by the crabs depend partly on the size of the shells, partly on the shape of the shells and greatly on the relative abundance of the species. Some zonation in species types was noted, the kinds lugged about by crabs in the surge channels being distinctly different from those used by residents of the beachward fringes of the reefs.

The four species of seashells most frequently inhabited by hermit crabs on several beaches of the Marshall Islands were: Strombus mutabilis, Bursa granularis, Cymatium muricinum and Morula uva.

****

A CHECK LIST OF TEXAS MOLLUSKS DATING FROM 1849 PART I

by Dr. H. Odé

In the last twenty years much progress has been made in the study of the mollusks of the Gulf of Mexico. Before 1946 several authors had reported on the mollusks of the Texas Coast; outstanding in this early work are the reports of Dall, Singley and Mitchell. The report of Dall included a survey of the whole Atlantic coast of North America and many of his references pertaining to the Texas Coast were based on shells collected by Mitchell. Even today many references to marine shells from Texas localities in Johnsonia are based on the material which Mitchell sent to Dall. It is fortunate indeed that this early work on Texas mollusks was done by these gifted and capable naturalists because it made these early checklists quite reliable. Many of their early references have only recently been confirmed. As example I may mention the occurrence of Diplodonta soror, which according to Dall (Trans. Wagner Free Inst. Sci., Vol. 3, p. 1188) lives in Jamaica and on the Texas Coast, but which was not mentioned in any checklist since Dall reported it. This bivalve is common in beachdrift at Port Aransas, but somewhat rarer at Galveston.

However, there should be information in the literature which dates back much farther in time than the references by Mitchell, Singley and Dall. Most Texas shell collectors know that one of the names for the common Texas beach Donax is Donax texasiana Philippi 1849. Philippi was a German naturalist who described many new species of shells from the Western Atlantic. Pursuing the idea that he must have had access to a collection of shells collected in Texas I made some investigations to discover the source of his shells. Here the works of Dall provided a decisive clue: in the synonymy of Polinices duplicatus (Trans. Wagner Free Inst. Sci., Vol. 3, part 2, p. 568, 1892) I discovered that one of the many other names by which this common Texas shell is known is Natica texasiana Philippi 1849, described as new in "Roemer's Texas" of 1849. The name Roemer struck a familiar chord because in honor of Roemer Philippi also described a Donax, closely related to D. texasiana - if not the same species - as Donax roemeri.

Ferdinand Roemer (1818-1891) was a German geologist who traveled for several years in the United States (1845-1949) and published two famous books on Texas. in one he reported his travels in Texas and discussed the early German settlements in that state (1849), and in the other he described the Cretaceous fossils he collected (1852). Because of this very early work on Texas' geology Roemer has been called the father of Texas Geology. Later he became professor of Geology in Germany, where he wrote several works on the subject.

Roemer's book on Texas is one of the most interesting I have read in a long time. Not only is the list of mollusks presented in the appendix of great interest, but the travellog itself with all its observations on early Texas conditions, its varied life, the Indians, the flora and fauna, is for all of us, who know Texas only from the present a rich source of early Texas history. Roemer's book has been translated by Oswald Mueller into the English language under the title "Roemer's Texas" (Standard Printing Co., San Antonio, Texas 1935). Unfortunately in this translation the appendices of the original have been omitted. A copy of the translation is in the M. D. Memorial Library of the University of Houston, while a copy of the original German text, (containing the appendices and a map): "Texas, mit besonderer Rücksicht auf deutsche Auswanderung and die physische Verhältnisse des Landes", Bonn, 1849, bei Adolph Marcus," is in the rare book collection of Rice University, where I consulted it. Before I discuss the checklist, which is contained in the appendix, it is worthwhile to mention several of the striking descriptions given by Mr. Roemer concerning early Texas conditions.

Roemer travelled to Texas by steamer from New Orleans to Galveston where he spent his Christmas in 1847. In his accounts he repeatedly expresses amazement about the "uncultured" exterior of "cultured" Texans. At Galveston he collected

the marine shells which are enumerated in the checklist. That people have not changed much is shown by the following lines which I quote from Mueller's translation (1935, p. 42): "On the Gulf beach of the island the shore slopes very gently toward the sea and forms a level beach which extends uniformaly along the entire length of the island forming an ideal promenade. The sand, washed by the waves becomes so firmly packed that horses' hoofs scarcely leave an imprint. To drive along the beach in the evening in a light Cabriolet drawn by a spirited horse and fanned by the cooling breeze, usually coming from the south, affords the inhabitants of Galveston much pleasure."

The beach fauna is vividly described in a few lines so that we immediately recognize it, as follows (loc. cit. p. 43): "The beach has a peculiar charm for the naturalist who finds here in addition to numerous mussel shells many representatives of the various families of a semitropical sea fauna, particularly crabs, which dig deep holes in the sand, and disappear in them with lightning rapidity at the approach of danger jelly fish as large as plates; and beautifully formed sea urchins. The marine life shows a marked similarity with that found on the coast of the South Atlantic states. . . ."

Unfortunately not everything has remained untouched by time. From Galveston to Houston one traveled by steamer up Buffalo Bayou, the price of the trip being $3.00, a surprising amount. The trip lasted twelve hours. How the landscape near Houston must have changed shows a quotation from p. 299 (loc. cit): "It is a peculiar sight to sail on this narrow river (Buffalo Bayou) whose width in some places is taken up almost entirely by a comparatively large boat, so that trees and shrubs on the twenty to thirty feet high banks can be almost touched from its deck. Turning a boat around or passing another is all out of the question. The magnolia trees which occur frequently on the banks of Buffalo Bayou, had partially unfolded their white blossoms as large as plates and everywhere luxuriant vegetation of a Texas spring was visible."

Herr Roemer stayed also several days as a guest on Morgan's Point on the estate of Mr. Morgan. A bearhunt (!) planned for him in the surrounding woods had to be called off because of inclement weather. While he was staying there the menu carried wild turkey, flocks of which roamed the surrounding wooded areas. At Morgan's point Roemer made some observations, which are probably the first concerning the post pleistocene in Texas: (loc. cit. p. 62) "Mr. Morgan's house lies about twenty-five feet about the level of the sea. The land toward the interior is of equal height and entirely level, while that toward Galveston (the shores of the bay) is scarcely two to four feet high. The surface soil is composed of humus one to four feet in depth. The subsoil is a red and black clay. In the latter are found shells of a bivalve (Gnathodon cuneatus Gray) scattered about singly. On the shores of the bay, but several feet above the present level, one can see mounds, a fathom deep, composed principally of shells of this mussel. These were evidently deposited atan earlier date, when the sea level was quite different from that of today. This same mussel lives today in the waters of the bay, but not in the narrow inlet which in reality is to be considered the mouth of the San Jacinto and on whose shores the accumulation of shells is found. It is only found where the bay enlarges itself and the water becomes brackish through a mixture of fresh and salt water...."

After his stay in Galveston and Houston Roemer traveled to New Braunfels, where he made most of his geological investigations, and collected Cretaceous fossils. Later he traveled also to Fredericksburg. At New Braunfels he collected most of the landsnails reported in the appendix, and he met Lindheimer, the naturalist. His experiences with the Comanches and his observations on the flora and fauna are lively and picturesque, but it would be outside the scope of this note to relate them here.

In the 2nd part, we will discuss the checklist of the mollusks collected by Mr. Roemer, which throws some interesting light on a few changes in the Texas fauna.

NOTES ON THE FAMILY PECTINIDAE . . . . . by John Q. Burch

There are two schools of workers with mollusks, or perhaps with any other group of animals. The conservatives think that there should be some anatomical difference to warrant separation as a genus. Others proceed on the theory that any difference, however trivial, is sufficient. The work of the latter has resulted in such facetous remarks as, "The only true definition of a genus is that it is a group of one species or more because somebody said so."

The problem of generic divisions in the family Pectinidae has long been fantastic. The question of a proper assignment to a species is simple compared to an attempt to place the shell in one of the host of described genera. Most of these are based upon shell characters only. With few exceptions, these are based upon a description of the type species. They are of specific value only. Nevertheless, some may be accepted as subgenera for cabinet convenience. I have simplified the problem in my own cabinet by placing all under Pecten with others as subgenera.

Genus Pecten Muller 1776. Type species: Pecten maximus (Linnaeus, 1758)
Subgenus Patinopecten Dall 1898. Type species: Pecten caurinus Gould, 1850.
Subgenus Euvola Dall 1897. Type species: Pecten ziczac (Linnaeus, 1758).

Many others could be placed here:

Chlamys Röding 1758. Type species: Pecten islandicus Muller, 1776. If given generic value, the type species is Chlamys islandica (Muller, 1776). Many subgenera may be suggested such as:

Argopecten Monterosato 1889. Type species: Pecten commutatus Monterosato, 1875.
Leptopecten Verrill 1897. Type species: Pecten monotimeris Conrad, 1837.
Aequipecten P. Fischer 1887. Type species: Pecten opercularis (Linnaeus, 1758).
Nodipecten Dall 1898. Type species: Pecten nodosus (Linnaeus, 1758).
Placopecten Verrill 1897. Type species: Pecten clintonius Say, 1824.

This list could be extended to include many others:

Hinnites Defrance 1821. Type species: Hinnites cortesyi Defrance, 1821. This is generally accepted as a genus, but it is interesting to note that the juvenile shells of this genus are of Chlamys form, and are identical anatomically. Young Hinnites up to perhaps 20 mm. are beautiful small, colorful shells, and are free swimming.

The following generic names seem to be generally accepted.

Propeamussium de Gregario 1884. Type species: Pecten ceciliae de Gregaric, 1884.
Cyclopecten Verrill 1897. Type species: Pecten pustulosus Verrill, 1873.
Pseudamussium H. & A. Adams 1858. Type species: Pecten hybridus (Gmelin, 1891).
Amussium Roding 1798. Type species: Amussium pleuronectes (Linnaeus, 1798).

During her visit at the South Padre Island Shell Show, Mrs. Connie Boone collected a beautiful specimen of Sinum maculatum on the beach at South Padre Island.

We have received so many requests for our very first issue (Vol. I, No. 1, September, 1964), that we have decided to reprint it in the present format. Everyone desiring a copy of this reprint, may request one from Mrs. C. Boone. Please do not forget to include thirty cents.

NEW PUBLICATION

An announcement of considerable interest to collectors of land and fresh water shells has appeared in the July-August issue of "Geotimes" (1967, p. 36). The appearance of "Pleistocene Mollusca of Ohio" by Aurile LaRocque (Ohio Geological Survey Bull. 62, part I, 111 pages, $2.50) will furnish an important tool for identification to all those interested in Naiades, Sphaeridae and other fresh water shells. Assemblages treated range from Manitoba, Ontario, through Minnesota, Indiana, New York as far south as Oklahoma and Texas. Part II, containing Chapters 4 to 7, still has to appear.

SHELLING NOTES . . . . . .by Constance Boone

Haminoea antillarum Orbigny disguises itself to blend into the grassy flats or under rocks where it is found by having a speckled or mottled brownish and grayish animal. The glossy, clear bubble shell would probably be easier to see if it did not have this enveloping animal covering it in a mucous blob. When I first saw them at South Padre on the grassy flats in the channel last February I collected them and thought I had small Bulla striata. Later I saw they were Haminoea antillarum. This summer I collected four under rocks while chiton hunting at Rockport. All along the bay front, especially Water Street, where there are rocks, some quite close to shore, with heavy algae growths on them, a number of fine, large, colorful specimens of Ischnochiton papillosus C. B. Adams were collected. The bubble shells were clinging to the same rocks. After watching them in a shallow dish, I also discovered that the bubbles exude a purple dye. I found other small shells on these rocks, the most unusual being live Cerithiopsis greeni C. B. Adams, very dark and shiny and quite different from the bleached out ones I have found in drift, and live Mangelia plicosa C. B. Adams (I am of the opinion I have two species of Mangelia but must do more work on this.)

* * * * * * * * * * * * * * * * * * *

Dr. R. T. Abbott sent the following review to our paper recently:

There has been a badly executed copy of a part of G. B. Sowerby's 1879 section on Murex from the Thesaurus Conchyliorum, released by a California business man. Although glibly advertised as a "treasured collector's item" and with "precisely reproduced" illustrations, the pamphlet is not a facsimile, but a poorly "varityped?" copy of the explanation to the plates, and a doctored, black-and-white photo-offset of the original colored publication. Most of the figures are so muddy and poorly done that only a few dozen of the 264 figures are useful. The 55 pages of text and index are not included.

There are spelling mistakes in the copy (one reason why genuine facsimiles are worthwhile); plate numbers and special size indications are omitted on the plates. The introduction says that the "Theasuarus" (should be Thesaurus) contains names of the times of Sowerby and that there have been some name changes since. This is an understatement; of the 264 names, probably only 60 or 70 are now considered valid and in the genus Murex, even in the broadest sense.

A good rule for a conchologist is never to order or buy a shell book unless he has seen a copy or has seen a discerning review of it in some journal or club newsletter. Be sure the author is reputable, and see if the publisher is legitimate. And remember, even big publishers have been known to issue bad books. Fortunately, if not entirely satisfied that you are getting what was advertised, you can get your money back from reputable dealers.

* * * * * * * * * * * * * * * * * *

Texas CONCHOLOGIST

Volume IV, Number 3 October, 1967

NOTES & NEWS

October 25, 1967, regular monthly meeting in the Southwest Service Center, 4503 Beechnut. Mr. Paul McGee will speak on "Living Species from Aquatic and Marine Environment". Mr. McGee will demonstrate his subject matter on live specimens.

Please note that the November meeting will be held November 15, 1967, due to the Thanksgiving holidays the following week. 4503 Beechnut is the meeting place and the time is 7:30 p.m.

Report on the meeting held September 27, 1967. Because the Dexters were vacationing the meeting was presided by Tom Kister. Carlos Cardeza reported a gift of $5.00 to the club, donated by Mr. Fred Barsam of Philadelphia who was much impressed by the club's activities! Dr. W. W. Sutow reported a gift by Mrs. Helen Denny of Sanibel collected shells to be sold during our next exhibition. We take this occasion to express our gratitude to Mr. Barsam and Mrs. Denny. Door prizes were furnished by Mrs. Ike Sheffield, Mr. Lloyd Meister and Mr. Carlos Cardeza. Dr. H. Odé gave a talk on "Ecologic Assemblages of the Texas Coast" which was illustrated by a demonstration of the various species of arc shells which can be found on the Texas Coast.

Hurricane Beulah. A severe hurricane hit the South Texas Coast this month, leaving destruction and devastating floods in her wake. The members of the Houston Shell Club extend their sincere feelings of sympathy to all friends and beachcombers who lost personal property and valued collections and hope that they can be of assistance in rebuilding lost collections. Please let us know!

Library. Elsewhere in this issue the library rules are printed and the list of catalogued books is continued. We urge all members to make it a habit to use these books and to observe the rules. The address of the library is 6108 Auden.

Copy. The editor has often asked the members to contribute to their own paper. So far nobody has reported on his or her shelling activities during the summer or after Hurricane Beulah. Please write!

DUES ARE DUE! DUES ARE DUE! DUES ARE DUE! DUES ARE DUE! DUES ARE DUE!

Mr. LeRoy Hardy, who is in charge of the Oceanography program for the Houston Public School System, welcomes live specimens for the Oceanography Center's salt water aquariums. The Center, which is located adjacent to Westbury Senior High School, Chimney Rock and Gasmer Rds., supplies specimens for the science programs in the high schools. Westbury and Robert E. Lee High Schools now offer a semester of Oceanography and each school reports a waiting list. More classes and schools will be added to this program next year.

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

Family Epitoniidae

This family of gastropods has many representatives on Texas beaches. At Galveston juvenile specimens of several closely related species are often very common in beachdrift. Many species have so far been collected alive from beachdrift. In Texas the genera Amaea, Epitonium and Depressiscala. The large number of described species and the variability of the shells make a precise identification of many Texas specimens difficult. We believe that the forms enumerated below can be separated on the basis of shell differences; it is possible that some intergrades exist.

Amaea mitchelli Dall 1896, 1902. This is probably the most famous of all Texas wentletraps, and the shell is much sought after by collectors. Fragments are not uncommon in beach drift along the entire Texas coast, but good sized specimens of perfect quality are rare on the beaches. Live specimens have been found on St. Joseph Isl. (coll. Sorrell) and at Port Aransas and Port Isabel. The species has been reported as a Pleistocene Fossil from Louisiana (ref. 62). An unusual number of specimens were collected on North Padre Isl. during the fall and winter of 1965.

Figured in: 1, 6, 21.
Previous references: 11, 19, 21.
Localities: Rare along the entire Gulf Coast of Texas.

Epitonium angulatum Say 1830. This species, together with E. humphreysi, E. albidum and E. tollini, forms a rather close group the members of which are not always easy to separate. Typical specimens, referable to any of the above mentioned species are often found, but many of the smaller juvenile epitoniums from beachdrift are so intermediate in character and variable in shape that it is often impossible to assign them a specific name. Typical E. angulatum, which is the largest species of this group of simple white wentletraps is quite common on Texas beaches where it is not uncommonly collected alive during the winter months (Galveston), whereas, large numbers of E. angulatum, can be collected alive during spring and summer on Mustang Island. Wrapped in a white handkerchief these live specimens often leave a purplish stain. Juvenile specimens are easily recognized by their relatively large apical angle and broad shape. According to 14 alive in inlet influenced areas.

Figured in: 1, 4, 5, 6, 11, 14, 21.
Previous references: 11, 14, 19, 20, 21, 22.
Localities: Common on all Texas Gulf beaches.

Epitonium humphreysi Kiener 1838. This species is not as common as the previous one. At Galveston it is the only species that so far has been found alive crawling at low tide on the mudflats of Bolivar Peninsula and San Luis Pass. It is known alive from the same environment at Port Aransas and Port Isabel (coll. Speers).

Figured in: 21.
Previous references: 11, 14, 19, 21, 24, 25.
Localities: Less common than the previous species on all Texas Gulf beaches; living in inlet areas.

Epitonium albidum d'Orbiguy 1842. This somewhat smaller species is found regularly in beachdrift. Most specimens are of quite constant shape irrespective of the size, in contrast to E. angulatum. A good figure of this species is Plate 174, page 352 of ref. 21.

Figured in: 3, 6, 12 (mislabeled), 21, 31.
Previous references: 12.
Localities: Not uncommon in beachdrift along entire Texas Coast.

Epitonium tollini Bartsch 1938. This species more variable slender, and irregularly formed than all previous species constitutes probably the bulk of the small beach epitoniums in the Galveston-Freeport area where it appears to be more common than farther south. A few live specimens are known from the beach (Mustang Isl., coll. Speers).

Figured in: 1, 3, 4, 6, 21.
Previous references: 14.
Localities: Common in beachdrift along the entire Texas Coast.

Epitonium krebsi Morch 1874. Only a single dead specimen of this species, recognized by the presence of an umbilicus has been collected on Padre Isl. (coll. Speers). It is probable that most, if not all, previous references to this species for Texas concern juvenile E. angulatum which are easily mistaken for Krebsi. E. krebsi occurs in deep water off the Texas Coast.

Figured in: 1, 3, 5, 6, 8, 21, 31.
Previous references: 11 (listed by Johnson, Reed and Singley).
Localities: Padre Island.

Epitonium unifasciatum Sowerby 1844. Of this rare species only three dead specimens are known from the beach of Padre Isl. (coll. Speers).

Figured in: 3, 21, 31.
Previous references: None
Localities: Padre Isl.

Epitonium apiculatum Dall 1889. Specimens of this small species are taken rarely in beachdrift. The species is characterized by its nuclear whorls, (see ref. 21.).

Figured in: 21
Previous references: None
Localities: Sabine, Galveston, Port Aransas.

(to be continued)

MOLLUSCANA

by W. W. Sutow, M. D.

Let us engage in some COWRY TALK.

These comments are based on data presented in the following two references:

(1) Schilder, F. A., and Schilder, M.: The size of ninety-five thousand cowries, VELIGER 8:208-215, 1966.

(2) Schilder, M.: Length, breadth, and dentition in living cowries, VELIGER 9:369-376, 1967.

In these papers, measurements are presented for each of 208 "species and prospecies" of the cowries. Data were obtained from examinations of 100,023 specimens! The measurements are given in terms of the "average" (expressed as the "median") and the "range" of values for the middle two-thirds of the population for any given species.

The Schilders have studied the Cypraeidae for many years and their publications on the subject are well-known. Hence, their observations should provide a particularly sound basis for some intriguing, though speculative, interpretations.

For example, the numbers of specimens examined for each cowry species are not precise statistical indicators of the relative abundance of the species. The figures, however, may indicate the relative availability of the specimens in museums and private collections, and hence indirectly may suggest the relative frequency with which each species may be collected in the field. Approached in this manner, what might be the commonest cowry species? For any single species, the largest number of specimens measured (10,484) was Monetaria annulus. Monetaria moneta was next with 5,306. The other species, each of which provided samples of 3,000 or more specimens, were: Luria isabella, Erosaria caputserpentis, Lyncina carneola, Erronea errones, Erronea erosa, and Erosaria helvola.

What seem to be the rarest species? One could assume that for the purposes of a study such as the one reported, a very special effort would be made to examine as many as possible of the rarities. Yet, if, in spite of the effort, the numbers examined remain small, then, in fact, these species must be extremely scarce. It is noted that most of the uncommon species have been too recently described to permit extensive collecting. Only single specimens of the following were examined: Schilderia queenslandica, Lyncina porteri, and Bernaya catei. Five specimens or less were measured for: Notadusta katsuae, Erronea subviridis piscatorum, Erronea pulchella novaebritannae, Umbilia armeniaca, Cypraeovula cohenae, Cypraeovula amphithales, Schilderia langfordi, Schilderia langfordi moretonensis, Erosaria englerti, Lyncina leucodon, Lyncina schilderorum kuroharai and Zoila rosselli.

Compared to these rare ones, the Lyncina aurantium (Golden Cowry) seems common indeed, a total of 303 being measured. The built-in bias of the type of reasoning in which we have engaged is illustratively suggested by the fact that compared to 303 golden cowries, only 272 specimens of Lyncina argus and a mere 79 specimens of Lyncina camelopardalis are tabulated.

We are probably on firmer ground when we ask about the cowries that are the largest or the smallest. The five species with the largest median length values are: Macrocypraea cervus (104 mm), Chelycypraea testudinaria (103 mm), Lyncina aurantium (96 mm), Mauritia valentia (92 mm) and Umbilia armeniaca hesitata (91 mm). The smallest cowries are indeed minute. The two shortest median lengths are recorded for Purpuradusta minoridens and Purpuradusta serrulifera, each 8 mm or about one-fourth of an inch. Among the other pygmy cowries are: Purpuradusta microdon, Erosaria beckii, Blasicrura goodallii, Naria irrorata, Notadusta punctata, Palmadusta contaminata, Bistolida ursellus and Cribraria cumingii.

(to be continued)

Olsson, Axel A. and McGinty, Thomas L., "Recent Marine Mollusks from the Caribbean Coast of Panama with the Description of Some New Genera and Species." #177 Paleontological Research Institution.

Weisbord, Norman E., "Late Cenozoic Scaphopods and Serpulid Polychaetes from Northern Venezuela." #214, Paleontological Research Institution.

Johnson, Charles W., "List of the Marine Mollusca of the Atlantic Coast from Labrador to Texas."

Harmer, S.F. and Shipley, A.E.(eds.), "The Cambridge Natural History--Volume III, Mollusca by A.W. Cooke and Brachiopods by A.E. Shipley and F.R.C. Reed."

Pilsbry, Henry A. and Olsson, Axel A., "Vitrinellidae and Similar Gastropods of the Panamic Province." Part I

Pilsbry, Henry A. and Olsson, Axel A., "Vitrinellidae of the Panamic Province," Part II

Ingram, William Marcus, "Check List of the Cypraeidae Occurring in the Western Hemisphere." #122 Paleontological Research Institution.

McLean, Richard A., "Scientific Survey of Porto Rico and the Virgin Islands--The Pelecypoda or Bivalve Mollusks of Porto Rico and the Virgin Islands."

Olsson, Axel A. and Harbison, Anne, "Pliocene Mollusca of Southern Florida with Special References to Those From North Saint Petersburg with Special Chapters on Turridae by William G. Fargo and Vitrinellidae and Fresh Water Mollusks by Henry A. Pilsbry."

Dall, William Healey, "Contributions to the Tertiary Fauna of Florida with Especial Reference to the Miocene Silex Beds of Tampa and the Pliocene Beds of the Caloosahatchie River."
Part I, Pulmonate, Opisthobranchiate, and Orthodont Gastropods." Transactions of the Wagner Free Institute of Science of Philadelphia, Volume 3
Part II, "Streptodont and other Gastropods, Concluded." Volume 3
Part III, 1. New Classification of the Pelecypods" Volume 3
Part IV, 1. "Prionodesmacea: Mucula to Junia, 2. "Teleodesmacea: Teredo to Ervilia." Volume III

Dall, William Healey, "Contributions to the Tertiary Fauna of Florida with Especial Reference to the Silex Beds of Tampa and the Pliocene Beds of the Caloosahatchie River Including in Many Cases a Complete Revision of the Generic Groups Treated of and Their American Tertiary Species." Part IV, Concluding the Work. Volume III

Clench, William J. and Turner, Ruth D., "The Genus Calliostoma in the Western Atlantic." Johnsonia 4, #40

Turner, Ruth D. and Boss, Kenneth J., "The Genus Lithophaga in the Western Atlantic" Johnsonia 4, #41

Clench, William J., "The Genera Pedipes and Laemodonta in the Western Atlantic." Johnsonia 4, #42

Clench, William J., and Turner, Ruth D., "The Subfamilies Volutinae, Zidoninae, Odontocymbiolinae, and Calliotectinae in the Western Atlantic." Johnsonia 4, #43

Boss, Kenneth J., "The Subfamily Tellininae in the Western Atlantic (Part I)", Johnsonia 4, #45

Malacologia, Volume III, No. 1, 2 and 3, 1965-1966.
Volume II, No. 1, 2 and 3, 1964-1965.
Volume IV, No. 1 and 2, 1966.
Volume V, No. 1, 1966

Nautilus, Vol. 78, No. 3, January, 1965.
Vol. 79, No. 1, July, 1965

Woodward, S.P., "A Manual of the Mollusca; or, Rudimentary Treatise on Recent and Fossil Shells."

LIBRARY RULES

1. Three pieces of printed material may be checked out by any paid member of the Houston Conchology Club for a period of two weeks. Every book, monograph, magazine, etc., on the bookshelf may be checked out. There are no restrictions, because we want the materials to be used to the greatest advantage. However, since some of the books are out of print, some are extremely valuable, many will be hard to replace; we hope that each member will help care for the books.

2. Materials may be rechecked once for another two-week period.

3. Until books are completely carded, please check out materials by filling out the blanks held in this notebook. Ask the librarian to stamp in the date due in the notebook. You may wish to have her stamp on an index card for your reminder.

4. The fine for overdue materials will be five cents a day for each piece of written material checked out.

5. Please pay fines to the library committee---Dr. W. W. Sutow, Mrs. W. Berkeley Glass, and Mrs. Hollis O. Boone. If you are long overdue in returning books, you will receive a reminder card or telephone call.

6. Some pocket folders have been put on the bookshelf for you to carry home monographs, magazines, etc., in since many of them do not have protective outside covers. Please use them.

7. A list of materials available are typed on sheets included in this notebook.

Heteropoda

by Helmer Ode

Among the most neglected and unknown mollusks of the Gulf of Mexico one may count the Heteropoda. The finding of a small shell of an Atlanta species in the beachdrift at Port Isabel caused me to look into the general distribution of the animals and the previous records of this remarkable group of gastropods for the Gulf of Mexico. For this purpose Dana Report No. 34 by J. J. Tesch, Heteropoda, Copenhagen 1949, is available, but only meager information concerning the Gulf of Mexico can be gleaned from it. This is not surprising because the report deals with the world wide distribution of these remarkable animals and no special consideration is given to our corner of the globe.

In size the animals range from less than an inch to very large, even up to 20 inches, for some Indo-pacific species. They are without exception holopelagic which means that they occur swimming in the ocean far from the coasts and well above the bottom. Most species appear to live at least several tens of fathoms below the surface. Only a few references for Texas to these animals have appeared in the literature, but it is highly probably that several of the species treated by Tesch will turn up in offshore waters.

The order of the Heteropoda is divided in three distinct families: Atlantidae, Carinariidae and Pterotrachaeidae. It is possible that representatives of all three families can be collected off the Texas coast, although only of the first I have seen shells. Species of the second family have been reported, but as far as I know, only several very minute shells, dredged recently offshore, may confirm its presence in Texas waters. No mention has ever been made for Texas of the third family, which is perhaps not surprising as the animals are shellless.

Atlantidae: There are three genera, Oxygyrus, Protatlanta and Atlanta. All shells are small, planorboid in shape. The only member of the genus Oxygyrus, O. keraudreni Lesueur, has been previously reported for the Texas fauna. From

Texas offshore samples a single specimen was obtained, thus confirming the older report. The single species of Protatlanta (P. souleyeti EA. Smith 1888) is known from the Gulf of Mexico (near Cuba), but has not been mentioned for Texas.

Tesch distinguishes8worldwide species of the genus Atlanta, of which seven occur in the Atlantic Ocean. All are wound in a plane, are chalky with chalky keels. Atlanta peroni Lesueur 1817 has been reported for Texas and shells of this species occur sparingly in offshore samples. The specimen collected by me on the beach at Port Isabel, however, is more like Atlanta gaudichaudi Souleyet 1852, but both species are so close to one another, that I may be mistaken. Another species (A. inclinata Souleyet 1852), somewhat different and easily separated from the former two, is present in offshore samples, but so far are unknown from the beaches. Then some of the species A. fusca, A. lesueuri, A. inflata and A. helicinoides Souleyet may also occur in Texas offshore waters.

Carinariidae. There are two genera, Carinaria and Cardiapoda. The only Carinaria which can be expected off Texas is Carinaria lamarcki Peron and Lesueur 1810. Indopacific species of this genus may attain very large size, but C. lamarcki is not large. Carinaria possesses a very peculiar shell, patelliform in shape, but its summit is coiled. The shell is much smaller than the animal and covers the intestinal sac from which it easily becomes detached. The shells are much sought after by collectors. In Van Nostrands Standard Catalogue of Shells prime specimens are listed quite high!

The other genus Cardiapoda possesses a much reduced shell, so small that early investigators overlooked it. Maybe some very minute shells obtained in offshore samples belong to it. The species is shown by Tesch for the Gulf of Mexico in Figure 31. Another species C. richardi Vassière 1909 is known only from the midatlantic.

Pterotrachaeidae. This is a family of shellless animals, none of which to my knowledge has been reported for the Texas coast. However, investigation with special equipment in offshore waters will probably turn up some of these species in the western part of the Gulf of Mexico. All four species cited by Tesch are stated to be common and numerous in tropical waters. These are: Pterotrachaea coronata Forskål 1775, P. hippocampus Philippi 1836, and P. scutata Gegenbauer 1855. Only the last of these is shown in Fig. 39 for the Gulf of Mexico. The fourth species is Firoloidea desmaresti Lesueur 1817 is said to be very common; in particular: "In the Caribbean and Sarigasso Sea it is numerous everywhere" (page 48).

RECENT FINDS AT PALACIOS

by Helmer Odé

One of the most delightful aspects of shell collecting on the Texas Coast is the complete uncertainty of predicting whether the results of a trip to any given locality, however unlikely, will be good or bad. Several years ago I collected at the old seawall at Palacios and did not find anything that was worth mentioning. Recently Mrs. C. Boone planned to go there and I predicted confidently that not many interesting finds would reward her for the trouble of going there. How wrong I was! Apart from a large almost perfect specimen of Tonna galea half buried in the mud--perhaps a relic of hurricane Carla--she took home some of the beach drift which can be found on a small beach near the old pier. This material turned out to be so unusual that a few weeks later I went up to Palacios to gather some of the same material. While not rich in species the composition of its shell fauna was so remarkable--although perhaps not totally unexpected--that it merits a short report here. Bivalves were represented almost only by old fragments of Crassostrea, very worn and shiny, and which made up 99 percent of the total sample. A few Nuculana acuta, Brachidontes recurvus, Crassinella lunulata, Mulinia lateralis and juvenile Rangia cuneata

represented most of the other bivalve species. However the distribution of gastropods species in the sample was quite unlike any I have come across. The majority of those was formed by various species of Odostomia, among which O. impressa and O. trifida (probably synonymous) were by far the most common. O. bushiana occurred in more perfect specimens than I have seen anywhere else. O. seminuda and O. dianthophila were uncommon in the sample and some O. canaliculata were present. A very fresh specimen of a large Odostomia may belong to an as yet undescribed species. A single specimen of Syrnola sp. concludes the list of Odostomias. A big surprise was the presence of many worn and several very fresh looking Rissoina chesneli, whose condition is more perfect than that of specimens collected around Port Aransas. Quite common were fragments of juvenile Diodora cayenensis. Some perfect although bleached specimens of Seila adamsi, Cerithiopsis greeni, Cerithiopsis subulata and Triphora perversa were obtained, but were plentiful in fragmentary condition. Bittium varium was far less common than one would expect on the basis of shelling experience around Port Aransas. Some fragments of Tegula fasciata also turned up. Vitrinellids were represented by a few dead specimens of small species typical for the Texas coastal bays. They were: one specimen of the small Teinostoma biscaynense, two specimens in very fresh condition of Vitrinella floridana, one large Anticlimax pilsbryi and some Cyclostremiscus suppressus. Anachis obesa and Retusa candei were reasonably common in the sample. The list may be concluded by mention of Littoridina sphinctostoma, which were present in many specimens; some shells of a related hydrobid, which occurs along the whole Texas Coast, but which I am unable to identify, and a little shell of the genus Henrya, which I suspect also belongs to the Hydrobiidae and not in the Aclididae.

It is probable that Littoridina, Henrya, Rangia and Brachidontes came from the more brackish portions of Matagorda Bay, while the oyster fragments, all Odostomias, Seila and Anachis with a few fragments of Crepidula plana came from the low salinity oyster reefs. Rissoina, Cerithiopsis, and Triphora may have come from "grass flats" out in the bay, although I do not know whether such flats exist there. Tegula may no longer live along the Texas Coast. Dead shells abound around Port Aransas and the presence of dead shells in Matagorda Bay (Palacios and Indianola) is interesting. The absence of the more usual bay components in my sample, such as Tagelus, Macoma, Polinices, etc. is somewhat puzzling, because during former visits at the location many of those were seen. However, the high tide at the time of my last visit may have made observation of these species impossible. The above report shows how poorly known is even our most accessible type of environment, the Texas coastal bay!

Architects and architectural students have invaded the oceanography world according to Dr. George F. Bass at a recent meeting of the American Society for Oceanography held in the Emerald Room of the Shamrock Hilton. Dr. Bass teaches at the University of Pennsylvania and as a summertime archaeologist spends his vacations hunting and recovering fifth and sixth century Roman and Greek ships off the coast of Turkey. The individuals involved in this type of work have designed and built most of the equipment used in the various underwater operations. They are not professional scuba divers but all have learned to dive to depths of the "bends" levels. The rapid technological advances in deep diving and underwater operating techniques, as well as the development of operational submersibles has made it possible to recover archeological materials from greater and greater depths.

Recently it was discovered that Teredos do not like nylon. Wood panels covered with nylon remained undamaged after four years in the water in Shoreham Harbour (Gr. Br.). Other, uncovered panels disintegrated after sixteen months.

Texas CONCHOLOGIST

Volume IV, Number 4 November - December, 1967

NOTES & NEWS

ATTENTION: FIELD TRIP SUNDAY, DECEMBER 3, 1967, 9:00 a.m. Meet at San Luis Pass, Galveston side. Tom L. Kister and/or Dr. Helmer Ode will lead this expedition in search of the elusive Mitchelli.

Mr. Laurence Dexter, chairman, opened the October meeting. After the minutes were read, Mary Sutow, Jeane Riddle and Helmer Odé (chairman) were elected to the nominating committee. A field trip was set for November 5, to Matagorda Beach. Mr. Paul McGee reported on plans for the A.M.U. convention to be held next year in Corpus Christi, Texas. Several books, which the club had bound were displayed. Mr. Paul McGee gave a most interesting talk on live aquatic organisms, projecting a live Hydra and Daphnia on the screen. Several aquaria containing live specimens of shells (Conus sosoni, Spondylus, Coralliophila, Cerithium from the Flower Gardens, and a beautiful anemone from the Gulf of California were topics of interest and discussion long after the meeting was officially closed.

REPORT WORKSHOP GALVESTON OCTOBER 1, 1967 . . . . by Constance Boone

Eventually, everyone who went on the field trip Oct. 1, to Galveston got down on his knees and examined minute species along with Dr. Helmer Odé. For new members, it was an introduction to the tiny Texas species that one often finds in the beachdrift. An examination of the debris left by Beulah's high tides resulted in a collection of typical beach specimens, many with meat still in them and some still alive. Collected alive were Anachis avara semiplicata, Anadara brasiliana, Anadara ovalis, Anadara transversa, Noetia ponderosa, Thais haemastoma floridana, Busycon contrarium, Polinices duplicatus, and Cantharus cancellarius. Fresh dead specimens of Tellina tayloriana, Semele proficua, Mercenaria campechiensis, Atrina seminuda, Atrina serrata, and Dosinia discus were available. The high tide drift line yielded many varieties of Epitoniums, Turbonillas, Tellins, etc. Dr. Odé collected a juvenile pair of Isognomon bicolor and single valves of Montacuta floridana and Macoma aurora. Constance Boone found a single valve of Paramya subovata. Almost everyone collected pairs of Pandora trilineata. Mildred Tate broke open an interesting plug of clay marl that had holes in it and discovered a good specimen of Diplodonta semiaspera, and Leola Glass received it for her collection. Pieces of wood with holes were broken open to reveal Bankias, Martesias and a Petricola pholadiformis. By now, if members have been doing their homework with the fine drift line material they were urged to take home and to examine under magnification, everyone should have added many more species to their collection. The lesson of the day was to examine every part of the beach area and not to overlook small specimens and aalves of hard-to-get bivalves. Dr. Odé was and is an excellent teacher !!!!

Please note that there will be no Conchologist in December. Nine issues are published a year and the editor feels that the month of December is a much better month to skip rather than one tn the spring.

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR
Helmer Ode' - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas

ASSOCIATE EDITOR
Dorothy Kister - PA 3-2494
5302 Stillbrooke
Houston, Texas

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING and CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

Family Epitoniidae (continued)

Epitonium lamellosum Lamarck 1822. So far only a few specimens of this large species have been collected on Mustang Isl. (coll. Speers) where dead speciment have been collected along the Port Aransas ship channel, one alive (coll. Speers).

Figured in: 1, 3, 5, 6, 21, 31.
Previous references: None
Localities: Mustang Island.

Epitonium candeanum Orbigny 1842. A single small dead specimen was collected along the Port Aransas Causeway (coll. Ode'). It is possibly a Pleistocene fossil because the species has never been found either alive or dead on any of the outer beaches.

Figured in: 3, 4, 6, 7, 21.
Previous references: 12 (offshore).
Localities: Along Port Aransas Causeway.

Epitonium multistriatum Say 1826. This is a common beach shell along the entire Texas Coast, recognized by the large number of costae and the spiral striae. Live specimens have been collected on Galveston West Beach (coll. Rosencrantz) and the Gulf beach of Mustang Island (coll. Speers).

Figured in: 4, 5, 6, 21.
Previous references: 11, 14, 19, 21.
Localities: Common in beachdrift along entire Texas Coast.

Epitonium novangliae Couthouy 1838. This is a not uncommon species at Galveston, where it is however far less common than E. angulatum, albidum, tollini and multistriatum. The species becomes more common to the south and at South Padre Isl. it is the most common wentletrap in beachdrift. This species is in general colored a brownish shade of white, quite different from the pure white of E. angulatum. Under a magnifying glass it appears to be clearly spirally corded. E. championi of ref. 12 is probably a large worn heavily corded specimen of this species. Taken alive at Port Aransas (23).

Figured in: 3, 8, 21.
Previous references: 12, 19, 23.
Localities: Not uncommon in beachdrift along entire Texas Coast.

Epitonium rupicolum Kurtz 1860. This is a not uncommon species on all Texas beaches. It is easily recognized by its coloration, rounded costae and basal ridge. Very fresh specimens are occasionally found on the Sabine-Bolivar stretch of beaches, where the species appears to be more common than anywhere else in Texas. Live specimens have been taken around Port Aransas (coll. Odé, Speers) and Port Isabel (coll. Speers). Also reported alive in (19) and (20) in inlet influence environment.

Figured in: 1, 5, 6, 7, 21.
Previous references: 11, 14, 19, 20, 21.
Localities: Not uncommon along the entire Texas Coast.

Epitonium sericifilum Dall 1889. This strikingly beautiful and easily recognized species has been collected at several locations along the Texas Coast. The largest specimens are known from Galveston (10 mm in length) (coll. Ode). Live specimens have been obtained from beach drift on St. Joseph Isl. (juvenile specimens, coll. Odé) and from the inlet area at South Padre Isl. (coll. Speers).

Figured in: 21.
Previous references: 19 (see also ref. 11), 21.
Localities: Galveston, Freeport, St. Joseph Isl., Port Aransas, Padre Island, Port Isabel.

Depressiscala nautlae Mörch 1874. Dead shells of this rare species of even light brown color have been collected a few times in beach drift at South Padre Isl. (coll. Speers, Odé).

Figured in: 3, 6, 21.
Previous references: None
Localities: South Padre Isl.

Remarks: Epitonium foliaceicostum Orbigny 1842. has been reported in ref. 12; specimens resembling this species are in the Speers collection and in the Odé collection. According to ref. 3 this species might belong to the E. angulatum group.

Epitonium championi Clench and Turner. has been reported in 12. It is unlikely that this species occurs in the Western Gulf of Mexico; and probably the reported specimen is E. novangliae.

A number of other species belonging to the genera Amaea, Opalia, Cirsotrema and Epitonium is now known in Texas offshore waters at depths below 20 fathoms.

THE SELECTION OF A TEXAS STATE SHELL

by Helmer Odé

About a year ago a letter was received by our Club from the Shell Club of San Antonio, Texas., urging that our members give some thought to the selection of a state"shell. This matter was pursued during the club meeting in March 1967 when vote was taken. The result of the vote was that Tellina tayloriana received most f the votes, Amaea mitchelli came in second and one vote was cast for Callocardia exasiana. In this note I want to discuss briefly why I think that the choice of . tayloriana is a good one. The qualifications of a shell for the status of "state" hell may be enumerated briefly. First and most important is that the species not nly should be a characteristic constituent of the local fauna, but also that its rincipal area of occurrence should be largely limited to the northwestern part of he Gulf of Mexico. A second desirable feature is that its type locality should be in

Texas, that is to say, it should originally have been described from Texas. Thirdly, the shell to be chosen should not be too rare to be noted by the casual beachcomber and occasionally visitors to our shores. In the fourth place it should be a shell striking in color and shape. Especially it should not be too small a shell. And lastly its taxonomy should be settled and reasonably stable. Any change in scientific in the near future would be confusing for a "state" shell. Although of course it is impossible to satisfy all five requirements rigorously the shell which comes closest to fulfilling the conditions should get the honor.

The first requirement already drastically limits the choice and excludes such shells as Atrina, Busycon contrarium, Dinocardium, Thais, Labiosa, etc., which sometimes wash ashore in spectacular quantity, but which are also found as frequently farther east on the Atlantic seaboard. The following list may be given for shells satisfying condition I.

List 1.
1. Anadara baughmani
2. Amaea mitchelli
3. Chione clenchi
4. Callocardia texasiana
5. Cyclostremella humilis
6. Cyclostremiscus trilix
7. Donax variabilis roemeri
8. Donax tumidus
9. Diplodonta soror
10. Dentalium texasianum
11. Epitonium angulatum
12. Epitonium tollini
13. Epitonium sericifilum
14. Kurtziella cerinella
15. Littoridina sphinctostoma
16. Macoma mitchelli
17. Macoma tageliformis
18. Murex fulvescens
19. Mercenaria campechiensis texana
20. Periploma angulifera
21. Pitar cordata
22. Tellina texana
23. Tellina tayloriana
24. Vitrinella texana
25. Busycon spiratum galvestonensis

The second condition would limit our choice very drastically. In comparison with other stretches of the Atlantic Coastline of the U. S. A., the many hundreds of miles of combined outer beaches and bay shores of Texas make a very poor figure in number of newly described species. Philippi was the first to describe Texas species (obtained from Roemer). Dall followed about fifty years later and in the last 20 years a sprinkling of new species has resulted from the efforts of various naturalists. At another occasion we shall discuss this matter in greater detail, and here we list only species 1, 2, 3, 4(?), 7, 10, 15, 16, 19, 22 and 24. A few of these can be excluded immediately for reasons of size and shape. Anadara baughmani is an offshore species never found on the beach, Vitrinella texana is a small and rare gastropod of interest only to a collector of such shells, Macoma mitchelli and Tellina texana are two small bivalves, lacking in general interest; similarly Littoridina and Dentalium texasianum should be scratched. This would then leave us with the shells listed in List 2.

List 2. Chione clenchi
Amaea mitchelli
Mercenaria campechiensis texana
Callocardia texana
Donax variabilis Roemeri

Some very typical shells from the first list may however be added to this list. Although not described from a Texas type locality these species are sufficiently characteristic of the Texas fauna to warrant inclusion in our list. For reasons of size, shape and general interest we may exclude Diplodonta soror, Epitonium tollini and Cyclostremella humilis. Busycon spiratum galvestonensis I would eliminate because it represents a local race of a wide spread species whose taxonomy is probably not quite settled. Macoma tageliformis can be eliminated because beach specimens look always dull and old and the shell misses the appeal of the other bivalves in the list. Kurtziella cerinella, the most common turrid of our beach is too small as is Periploma angulifera, which is a very typical Texas shell. Finally

Pitar cordata, while locally abundant offshore, is too rare on our beaches to qualify. This yields List 3 which is as follows:

List 3. Chione clenchi
Amaea mitchelli
Mer. camp. texana
Donax roemeri
Donax tumidus
Murex fulvescens
Tellina tayloriana
Epitonium angulatum
Epitonium sericifilum

t is now a matter of personal taste which shell to select, and we may attempt a hoice by a process of elimination. Epitonium sericifilum, probably one of the most haracteristic Texas shells one could name and in my opinion a far superior in eauty to Amaea mitchelli, is really too small to be of interest to the less experienced eachcomber and requires a trained eye to spot. Both species of Donax are colorful, nd common but must lose out in this respect to Tellina tayloriana, which is more triking and also larger.

Chione clenchi is seldom found in sufficiently well preserved state to make it of nterest. Beach worn shells are always dull and often in a poor state, while the colors, o interesting in freshly dredged material have almost completely faded. Callocardia exasiana has to be eliminated. I do this somewhat reluctantly since it is probably he most common of the typical Texas constituents of our beach fauna. However, it s by nature not endowed with a striking pink coloration and as a result some collectors o not even know it. Epitonium angulatum has to be eliminated because there are so nany closely related forms described under different names, with which this species an be confused. Of the four remaining species, Mercenaria c. texana and Murex ulvescens are in keeping with Texas norms of size and shape. However, in pleasing utline of form and coloration the quahog is less attractive than Tellina tayloriana, lthough its taste steamed, cooked or stewed is excellent. Murex fulvescens is often quite beautiful shell, especially some large specimens dredged offshore. Unfortuna-ely, most beach specimens are encrusted with byyozoa and the spines are broken off y rolling in the sand and transport by hermit crabs. The remaining choice between Amaea mitchelli and Tellina tayloriana must be decided in favor of the latter. Amaea s just too uncommon a shell to be of interest as a state shell.

The Dexters spent an enjoyable vacation in Washington and along the northern coast of Oregon in September. Although this was primarily a geological and botanical trip, there was time for a quick look at a few beaches and tide pools. Rocks in the tide pools were covered with anemones, barnacles, and the mussel Mytilus edulis. One bay in Puget Sound was literally covered with shells of the butter clam, Saxidomus nuttalli, every shell with at least one broken valve because they had been dropped on the rocks by hungry gulls. Anella sampled Dunginess crab in a salad but still doesn't know whether its flavor is as superior as claimed for it because her order turned out to be a whole head of lettuce with about three teaspoons of crab completely smothered in salad dressing. Laurence found his razor clam, Siliqua patula, had a good flavor but was very tough. (Mary Sutow says she can cook clams so they would be tender!)

Always looking for anything unusual, freakish, etc., I recently collected a living Cantharus cancellaria at Galveston with a small hermit crab firmly anchored inside the shell, too. Evidently the crab had a hart time finding the right new home or it knew the Cantharus, washed up by Beulah, would soon be dead and it would have a new home. Besides, think of the feast the crab would have to carry around!

In Florida, at St. Andrew's Bay, in late August, I picked up another freakish shell. This Cerithium muscarum was alive but had had a hard time growing up. A worm shell had grown right along with the Cerithium and twined around each suture and restricted each one so that each whorl then presented a continuous hour-glass figure. . . . . by Constance Boone

MOLLUSCANA

by W. W. Sutow, M. D.

This portion of the COWRY TALK was left over from the previous month.

In looking over the tables (in the references previously cited), I was somewhat surprised to note that the median length for 1513 specimens of Cypraea tigris was only 81 mm. It appeared, however, that all available data for this cowry had been lumped together as one species. In another article, published elsewhere, Schilder (Schilder, A. F.: "The size of Cypraea tigris Linnaeus", THE COWRY 1:43-44, 1962) has separated out the giant subspecies of Hawaiian waters, Cypraea tigris schilderiana Cate. If the measurements for all specimens of Cypraea tigris from various parts of the world were grouped together, the median length for 1536 specimens was 80 mm. The shape of the distribution curve, however, had a long tail and hinted at the possibility of a separate population existing at the larger end. This indeed proved to be the case!

If the deep water species from Hawaiian and Johnston Islands (192 specimens) were considered separately, the median length for this subgroup was 120 mm. Thus, this subspecies possessed the largest average size among the cowries. About 20% of the specimens were 130 mm or larger. Somewhat more than 1% exceeded 140 mm in length! (10 mm equals 0.3937 inch, or conversely, 1 inch equals 25.4 mm.)

* * * * *

Once again SUNSET ("The Magazine of Western Living") has published a nice article on mollusks, this time an illustrated thriller entitled "CLAMMING". This appeared in the April, 1967 issue of the magazine, pages 78 through 83. The article vividly recounts clam-digging activities on the beaches and tidal flats of Oregon and Washington. Thirteen of the common species, from the famous geoduck to the delectable razors, are pictured and described. An appended map indicates the most productive areas for these clams. And the bibliography lists names of informative booklets and the agencies from which they may be obtained. Shell collectors contemplating a shelling trip to the Pacific Northwest should read this appetizer.

Of particular interest are several paragraphs on shellfish eating hazards as they apply to this geographic area. Regarding the dangers of shellfish poisoning, there is this reassuring statement reproduced from the article: "In American waters, if you obey seasonal regulations and pay heed to mid-season emergency closures, you should have no reason to worry".

And while we are talking about the far West, let me put in a second plug for SUNSET magazine's booklet: "BEACHCOMBER'S GUIDE TO THE PACIFIC COAST", a $1.95 bargain of vital information for mollusk hunters heading west for the Pacific Coast, U. S. A.

* * * * *

The neatly drilled hole in an empty seashell provides telltale evidence of a predator's kill. M. R. Carriker ("Comparative Functional Morphology of Boring Mechanisms in Gastropods", AMERICAN ZOOLOGIST 1:263-266, 1961) states that organisms equipped to perforate the hard calcareous outside shell of other organisms are represented in at least seven animal phyla in addition to algae, fungi, and bacteria. Among the gastropods, members of the families Cassididae, Doliidae and Tritonidae are thought to be able to bore into or dissolve the outer coat of echinoderms. The other species capable of boring into molluscan shells are found in the families Cymatiidae, Thaididae, Muricidae, Naticidae, Helicidae, and, Oleacinidae.

If you have wondered how the creatures actually do it, various observations on the mechanism of drilling, boring and burrowing are discussed in PHYSIOLOGY OF MOLLUSCA, edited by K. M. Wilbur and C. M. Yonge, in the chapters on "Feeding" and "Locomotion". (See previous reference to these volumes in the TEXAS CONCHOLOGIST).

A CHECKLIST OF TEXAS MOLLUSKS DATING FROM 1849. . . . . by H. Ode

PART II.

In the following list of mollusks reported by Roemer in the appendix to his book on Texas, 91 species are enumerated. Those shells Roemer did not identify he submitted to Philippi (marine shells) and to Pfeiffer (land mollusks). For those species which they thought were new to science Philippi and Pfeiffer supplied latin diagnoses. This will be indicated by the brief statement, "latin diagnosis," in our list. The brief comments in German I have translated for the benefit of our readers and I have also indicated in brackets the more modern names of the shells, together with my own remarks. Moreover the shells have been arranged in the categories: 1) marine, 2) land, and 3) fresh water mollusks, but I have retained the numbering as employed by Roemer. Roemer noticed the correspondence of the fauna of Galveston with that of South Carolina and thus in a sense was one of the earliest proponents of placing the North Western Gulf coast molluskfauna in the Carolinian faunal province.

I. Marine shells.

1. Teredo navalis Linne. In driftwood. [It is possible that Roemer's material was not Teredo, but Bankia sp., because the latter is far more common than Teredo in driftwood at Galveston].
2. Pholas costata Lin. common. [Cyrtopleura costata].
3. Pholas pusilla Lin. In driftwood. [Martesia striata. It is more likely that Roemer's specimens belonged to M. fragilis. The latter is quite common along the Texas coast but M. striata is extremely rare].
4. Solecurtus caribaeus Blainville. [Tagelus plebeius].
5. Lutraria canaliculata Say. Common [Labiosa plicatella].
6. Mactra solidissima Chemnitz.
7. Mactra lateralis Say. (A single specimen). [Mulinia lateralis]
8. Mactra rostrata s. sp. Latin diagnosis by Philippi. [I do not know what species is meant].
9. Periploma anguliferum Phil. (Zeits. f. Malak. 1847, p. 73), common.
10. Pandora trilineata Say.
11. Gnathodon cuneatus Gray. Very common in brackish water at New Washington on Galveston Bay. [Rangia cuneata].
12. Amphidesma aequalis Say. [Abra aequalis].
13. Amphidesma orbiculata Say. [Semele proficua].
14. Amphidesma deforme n. sp. Latin diagnosis by Philippi. [It is unknown to me what species is meant]
15. Petricola pholadiformis Lam.
16. Tellina alternata Say. (Very common).
17. Tellina lateralis Say. [This species is unknown to me]
18. Donax variabilis Say.
19. Donax texasiana Philippi. (Zeits. f. Malak. 1847, p. 77)
20. Donax Roemeri n. sp. Latin diagnosis by Philippi. [Numbers 18, 19 and 20 are probably the same species].
21. Donax tumidus n. sp. Latin diagnosis by Philippi.
22. Venus mercenaria Linn. [Mercenaria campechiensis texana]
23. Cytherea concentrica Lam. Very common. [There is little doubt that the species meant is Dosinia discus, not D. concentrica].
24. Cyrene carolinensis Say. Very common in brackish water at New Washington on Galveston Bay together with gnathodon cuneatus Gray. [Polymesoda caroliniana].
25. Cardium ventricosum Bruguiere. Common. [Dinocardium robustum]
26. Cardium muricatus Lin. var. sub aequilatera, adque alta aclata. (A single valve.) [Trachycardium muricatum].

27. Arca pexata Say. Very common. [Anadara ovalis].
28. Arca ponderosa Say. A single specimen. [Noetia ponderosa].
29. Arca incongrua Say. Very common. [Anadara brasiliana].
30. Arca umbonata Lam. [Arca imbricata].
34. Chama arcinella Lin. A single valve. [Echinochama arcinella].
35. Modiola plicatula Lam. Very large. [Modiolus demissus. Probably not obtained from Galveston beach, but from Galveston Bay, where it is common at many places].
36. Mytilus hamatus Say. Common. [Brachidontes recurvus].
37. Pinna muricata Lam. A single specimen. [Because number 38 according to Turner (Johnsonia Vol. 3, p. 320) is Atrina serrata it is possible, but unlikely, that Roemer here meant Atrina seminuda].
38. Pinna squamosissima n. sp. Latin diagnosis by Philippi. [Atrina serrata].
39. Pecten concentricus Say. (P. irradians Lam. ?) [Aequipecten irradians amplicostatus Dall].
40. Ostrea virginiana Lister? Great quantities are eaten in Galveston. [Crassostrea virginica].
41. Dentalium texasianum n. sp. Latin diagnosis by Philippi.
42. Crepidula fornicata Lam.
43. Crepidula plana Say.
72. Auricula bidentata Say. Very common on the beach of Galveston. [The precise identity of this shell is still in dispute, and depends on whether Melampus coffeus and M. bidentatus are distinct or not].
77. Pirena (Cerithium) scalariformis Say. A single specimen from the Galveston Beach. [Undoubtedly meant for Cerithidoidea pliculosa].
78. Littorina irrorata DeKay. (Turbo irroratus Say). On Pelican Island near Galveston. Very common on water plants.
79. Scalaria clathrus Lin. ? A single specimen. [Probably Epitonium angulatum, but this is not certain],
80. Sigaretus perspectivus Say. [Sinum perspectivum].
81. Natica heros Say. [This is probably a misidentification of a large specimen of P. duplicatus, because the species does not occur in the Gulf of Mexico].
82. Natica texasiana n. sp. Latin diagnosis by Philippi. [Polinices duplicatus. In the Latin diagnosis the two forms, flat and elevated are mentioned].
83. Terebra dislocata DeKay. New York Report 152. (Cerithium dislocatum Say; Terebra Petitii Kiener.)
84. Terebra strigilata var. after Kiener; probably a different species. [I do not know what species might be meant].
85. Purpura Floridana Conrad. Common. [Thais haemostoma haysae and floridana],
86u Murex spinicosta Valenciennes. A single specimen. [Murex fulvescens].
87. Fasciolaria distans Lam. [Fasciolaria hunteria].
88. Pyrula perversa Say. Common. [Busycon contrarium].
89. Strombus pyrulatus Lam. A single specimen. [I am not quite sure whether Busycon spiratum is intended],
90. Cassis granulata Brug. ? A single incomplete specimen. [Phalium granulatur
91. Oliva litterata Lam. [Oliva sayana].

From our former member, Larry Horner, we received a letter from Fort Meyers, Florida, where Larry has started "The Southwest Florida Conchological Society". This club has already over 135 members, and Larry is its vice-president. A newspaper clipping accompanying his letter records an exceptionally large dog's head triton (Cymathium caribbaeum) which Larry obtained from Jimmy Hart, a shrimper who dredged it from 80 feet out of Key West.

Texas CONCHOLOGIST

Volume IV, Number 5 January, 1968

NOTES & NEWS

January 24, 1968, 7:30 p.m., regular monthly meeting in the Southwest Service Center, 4503 Beechnut. Mr. Tom L. Kister will give a short review on the book STALKING THE BLUE-EYED SCALLOP by Euell Gibbons and as he specializes in OLIVES will talk about that subject.

REPORT - NOVEMBER MEETING

At 7:30 our chairman, Mr. Lawrence Dexter opened the meeting. He reported that the binding of the Texas Conchologist for the library will be postponed until Volume IV is completed. The following new slate of officers was elected:

Mr. L. Dexter	Chairman
Mr. T. L. Kister	V-Chairman
Mrs. H. Fennessey	Secretary-treasurer
Mrs. George VanErp	C-Secretary
Mrs. J. Dashiell	Program Chairman
Mr. Helmer Odé	Editor

Mrs. E. Shivers displayed her large and beautiful Amaea, collected during the Matagorda Beach excursion in November. Dr. W. W. Sutow requested help in planning the barbecue to be sponsored by our club at the A. M. U. meeting in Corpus Christi in July, and asked for volunteers on the committee for favors and decorations.

Dr. T. Pulley gave a most interesting talk: "Collections and Collectors" about the history of shell collecting from thousands of years ago until the era of Lamarck. He showed some of the early and beautiful books with handcolored illustrations of shells from the library of Mr. R. Barker.

* * * * * * * * * * * * * * *

REPORT BEACH EXCURSION OF NOVEMBER 5, 1968 by Dr. Helmer Odé

An enthusiastic group of about twenty shellers, including Mrs. J. Wasson from Corpus Christi, assembled at Matagorda Beach near the mouth of the Colorado River, the morning of November 5, braving cold winds under overcast skies. At this location not many interesting shells were collected, but noteworthy were abundant worn valves of Arca imbricata. The clay banks of the river contained a fauna no longer living at this location, with such species as: Cerithium variabile, Anomalocardia cuneimeris and Macrocallista nimbosa.

After a contingent of the Galveston Shell Club had joined us, lunch was eaten at the new pass about three miles east of the river mouth. Here Mrs. E. Shivers found a large and almost perfect specimen of Amaea mitchelli. A somewhat smaller, less well-preserved specimen was collected by myself. Several live

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR
Helmer Ode' - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas

ASSOCIATE EDITOR
Dorothy Kister - PA 3-2494
5302 Stillbrooke
Houston, Texas

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING and CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

Fam. Architectonicidae
Dead and worn specimens of the well-known "sun dials" are quite common on Texas beaches. A second much smaller species has been rarely collected.

Architectonica nobilis Roding 1798. A common shell along the entire Texas coast. Live specimens have not yet been recorded from the Galveston-Freeport area, but are since October 1964 not uncommon at Port Isabel.

Figured in: 1, 3, 5, 6, 17.
Previous references: 11, 17, 19, 20, 26, 29 (offshore).
Localities: Common on all Texas Gulf beaches.

Torinia bisulcata Orbigny 1845. This rare species is only known in Texas from Padre Island and Port Isabel. At the latter location it has been taken alive on the jetties. On Padre Island live specimens have been collected near Bob Hall pier in November 1966 and January 1967.

Figured in: 1, 3, 6.
Previous references: 19.
Localities: Padre Island and Port Isabel.

Family Cypraeidae.
Of the well known tropical Cowrie family only a single species can be found on the Texas beaches.

Cypraea cervus Linne 1758. This large shell is rarely found on Mustang and Padre Isl. After hurricane Carla about 25 dead specimens were collected by several collectors at South Padre Island. Live specimens have been collected on Mustang Island beach (Dr. Hildebrand ref. 23).

Figured in: 1, 3, 6, 7.
Previous references: 11, 12, 22, 23.
Localities: Mustang and Padre Islands.
Remarks: Cypraea cinerea Gmelin 1790 has been reported in Ref. 11 from coral banks 100 miles off Galveston and has been listed in R f. 22.

Family Veneridae.

Of this large and world wide family many species can be found on Texas beaches. In Texas the genera Mercenaria, Antigona, Chione, Pitar, Anomalocardia, Gouldia, Macrocallista, Callocardia, Dosinia, Cyclinella and Gemma.

Mercenaria campechiensis Gmelin 1892. Live specimens of this species can be found on most outer beaches of the Texas Coast. It does not attain the large size and the heavy shell of M. campechiensis texana Dall, which is a bay species. The latter form is erroneously listed in ref. 1 as a subspecies of M. mercenaria. References and localities will be given together with the next subspecies.

Mercenaria campechiensis texana Dall 1902. This is the large quahog of the Texas Coast. At some localities of the Sabine-Bolivar beach, Surfside beach of Freeport , Sargent and Matagorda large quantities of worn dead shells can be collected. Alive at Point Bolivar, Galveston Bay, Matagorda Bay (51), Port Aransas and Port Isabel. M. campechiensis texana is characterized by a smoothing of its ribs in older specimens. According to ref. 17, abundant in open sound or open lagoon assemblage.

Figured in: 1, 4, 5, 6, 9, 11.
Previous references: 11, 12, 14, 15, 17, 19, 20, 24, 26.
Localities: The typical form can be found on the outer beaches; the subspecies lives in the bays.

Antigona listeri Gray 1838. Dead and discolored specimens of this species were collected in February of 1962 on the south end of Padre Island (Gulf Beach, coll. Speers).

Figured in: 1, 2, 3, 5, 6.
Previous references: None.
Localities: South end of Padre Island.

Chione cancellata Linne 1767. A very common shell around Port Aransas, where it occurs alive. Dead shells are far less common at Galveston, and we have so far no report of live specimens, but we expect it to live in Galveston We st Bay. According to 17 abundant in open sound or open lagoon assemblage and according to 14 alive in open bay, bay margin and inlet influence and hyper-saline environment.

Figured in: 1, 2, 3, 4, 5, 6, 11, 17.
Previous references: 11, 14, 15 , 17, 19, 20, 24, 25, 26.
Localities: Dead shells along entire Texas Coast. Alive very common at Port Aransas, and abundantly alive at Port Isabel.

Chione intapurpurea Conrad 1849. This is a far less common species than the previous one. Live specimens have been collected on Mustang Island. (1964) (coll. Speers). According to 17 common off Western Louisiana in inner shelf assemblage. It is missing at Galveston, appears at Sargent and is common at Port Isabel. Taken alive from Heald Bank (coll. Geis).

Figured in: 1, 3, 4, 5, 6, 11.
Previous references: 11, 12, 17, 20, 24.
Localities: Sargent, Matagorda, Mustang Isl., Padre Island.

Veneridae to be continued

BOOK REVIEW . . . . . .Dr. W. W. Sutow

Van Nostrand's Standard Catalog of Shells, by Robert J. L. Wagner and R. Tucker Abbott, Second Edition, 303 pages. D. Van Nostrand Company, Inc., Princeton, N. J., 1967. Price $5.95.

The second edition of this widely read catalog of shells appears three years after the first edition, with 113 more pages, a great number of price revisions, and, more than a dozen new sections. As before, the upper and lower catalog values (in dollars and cents) are listed for thousands of species in molluscan families most popular with collectors. The listed values require careful understanding. Much like the standard philatelic catalogs, the prices are relative, rather than absolute, and reflect the availability of and the collector demand for particular shells. A number of price changes have been made to approach more reasonably the retail dealers' list prices. However, wide discrepancies still exist and the reader is cautioned against accepting the printed figures at face value.

The major chapters deal with thousands of species of the Cowries, Cones and Marginellas. Complete and valuable tabulations of known living species are presented for the Slit Shells, Abalones, Strombuses, giant Clams and the Nautiluses. Extensive lists are also printed for the families Magilidae and Volutidae. Partial listings, some quite scant, include the Tuns, Nerites, Helmets, Miters, Vases, Chanks, Harps, Augers, Whelks (Buccinidae), Cymatiums, Fissurellidae, Trochidae and the Murex Shells. In addition to the Faunal Quick Lists published previously for Eastern North America, Western North America and the Caribbean, the new edition has added British Isles and Southern Australia. Pages of miscellaneous information such as World Size Records, List of shell Clubs and a list of some shell dealers are appended.

Some 18 popular shells, 8 rare cowries and 15 species of Marginellas are illustrated in color on the cover pages. Black and white drawings of a number of shells are included in the various sections. References are made to illustrations in 15 well-known publications and bibliographic sources are given for hundreds of species.

The publication is a good one and should be a basic library text. It should be useful to the individual shell collector if he takes care not to misinterpret the printed prices. In this reviewer's opinion, the greatest value of the publication lies in its wealth of authoritative nomenclatural information and the check lists, both regional and familial.

NEW ORGANIZATION

We received a notice concerning a new organization "The International League of Young Shell Collectors". Its aims are:

1. Encourage g reater interest in the study of shells among young people.
2. Provide information and literature on shells.
3. Promote international contact by the exchange of shells and ideas, and
4. Furnish vocational advice to those interested in malacology as a career.

The League will publish amimeographed paper in the English language, "The Young Shell Collector's Quarterly," which is edited and published in Lima, Peru. Vol. I, Number 1, was published in August, 1967. Dues are $2.00. For more information, please write to Public Relations, ILYSC, Mrs. Edwin S. Hicks, 7170 Lucky Drive West, Jacksonville, Florida, 32208; or send dues direct to ILYSC, Mr. Steven J. Britz, Treasurer, Whitney Plaza Apts., #442, 32 Whites Avenue, Watertown, Mass., 02172.

VITRINELLIDAE IN TEXAS, A REVIEW AND SOME OBSERVATIONS

by Helmer Ode

It has been remarked before in this publication that news concerning interesting publications is slow in reaching the ears of not only the editor but all those waiting eagerly for it. It was fairly generally known amongst Texas collectors of small beach shells that Donald B. Moore, the author of several papers dealing with small Texas marine shells, was working on a paper--his thesis--on the Vitrinellidae of the Gulf of Mexico. Not so long ago the rumor reached my ears that this work was completed and published. When I finally obtained a copy of it, I was dumbfounded to see that this work appeared more than three years ago, June, 1964.

The title of Dr. Moore's study is: "The Family Vitrinellidae in South Florida and the Gulf of Mexico," (ref. 1) which was submitted as a doctoral thesis at the University of Miami, Florida. Because the manuscripts of many these are difficult to obtain, the long time it took reaching the notice of the shell collecting community may be explained. In the following I will attempt to summarize its contents but will place the emphasis on occurrences of Vitrinellids in Texas.

As Dr. Moore remarks, Vitrinellids are mostly shallow water prosobranchs living in tropical seas. A few are known from the cooler waters north of Cape Hatteras and Western Europe. Moore states that no Vitrinellids are known in the Atlantic, south of Trinidad, but since the publication date of his thesis Altena has described several species from Dutch Guyana (ref. 2).

Almost all Vitrinellids are known from shallow waters of coastal bays and continental shelves. This explains the large number of species in Texas (so far I have identified with the help of Dr. Moore's study 20 different ones). A few are known from deeper waters. Moore cites one from the Azores at a depth below 1800 m. I may remark here that on the Texas coast Vitrinellids have been collected below a depth of 200 fms.

Many species taken on the American coast have their habitat under rocks, but apparently a number lives on sandy bottoms or in muddy bays. It is clear that the majority of the Texas species belong to the latter catagory. While some forms live between algae (in Texas Parviturboides) other apparently may be parasitic or commensal such as the Carolinian Cochloilepis paraitica which has always been found together with a polychaete worm.

In Chapter II of this thesis, following a short introduction, a resume of the earlier taxonomic ideas concerning the family is presented and various important works on the family by American workers are reviewed. In Chapter III, entitled General Biology, the conclusion is reached that the Vitrinellidae belong in the superfamily Rissoacea and do not belong in the order of the Archaeogastropoda where many early workers had placed them. The fossil record and evolution are outlined in Chapter IV where at the end the opinion is expressed that the Vitrinellidae constitute one of the more primitive families of the Rissoacea and were derived from the Skeneidae.

A comparison with West American faunal representatives is given in Chapter V entitled Zoogeography. Such a comparison has been made possible by the work of Pilsbry and Olsson on Pacific Vitrinellids. Whereas, some western Atlantic species have a fairly wide distribution throughout the warmer Atlantic waters, several other species have a distribution limited to the Northwest Coast of Florida. One species described in the thesis (see also ref. 3) is only known from the Port Aransas area in Texas. According to Moore several such species may be remnants of a population that at one time extended well up the Carolina Coast.

Almost all of the Texas material available to Dr. Moore was supplied to him by Mrs W. Rice, well known to many of our members, who collected it in the bay and beach areas around Port Aransas. At a later date Mrs. Speers and I hope to give more complete data on the distribution of Vitrinellids along the Texas Coast in the column "Notes on Texas Beach Shells."

The list of Texas species mentioned by Moore is as follows:

Vitrinella helicoidea C. B. Adams 1850
Vitrinella floridana Pilsbry and McGinty 1946
Vitrinella texana Moore 1964
Pleuromalaxis balesi Pilsbry & McGinty 1945
Teinostoma leremum Pilsbry & McGinty 1945
Teinostoma parvicallum Pilsbry & McGinty 1945
Teinostoma biscaynense Pilsbry & McGinty 1945
Episcynia inornata d'Orbigny 1842
Solariorbis infracarinata Gabb 1881 (formerly called S. euzonus)
Solariorbis mooreana Vanatta 1904
Solariorbis blakei Rehder 1944
Cyclostremiscus pentagonus Gabb 1873 (formerly called C. trilix)
Parviturboides interruptus C. B. Adams 1850
Anticlimax pilsbryi McGinty 1945 (formerly called A. tholus)
Cochliolepis nautiliformis Holmes 1860
Cochliolepis striata Dall 1889
Macromphalina palmalitoris Pilsbry-McGinty 1950
Cyclostremella humilis Bush 1897

Some of the taxonomic changes noticeable in this list are caused by the fact that Moore considers some species originally described as fossils from upper tertiary strata as identical with recent forms. Moore also considers several species described by Pilsbry and McGinty as full synonyms; f.i. T. nesaeum and T. obtectum are placed in synonymy with Teinostoma biscaynense, a procedure which will facilitate identification within that genus.

At the end of the species discussion there are 35 excellent figures which are quite helpful in identifying the discussed species. I had no trouble at all to identify all my Vitrinellid beach material with the help of Moore's thesis. The only species in my Texas beach collection (from Matagorda beach) not mentioned for Texas in the thesis was also figured and cited for Florida (Cyclostremiscus jeannae). This species is common in material dredged offshore in depths between 20-40 fms.

All 19 listed species are cited for Port Aransas. However, most of them have been taken also from drift on beaches elsewhere on the Texas Coast so that it may be inferred that they are of general distribution along the Texas Coast. All listed species except Macromphalina (from offshore waters) were obtained from drift. All of those except Pleuromalaxis, which so far I have not collected, and Vitrinella texana, which I only have from Port Aransas and Port Isabel, occur elsewhere on the Texas Coast. It is interesting to note that the genus Cyclostremiscus is represented in Texas by three species of quite different habitat, one a bay species (suppressus), one a sandy beach species (blakei), and one a deeper water species (jeannae). Moore does not clarify the problem raised recently by Altena whether S. blakei is synonymous with Vitrinella shimeri Clapp. (ref. 4).

To conclude the review of this most welcome paper I would like to mention one observation of Moore which appears contrary to my experience on the Texas Coast. He states that Episcynia inornata "appears to prefer quite shallow water, for the deepest occurrence seems to be from 15 fathoms off Cape Hatteras reported by Dall (1889)." In offshore Texas waters the species appears fairly regularly, although sparingly in dredgings of depths between 20 and 30 ms. Its apparent

rarety in beachdrift on the Texas Coast may reflect its vertical range which appears to be below that of most other Texas Vitrinellids. Other beach species such as C. pentagonus, C. suppressus and S. infracarinata are virtually absent in samples from this depth, while the common V. floridana is seldom encountered at all in offshore dredgings. This seems to indicate that these forms are bay or surf species while E. inornata prefers deeper water.

Ref. 1. Moore, D. B. (1964). The Family Vitrinellidae in South Florida and the Gulf of Mexico, Thesis Univ. of Miami, Fla., June 1964, 235 p.

Ref. 2. Altena, C. vanRegteren (1966), Zool. Medel. Ryks. Museum Nat. Hist. Leiden, Vol. 41, (16) p. 233-241

Ref. 3. Moore, D. B. (1965) Nautilus, Vol. 78 (3), p. 78, Pl. 7, figs. 4-6.

Ref. 4. Clapp, W. F. (1944) Nautifus, Vol. 28, p. 38-40, pl. 2, figs. 6-8.

CONTINUATION LIBRARY LIST

Pulley, T. E., "A Checklist of the Marine Mollusks of Texas"
Perry, Louise M. and Schwengel, Jeanne S., "Marine Shells of the Western Coast of Florida."
Thiele, Johannes, "Handbuch der Systematischen Weichtierkunde" Volume I and Volume II
Johnsonia, Volume I, Volume II, Volume III
Parker, Robert H., "Macro-Invertebrate Assemblages of Central Texas Coastal Bays and Laguna Madre"

The first $100.00 of books voted by the club gave us the following books:
American Malacological Union, "How to Collect Shells"
Allan, Joyce, "Australian Shells"
Abbott, R. Tucker, "American Seashells"
Habe, T. "Sea Shells of the Western Pacific"
Kira, T. "Sea Shells of the Western Pacific"
Keen, Myra, "Sea Shells of Tropical West America"
Melvin, A. Gordon, "Sea Shells of the World with Values"
Warneke and Abbott, "Caribbean Seashells"

SCALLOP FIND

by Tom Kister

The U. S. Bureau of Commercial Fisheries reports finding and evaluating an immense bed of Calico scallops, Aequipecten gibbus, off the East Coast of Florida. Marine biologists estimate that the 1,200 square mile bed should produce over 300 million pounds of scallop meat per year, and that a yield of 1 billion pounds per year is possible. The beds, which lie mainly from 100 to 300 feet deep, may be one of the most important finds in the history of commercial fishing. The Calico scallops found measure 1-1/2 to 2-1/2 inches in diameter and are slightly smaller than their main rival, the bay scallop, Aequipecten irradians irradians. Only the muscle or "eye" is considered commercial, although the whole animal is delicious. It requires 450 to 900 muscles to make up a gallon, or about eight pounds of meat. The Calico scallop, is small but is regarded as one of the world's tastiest sea-foods. The first commercial trawler started operations in October 1967. The many billions of these scallops should provide not only culinary delights, but ample specimens with various bright colors.

specimens of Murex fulvescens, Busycon spiratum and Busycon contrarium were dug up from the exposed sand bars.

* * * * * * * * * * * * *

REPORT OF DECEMBER FIELD TRIP BY CONSTANCE BOONE

December 3 was cold, but sunny and bright, and the largest field trip of the year also proved to be one of the most successful. Beginners, "hardened criminals" in the shell collectors union, and members of the families brought along for the ride had a wonderful day roaming, sunning and discovering live shells. Out-of-town members Frank Ray of Conroe, Mrs. J. A. Wasson of Corpus Christi, and Mrs. Fred Speers, now of Conroe, joined the Houston group under the bridge at St. Luis Pass, Galveston Island side. The tide was very low and flats to the west of the bridge and in the bay were well exposed all morning. Among the "finds" was one live Phalium granulatum Born (Patsy Kister), several live Solen viridis Say, numerous live Tellina iris Say, one live Tellina versicolor DeKay, some live Aequipecten irradians amplicostatus Dall (Lloyd Meister brought these in from the mud bar in the bay), two live greenish-orange Kurtziella cerinella Dall (discovered in that much-used sieve carried all day by myself to scoop up whole little trails of mollusks on the west flats), several live Epitonium humphreysi Kiener, one live Pandora trilineata Say (Mrs. W. B. Glass), and many other of the usual mollusks living in this area. A total of at least thirty live species was collected.

* * * * * * * * * * * *

SOUTH PADRE ISLAND SHELL FAIR

The eighth annual shell fair sponsored by the South Padre Island Shell Club will be held on February 24 and 25, it has been announced by Larry Allen, chairman. Despite Beulah, the South Padre Club feels the island park building, which lost part of its roof, will be ready for the exhibits which draw thousands of visitors from over the state each year. The schedule for the competitive events was mailed out to members in December. Some catagories have been changed or regrouped. Houston shellers are eligible to enter the events. Mrs. Hollis Boone (MO 88252) has a schedule, or one may be obtained from the South Padre Island Shell Club, South Padre Island, Texas, 78578. Reservations for space for entries must be made well in advance. Dr. Harold Rehder, Division of Mollusks of the Smithsonian at Washington, D. C., will serve as senior judge for the second year.

* * * * * * * * * * * *

Once again the junior displays surpassed the adult exhibits at the annual Brazoria County Fair on its 25th anniversary at Angleton, Texas, October 10 thru 14, 1967. Dr. W. W. Sutow, Mrs. Constance Boone and Mrs. Dorothy Kister were judges for the Sea and Shore Exhibits. Mrs. Kathryn Kirby of Lake Jackson was superintendent for this event and also works throughout the year with the junior exhibitors. Many displays of life cycles were presented representing months of work by the youthful members. Live aquariums, driftwood, shell craft, conservation, pollution, and Gulf Coast shells were just a few of the many interesting and educational displays. An Amaea mitchelli, the largest ever produced by man was an "eye-catcher" and whenever you chance to be in the Lake Jackson area and stop by its museum, ask Mildred Tate about this most unusual display. All in all the Brazoria County Fair's Sea and Shore gets "better-n-better" each year and is an event to watch for in the early autumn months.

Texas CONCHOLOGIST

Volume IV, Number 6 February, 1968

NOTES & NEWS

NEXT MEETING!!! Our regular monthly meeting will be held February 28, 1968, 7:30 p.m., in the Southwest Service, 4503 Beechnut. Carlos Cardeza will speak about his shelling experiences on Sanibel Island and an auction of shells donated by him will be held.

* *

REPORT - JANUARY MEETING

After the meeting was called to order by Mr. Lawrence Dexter, Chairman, and minutes read, Mr. Tom Kister led a discussion of a possible field trip to South Padre by chartered bus. A field trip to be held in conjunction with the Outdoor Nature Club and led by Mr. and Mrs. Kister is planned at San Luis Pass on Feb. 17. Announcement was made of the South Padre Shell Show on February 24 and 25 and the Coastal Bend Shell Fair to be held at the Corpus Christi Museum on March 9 and 10. Entrance forms for the latter can be obtained from Mrs. Constance Boone. Mrs. Boone reported on publications being received from various shell clubs for our library. Since Dr. Sutow will be out of the country, Mr. Paul McGee will meet with the Corpus Christi Club to help in planning the convention. Mrs. Ann Speers led a discussion on tentative barbecue arrangements for the convention. An auction of shells donated by Admiral Carlos Cardeza will be held at the next meeting. Mr. John Edstrom announced the Sharpstown Shell Show will be held May 10 and 11. Mr. Tom Kister spoke on olives and gave an interesting book review on "Stalking the Blue-Eyed Scallop" by Euell Gibbons. Admiral Cardeza read a fascinating article "Drugs from the Sea" from an oceanography magazine.

* *

The Coastal Bend Shell Club will hold its annual shell fair at the new Corpus Christi Museum on March 9 and 10, 1968. An invitation has been extended to all Houston club members to attend and exhibit. A schedule of classes for competition may be obtained from Mrs. H. Q. Boone, MO 8-8252. All entries must be in place by 11 a.m. Saturday, March 9, at the museum located on North Waters. Doors will open to the public after judging on Saturday noon and remain open until 6 p.m. On Sunday the exhibits will be open from noon to 6 p.m. Dr. Helmer Odé has been asked to be senior judge this year.

There are divisions for all ages and classes of collectors. Houston shellers would be able to plan a good weekend of shelling in the Corpus Christi area (Port Aransas, Rockport, Padre) and visit the show, even if they do not exhibit.

* * * * * * * * * * * * * * * *

Liz Eubanks, our first editor, writes from Dallas that she will graduate in May of this year and her major field is now bacteriology, which she finds as interesting as mollusks. She is now a research assistant at N. T. S. U. and is doing graduate work along with everything else. Still a busy, busy gal!

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR
Helmer Ode' - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas

ASSOCIATE EDITOR
Dorothy Kister - PA 3-2494
5302 Stillbrooke
Houston, Texas

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING and CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

Fam. Veneridae (condinued)

Chione clenchi Pulley 1952. Dead shells of this species, found occasionally at Galveston and Freeport, already common at Sargent, become a regular constituent of beach drift further south. At Galveston all valves are old and worn, but at Sargent fresher material can be obtained. Very fresh material can be collected at Port Isabel attached to whip coral (coll. Ode') and live specimens according to 14 in inlet influence environment at Rockport. According to 17, common along entire coast in intermediate shelf environment. Alive offshore in 15-20 fathoms (11).

Figured in: 11, 63.
Previous references: 11, 14, 17, 19, 20, 26, 63.
Localities: Dead shells on all Texas beaches, but more common to the south.

Chione grus Holmes 1858. This species is uncommonly found on the beach at Port Aransas (coll. Speers, Ode'), but is regularly collected at Port Isabel. Live specimens are known from Port Aransas (ref. 23, and coll. Speers) and are not uncommon at Port Isabel. According to 17, common along entire coast in intermediate shelf environment. Dead specimens are reported in (18) from calcareous banks assemblage.

Figured in: 1, 4, 12.
Previous references: 12, 15, 19, 23.
Localities: Sargent (one single valve, coll. Ode'), St. Joseph Isl., Port Aransas, Port Isabel.

Anomalocardia cuneimeris Conrad 1846. This is a common shell around Port Aransas and Port Isabel, where it lives in the bays. It tolerates very high salinities (28). According to 17 in hypersaline open and enclosed lagoon assemblage. Dead shells are rarely found at Galveston and Freeport. It is probable that some forms of this variable species have been described under different names (see ref. 2.).

Figured in: 1, 3, 4, 5, 6, 11.
Previous eeferences: 11, 14, 15, 17, 19, 20, 24, 27, 28.

Localities: Entire Texas Coast, but rare in the Northeast, but abundant in the Laguna Madre about 10 miles south of Corpus Christi Causeway and south of Baffin Bay.

Pitar cordata Schwengel 1951. This is a rare beach species, of which only dead shells are occasionally found on St. Joseph, Mustang and Padre Isl. (coll. Speers, Odé). The species is typical for the Gulf of Mexico (64). According to 17 commonly alive off Texas in intermediate shelf environment and abundant in outer shelf environment. Also reported in 29.

Figured in: 1, 64.
Previous references: 11, 17, 19, 20, 26, 29.
Localities: St. Joseph Isl., Mustang Isl., Padre Isl.

Gouldia cerina C. B. Adams 1845. A single juvenile valve has been found at Port Aransas (coll. Speers) and about 15 valves attached to whip coral were taken at Port Isabel (coll. Odé). Here also a single valve in beach drift. According to 18 alive on the offshore coral banks.

Figured in: 2, 3, 4, 6, 17, 18.
Previous references: 12, 17, 18.
Localities: Port Aransas, Port Isabel.

Macrocallista maculata Linne 1758. An uncommon species, except on South Padre Island, where occasionally fresh looking specimens can be found south of the Mansfield cut. Old and worn specimens rarely at Sargent (coll. Odé). Small specimens have been collected alive on the outer beach of Padre Island (Nov. 1964, coll. Speers). Live specimens from Heald Bank and off Freeport (coll. Geis). Reported alive offshore in 12.

Figured in: 1, 2, 3, 4, 5, 6, 21.
Previous references: 11, 12, 19.
Localities: Sargent, South Padre Isl.

Macrocallista nimbosa Solander 1786. This characteristic shell is rare at Galveston and Freeport (fragments, coll. Odé, a single live specimen from Freeport, coll. Sutow), but becomes more frequent toward the south. (Not uncommon on Matagorda beach). The species has been reported from indian middens near Corpus Christi (65), and also can be found in pairs in spoil banks of Corpus Christi Bay. A single live specimen has been collected at Port Isabel (coll. Speers). Reported alive offshore in (12).

Figured in: 1, 4, 5, 6, 11, 21.
Previous references: 11, 12, 19, 20, 24, 65.
Localities: Galveston, Freeport, Indianola, Matagorda, Port Aransas, Port Isabel.

Callocardia texasiana Dall 1892. This is a common beach shell, typical for Texas. However, live specimens on the beaches are quite rare (a single specimen from Gillcrist, coll. Odé, and several pairs after hurricane Carla on Bolivar Peninsula (coll. Bender). Reported offshore in 12.

Figured in 12.
Previous references: 11, 12, 20, 26.
Localities: Dead valves common on all Texas beaches. Live specimens extremely rare.

(Veneridae to be continued)

MOLLUSCANA by W. W. Sutow, M.D.

Some comments were left unfinished in the March (1967) issue of the TEXAS CONCHOLOGIST (Volume III, No. 8). The subject matter concerned "type" terminology. It seemed a good idea to look for some concise definitions of the most useful of more than 200 expressions relating to generic and species types. Others must think so, too. There has appeared in THE TABULATA (Santa Barbara Malacological Society publication), Vol. I No. 1, (October) 1967, page 10, an article entitled, "Terms in Taxonomy: Types of a Species." Cernohorsky in his new book, MARINE SHELLS OF THE PACIFIC (1967), also has a tabulation of type vocabulary.

For orientation purposes, synoptic definitions of seven key type terms are listed below (in alphabetical order):

HOLOTYPE: a single specimen designated as "the type" by the original author.

HYPOTYPE: specimen(s) described, listed or figured (whether or not included in the description of the new taxon) which extends or corrects the concept of a species.

LECTOTYPE: specimen selected from the type lot (by a competent reviewer following established procedures) as the equivalent of a holotype when the holotype is not designated by the original author.

NEOTYPE: a new type specimen of a particular species designated when the holotype and type lot are destroyed or lost.

PARATYPE: specimen(s) in the type series (in addition to holotype) used by original author for description.

SYNTYPE: one of several of equal rank used in the original description without any being singled out as the holotype.

TOPOTYPE: specimen obtained from the same locality as the holotype but at a different time.

* * * * * *

On one of my plane trips, I picked up a paperback publication entitled, "Mythology, Timeless Tales of Gods and Heroes" by Edith Hamilton. In thumbing through the pages, I noted suddenly that my mind was recognizing with fair frequency the names which were associated with seashells. The Elder Gods of Greek mythology were represented by Saturn, Prometheus and Ocean. Immediately spotted were such Olympian Gods as Neptune, Diana, Juno, Venus and Hermes, all of whom have been incorporated into well-known seashell names. A partial list of the Lesser Gods and other mythical Greek and Roman characters (and creatures) that have gained additional immortality in molluscan nomenclature would include: Erato, Semele, Iris, Pandora, Glaucus, Aurora, Io, Argus, Argo, Argonaut, Actaeon, Midas, Circe, Lucina, Janus, Triton, Antigona, Melampus, Proteus, Psyche, Gorgon, Trivia and Astraea.

It should be fascinating indeed if we could know, in each case, the association between the seashell and the mythological source which led the author to pick the particular name.

SONG OF JOY by MRS. CONSTANCE BOONE

A sheller's dream consists of great discoveries and fabulous beaches. This came true for one of our new members, Clarice Van Erp, one of our not-so-new members, Constance Boone, and one of our veteran members, Mildred Tate. Clarice called and asked me to go shelling Nov. 1 because the tides were due to be low and the northwest winds were blowing. I almost didn't go because I had stacks of shelling work to do---but I never can resist! I called Mildred to meet us at Surfside at 8:15 a.m. The Freeport beaches were very bare all the way to the pass. I was sure it was a real bust. It so often is when I hope to help a new sheller find live material. But we decided to cross the bridge to my favorite spot from last winter---under and near St. Luis bridge. Beulah had sanded over the cut through to the inner lagoon on the west side, and I have been unhappy over this, because last winter Leola Glass and I had such gook luck on the bar at low tide. The bar didn't look too inviting, except there was a line of debris to examine. Sand was blowing over everything. We went to the west point flats where I felt we'd find a few live things---and, bingo! Terebra dislocatas were everywhere, popping up out of the sand. Some were quite orangey hued. I showed the others how to pick out the little, beautiful Tellina iris trails. They make about four inch slits for trails, and you have to be very careful to pick up the fragile bivalves in a glob of sand so you don't break them. I prefer to carry a kitchen sieve and put the whole end of such small trails in it. When I have a half full sieve of sand I walk to the water and gently swish out the sand. Other small trails held baby Donax tumidas and Donax variabilis, Mulinia lateralis, Natica pusillas, and juvenile cockles and mercenarias.

Then Mildred gave a shout of pleasure. We rant to see her hold a fuzzy, bright yellow animal that was her first live-collected heart urchin. Both Clarice and I finally found one apiece. Mildred got one live Solen viridis; I got a Cantharus cancellaria. It was about that time that Clarice came over and held out her hand and asked what was the shell she had picked up. Both Mildred and I gasped. It was a perfect, live and kicking Tonna galea, about two inches in size. Beginner's luck! Neither Mildred nor I had seen one collected alive.

We kept looking and roaming the flats. There were innumerable trails and humps. We collected the following things alive: Thais haemostoma, Spisula solidissima, Busycon contrarium, (they were tiny babies still with the rounded, bulbed spire), Polinices duplicatus (including some of the bay high-spired species), Dinocardium robustum, Ensis minor, Tellina alternata, Epitonium humphreysi, Dosinia discus, Nassarius vibex, Nassarius acutus, Mitrella lunata, Anachis avara, Retusa candei, Anadara ovalis, and enough Mercernarias for clam chowder. I believe the Mercernarias were Texana species and there were two notatas. Clarice also was able to collect good dead pairs of Tagelus plebeius, Anadara brasiliana, and Periploma inequale. We also got some drift epitoniums and other small gastropods. Seems I have forgotten somtthing! Not really---I am too excited over it all!

I went roaming ahead collecting about mid-day. Mildred and Clarice went to get cigarettes and came along behind me. Suddenly I heard Mildred shouting and jumping up and down (bad back and all!), and I ran back to hear her saying, "I got one!" I got one!" She had found a three inch live Tonna galea. I had passed right by it. She says she was just commenting to Clarice that she had never been with anyone who had collected one and reached over to touch her for luck and spotted the tun, almost sand covered. I never found a tun, but I had my thrill, too. Almost at the end of the day I found a live Tellidora cristata, my very first. So I got to shout and exclaim and carry a treasure home.

SHELLING ON THE FLOWER GARDEN BY DR. H. Odé

On October 5, the destroyer Hainsworth, under command of Lieutenant Commander Donald Edwards left Galveston at about 6:30 p.m., carrying besides its normal crew, a group of about 30 divers with lots of equipment and two air compressors. Dr. Tom Pulley, director of the Houston Museum of Natural Science was there; Paul McGee of the Houston Independant School System; Bill Cromie, science writer with the World Book Encyclopedia Science Service; Harold Geis, Leroy Rudder, who served as liaison between the Navy, the divers, and myself.

Harold had organized the trip for which authorization had been obtained from Rear Admiral P. N. Charbonnet, Jr., in order to obtain specimens of shells and other fauna for a collection now being assembled for the Houston Museum of Natural Science. As a safety measure for the divers, a two chamber decompression unit was on board, which fortunately was not needed. It had been supplied by the G. and G. Marine Diving Co., whose diving research specialist, Peter Edel, also made the trip. The Navy had provided the services of Captain E. H. Beckman, who supervised the medical part of the operation.

The object of the trip was to investigate the fauna of and make collections on some of the coral reefs which grow atop of several so-called "lumps" fringing the edge of the continental shelf. These prominences are the surface expression of slowly rising columns of salt (salt domes), many of which are now known in Texas and Louisiana, both onshore and offshore. When we steamed through the gathering darkness between the long jetties of Bolivar Pass, in beautiful weather, a red sky overhead, everybody was in the best of spirits and the expectations for a good catch and interesting film footage were high. A thirty minute film documentary is in preparation by Ralph E. Payne.

On Friday morning the anchor was cast on top of the East Flower Garden Bank, where after a careful maneuver around a smoke flare, the highest peak of the prominence was selected. The East Flower Garden rises from a more or less flat bottom at 300 ft. depth to an elevation as shallow as 10 fms. thus enabling the growth of coral, because the water is clear enough and its temperature sufficiently high. Coral formations could be seen indistinctly through the clear blue water, which was disturbed by a gentle swell. Above the coral three sharks glided around but caused no excitement among the experienced group of divers. After a briefing by the diver's safety officer, Luther Swift, the first two divers went down to explore the location and after that, teams of two and three divers descended at regular intervals to collect and to photograph. Very common live shells brought up were Astraea caelata, Cerithium sp. and two species of Coralliophila (abbreviata and caribaea) while the most common bivalve was Lima scabra whose animal is unbelievably beautiful when put in a pail of seawater. Lots of fine coral debris was brought up in collecting bags to be scanned later under the microscope. Preliminary investigations of this material disclosed the presence of small shells such as several Triphora species, Cyclostrema sp. and other interesting small forms. Especially one of the Triphora species is a very peculiar looking creature. Paul, who had seen some of these on an earlier trip had told me before the trip that some of these shells possessed three openings and I had accepted his bet that I must be mistaken. Well, when the first sample came up and a magnifying glass was produced I had lost my six pack! Sponges and coral specimens were also brought aboard and several of the less attractive specimens were set aside for investigation of the mollusks they might contain. At the end of the day a fair sample of the mollusk fauna was assembled in the collecting bags and in the pails of seawater where some of the live specimens were

stored. Conus sozoni, Conus juliae and the cone figured earlier in this publication (Tex. Conchol. Vol. 2, No. 5) were conspicuous among these, the latter two by their bright orange color.

The second day was devoted to diving on an as yet unexplored lump somewhat more to the east. The water depth at this location was much greater, 24 fms. instead of 10 fms the first day, and the decision to dive here was made to investigate whether coral growth extended to this depth. The far greater water depth allowed only a single dive per diver, but fortunately much material of interest was brought to the surface. The bottom debris turned out to be strongly encrusted by calcareous algae and also the shell fauna appeared to be slightly different. The bottom was described by the divers as being flat and covered by widely dispersed small heads of dead looking coral formations. The fine bottom debris contained a fauna of small mollusks which will turn out to be quite interesting. At a first glance I spotted a large number of small forms many of which are unknown to me and a beautiful specimen of Spirolaxis exquisita appeared later in a handful of dried debris.

Gorgeous specimens of Spondylus were brought up from this location. Most of these had many well-developed spines, sometimes quite frondose. One specimen in particular, a soft yellow color looked like a veritable Medusa head. A large pinkish sponge provided the biggest surprise molluskwise. In the evening Harold and I were busily engaged in cutting it up to obtain the mollusks living in and on it, and had proceeded as far as cutting away one side when a large cavity came into view, half filled by small shell and coral debris. On the tough wall of it, just above the debris a beautiful live specimen of Ostrea thomasi was attached, its shell colored by vivid red streaks. The shell debris below it yielded no less than two specimens of Haliotis pourtalesi; one was old and worn and reduced to not more than a mere fragment; the other, however, practically perfect except for a small chip from the lip, is of a bright uniform orange color and 24 m.m. in length. Whether these specimens were washed into the cavity or lived in it, is unknown.

The third and last day of the trip the scene of operations was relocated on East Flower Garden, but now in slightly deeper water on the slope of the structure. The harvest here was excellent again. Several species so far unknown to the Texas Coast were brought up: a live Astraea longispina and most amazing a small live Strombus gigas (2 inches). While handling this baby I got an unexpected jolt when the animal hit my hand suddenly with its sharply pointed operculum. Mrs. Mildred Tate of Freeport informed me later that shrimpers on rare occasions bring in S. gigas from off Freeport. One of the last divers to go down brought up a beautiful live Latirus infundibulum.

From the results of this trip, together with previous data obtained by investigations of Parker and various other workers, it is clear that the offshore Texas fauna on the coral reefs appears to be a rich one. Such genera as Bursa, Cymathium, Trivia, Cypraea, Colubraria, Pisania, Calliostoma, Drupa, Mitra, Cingulina, Turbo, Rissoina, Condylocardia, Cyclostrema, Liotia, Rimula, Zeidora, Emarginula, Stilifer, Pachystremiscus, Triphora, Cerithiopsis, Tenagodus, Petaloconchus and Psammobia; all have representatives in the coral community which are never observed much closer to shore. Picking through the unsorted material and microscope work will undoubtedly bring to light many species not yet reported for this part of the Gulf of Mexico. The list of those obtained in previous years from many other locations off Galveston and Freeport is already quite long. In addition, a number of as yet undescribed species is without doubt contained in the material collected so far on the continental shelf off Texas.

Monday morning early the expedition made harbour in Galveston and the harvest of three days hard work was transferred to trucks and cars. We are deeply grateful to all who made this venture possible and participated in it. The Navy personnel from the executive officers to all crew members, many of whom took great interest in the catches, made our stay on board a memorable, safe and very pleasant one, and the divers gave generously of their spare time to collect shells and "sand". To all of them we are truly thankful!

The library committee has ordered the following published materials for the second $100.00:

Subscription to "The Veliger"
Subscription to "Nautilus"
"Indo-Pacific Mollusca" (up to Date) This is a series of monographs.
"Pandoridae," Johnsonia 4, No. 44, the only one we didn't have from Mr. Geis' collection.
Arnold, W.H., "A Glossary of a Thousand-and-one Terms Used in Conchology."
Burgess, C. M., "The Living Cowries"
Fenton, Carroll Lane and Fenton, Mildred Adams, "The Fossil Book"
Miner, Roy Waldo, "Field Book of Seashore Life."

Rectification. In my review of Moore's paper on the Vitrinellidae, which appeared in the previous issue, a few errors need to be mentioned. In the list on page 38, Cyclostremiscus supressus was inadvertedly omitted. Both the genera Cyclostremiscus and Solariorbis have bay, beach and offshore representatives. They are as follows:

Bay: Cyclostremiscus supressus
Solariorbis infracarinata

Sandy surfzone: Cyclostremiscus pentagonus
Solariorbis blakei

Shallow offshore: Cyclostremiscus jeannae
Solariorbis mooreana

The genus Cyclostremella does not belong to the Vitrinellidae, but for convenience, was treated with them, until it can be assigned a more correct place.

* * * * * * * * * * * * * * * *

CLEANING TIP . . . . . by Leola Glass

Club members are always looking for an easy way to rid a shell of its live animal. While in Marathon recently, I found I could put a freshly collected live Strombus gigas in the ice box for two days, then pull out the animal whole and eat the white meat. After two days, the animal might not be safe to eat. The shell remains in beautiful condition, no dulling or crazing. Two live-collected Strombus costatus in the Marathon area were put in the deep freeze for several days, then taken out to thaw completely, and the animal came out whole and the shells remained in beautiful condition.

Texas CONCHOLOGIST

Volume IV, Number 7 March, 1968

NOTES & NEWS

March 27, 1968, regular monthly meeting to be held at 7:30 p.m. in the Southwest Service Center, 4503 Beechnut. Two very avid shell collectors, Mrs. Constance Boone and Mrs. Leola Glass will present the program entitled COLLECTING FRESH WATER UNIONIDS, FROM TEXAS STREAMS. Their fresh water shells will be on exhibit and specimen shells will be door prizes. Don't miss this exciting evening.

* * * * * * * * * * * * * * * * * *

Tom Kister opened the February meeting in the absence of our chairman, Mr. Lawrence Dexter. After secretary and treasurer's reports, a Seadrift shelling trip was discussed. This will be an overnight excursion with dates to be announced later on. Mr. John Edstrom will be exhibit chairman for the May 10, 1968, shell-fair in Sharpstown Center Mall. We will set up exhibits on Thursday afternoon and evening, May 9, and remove them after 6:00 p.m., May 11. A dutch-treat dinner at Wyatts on Saturday evening is once again planned. Twenty tables and 60 pegboards are available so make plans now and reserve a space for your shells, fossils, beachdrift, etc.

It was announced that Mr. Harold Geis and Mrs. Fern Heinke donated the door prizes for the January meeting. Door prizes are always needed and anything you may wish to give is always welcome. Your discard may be someone else's prize possession.

The Outdoor Nature Club's annual shell trek led by Dorothy and Tom Kister was rained out although ten cars ventured out despite the weather.

Dr. Zeis reported that Hepatitis germs found in clams and oysters survive freezing temperatures and simmering also. It is best to be safe by letting the mollusks purge themselves overnight then boiling or frying them before consumption.

Mrs. Constance Boone reported that the Hotel Driscoll has reserved only 90 rooms for the A. M. U. Convention to be held there in July. Corpus Christi will have two other conventions meeting at the same time so it will be well to reserve a room or rooms now. A $5.00 deposit will hold your room and rates start at $14.00. Registration for the convention is $5.00. Make your plans now to attend. Don't forget our group will host the barbecue to be held at Welder Wildlife. A beach party, shelling trips, seminars, etc., are all on the agenda. More about this later.

A long-awaited shell auction was the highlight of the February meeting with Clarice Van Earp as auctioneer. The bidding was slow to start but Clarice moved it along with her persuasive ways and had the members battling for the shells given to us by Carlos Cardeza. Beautiful and large horse conchs, king's crowns, tulips and

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR
Helmer Ode' - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas

ASSOCIATE EDITOR
Dorothy Kister - PA 3-2494
5302 Stillbrooke
Houston, Texas

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING and CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

Family Veneridae (continued)

Dosinia elegans Conrad 1843. This species has so far only been found on St. Joseph, Mustang and Padre Isl. Especially on South Padre Island it is more common than anywhere else along the Texas Coast. According to 17 it occurs rarely off southern Texas in the inner shelf zone. A statement in 12 that the species occurs on the beaches of east Texas has never been confirmed. Live specimens are known from South Padre Isl. (coll. Speers). Fossil shells can be obtained in pairs from the spoil banks in Corpus Christi Bay.

Figured in: 4, 5, 6, 21.
Previous references: 11, 17.
Localities: St. Joseph Isl., Mustang Isl., Padre Isl.

Dosinia discus Reeve 1850. This is the common disc shell of the Texas beaches, quite often found alive during the winter. According to 17 common along the entire coast in the inner shelf zone. After Hurricane Carla when thousands of pairs were washed ashore it became noticibly scarcer in south Texas.

Figured in: 1, 5, 6, 11, 21.
Previous references: 11, 12 (alive), 14, 15, 17, 19, 20, 24.
Localities: Common on all Texas beaches.

Cyclinella tenuis Recluz 1852. This shell which superficially resembles a small smooth Dosinia has been found rarely at Galveston, but more frequently around Port Aransas and Port Isabel. Live specimens have been reported in (14) from open bay margin and inlet influences environment at Rockport. Live specimens have been collected in Aransas Bay, Corpus Christi Bay and the southern part of the Laguna Madre (coll. Speers).

Figured in: 2, 3, 4, 6.
Previous references: 11, 14, 15, 19, 20.
Localities: Point Bolivar, Galveston, St. Jos. Isl., Port Aransas, Rockport, Padre Isl., Port Isabel.

Gemma gemma purpurea H. C. Lea 1843. From Texas so far only dead specimens are known. Several dead pairs were obtained by dredging (Speers).

Figured in: 1, 3, 6.
Previous references: 11, 19.
Localities: Indianola, St. Joseph Isl., Port Aransas Causeway.
Remarks: In references 1, 3, Pitar dione is said to wash ashore in Texas. This must be an error, because we have never seen the species nor heard any report about it for Texas. However, a number of other species have been reported:

Anomalocardia rostrata Savage; in 24, 25, This is probably A. cuneimeris.
Pitar aresta Dall and Stimpson 1901; in (19).
Pitar fulminata Menke 1830; in (18) on offshore banks.
Antigona callimorpha Dall 1889; in (22).
Antigona strigillina Dall 1902; in (18).
Callista eucymata Dall 1889; according to (17) few in upper continental slope assembly.
Chione paphia Linne 1767 (reported by Reed, see Ref. 11) are probably misidentifications.
Chione pubera Valenciennes 1827; in 11

Fam. Ellobiidae

To this family belongs the well known "coffee bean" snail, about which several papers have appeared lately. (64, 65) In Texas two genera: Melampus and Pedipes.

Pedipes mirabilis Muhlfeld 1818. Live specimens of this species have been collected at the jetty of Port Aransas (coll. Speers), and Port Isabel (coll. Speers). At these localities dead shells have also been found in beachdrift. Dead specimens have been found at Galveston in January 1967. (coll. Odé, Boone).

Figured in: 3, 6.
Previous references: 19 (Pedipes spec.)
Localities: Galveston, Port Aransas, Corpus Christi, Port Isabel.

Melampus coffeus Linne 1758. According to several recent studies there is some uncertainty about the specific relations between several described species from the United States. We shall follow one of three suggestions offered in (65) which proposes that M. coffeus and M. bidentatus Say are identical. If these two shells should prove to be different the correct name for the Texas species should be M. bidentatus Say 1822. According to 14 the Texas species occurs alive in open bay margin and shallow hypersaline environment of Rockport. According to 17 common in open sound or open lagoon assemblages under vegetation etc. Live specimens have been reported in (11) from Galveston and Lavaca Bays. Alive near Seabrook (coll. Odé), Port Aransas (coll. Speers), Port Isabel (coll. Speers). Dead shells common on many beaches.

Figured in: 3, 4, 40, 65,
Previous references: 11 (M. coffeus), 14 (M. bidentatus), 17 (M. bidentatus), 20 (M. coffeus), 24 (M. lineatus), 44 (M. coffeus), 65 (Group A. presumably M. bidentatus).

References:

64 Morrison, J. P. E. (1950), American Ellobiidae - an annotated list. Am. Mal. Un. Ann. Rep. - p. 8-10.

65 Holle, P. A., and Dneen, C. F. (1959) Studies on the genus Melampus (Pulmonata).
Nautilus V. 75 (1), p. 28-35; Vol. 75 (2), p. 46-51

MOLLUSCANA

by W. W. Sutow, M.D.

Like all sciences, conchology has a language which (though based on zoology) is peculiarly its own. This refers to terminology other than the nomenclature of species and genera. One of the best up-to-date aids to learning this language is Winifred H. Arnold's "A Glossary of a Thousand and One Terms used in Conchology". This booklet has been purchased by our Club for our library and is available for use by the members.

* * * * * *

While browsing through the bookstore of the Tulane University Medical School (in New Orleans), I came across a manual by Emile A. Malek entitled LABORATORY GUIDES AND NOTES FOR MEDICAL MALACOLOGY (1962).

The manual is intended for a graduate course in parasitology and tropical public health. Special emphasis is placed on fresh-water pulmonates and their role in snail-borne diseases. Pelecypods are also discussed in relation to transmission of parasites. Species of the marine and brackish water mollusks that may become health hazards belong to the following families: Neritidae, Cerithidae, Littorinidae, Nassariidae, Conidae, Muricidae, Akeridae and Mactridae.

The manual contains a number of large anatomical illustrations of land and fresh-water mollusks with good, systematic directions for dissection of these animals. An extensive bibliography (20 pages) of books and major articles on medical malacology is included.

* * * * * *

Quite recently, Cernohorsky published a good book on South Pacific molluscan species: MARINE SHELLS OF THE PACIFIC, Pacific Publications, 1967. On page 17, the author mentions that a currently used anticancer drug named "vincaleukoblastine" is extracted from the Littorina species (periwinkles) of mollusks. This is completely erroneous. The drug is prepared from the common periwinkle plant (Vinca rosea) which has no connection whatsoever with the periwinkle snail. This correction should be noted by readers of the book.

* * * * * *

This year, Japan has issued two postage stamps picturing cephalopods. The 15-yen commemorative shows Omnastrephes sloanei pacificus (Steenstrup). This species is eaten widely in Japan and is sold as "dried squid." The second appeared as the 35-yen definitive postal issue. The pair of small jet-propelling squids are not identified.

Cephalopods have been used as central designs of postage stamps many times before by various countries. The chambered nautilus, Nautilus pompilius, has been featured more often than other species. In 1944, Germany released two stamps (Scott B286 and B287) in honor of the German goldsmith society. Each stamp shows the nautilus about which some artistic goldsmith work had been done. In 1962, New Caledonia issued a large airmail stamp (Scott C30) picturing a live specimen of this species. About the same time, the Condiminium of New Hebrides printed a series of stamps, the 30c value of which pictures the nautilus (Scott #117 for the French and Scott #101 for the British issues). According to philatelic news, Fiji has just issued a stamp showing the chambered nautilus.

Jugoslavia, in 1956, included a beautiful stamp showing the paper nautilus, Argonauta argo. Dubai, in its very first set of stamps (1963) honored a cephalopid, identified only as "cuttlefish," on its 20np value. Monaco, in 1960, commemorated the Oceanographic Museum. The 25c value of the set featured research on electrical qualities of cephalopods and showed several of the creatures in the stamp design.

COLLECTING TREE SNAILS . . . . . .by Leola Glass

I had my first experience of collecting tree snails. Ever since I read an article in the March, 1965 issue of National Geographic Magazine on the Liguus fasciatus, I had a great desire to collect some.

In November, while in Marathon, Florida, Berkeley and I drove along a highway where there were gumbo limbo trees and sighted a few of the snails. Some we could reach with our hands; others, we reached with a nylon-covered crab net. I went out again the next day to look for brown ones because we had only a few yellow and white ones. I saw one that I could reach with the net, and two that were much higher. I marked the spots on the shoulder of the highway with rocks and colored beer cans and went back to the motel to enlist Berkeley's aid. He rigged up a very long pole and can, and we went back to the highway and he reached the two-much desired snails. I made a bag of nylon net and put leaves and twigs of three species of trees, on which we had found the snails, in the bag and added the snails. Then, I stitched along the top of the bag, but did not secure the end thread as I wanted to be able to reach into the bag from time to time and replace the leaves with fresh ones. I then placed the bag flat on newspapers and sprinkled a little water, because the snails like moisture but not enough to drown them. During the night, I had to peek at them, and they were very active, as is their custom.

The next morning, Berkeley exclaimed "What is this on the floor?" And, there sat our largest tree snail. I began to count the ones in the bag, but the leaves hid some of them, and it was difficult to be sure, but I suspected three more were missing and began looking high and crawling around the table, and I found them on the sides of chairs. Hours later I found another one in a tiny container on top of the table. One snail hibernated for 24 hours on a twig. I changed the leaves and sprinkled with water, and he came out of hibernation.

One of the snails scooped off the tree had his aperture sealed over. I had been told it was impossible to budge one from a tree when in hibernation All are now in hibernation.

CONCHITAS by Tom L. Kister

A prized gourmet dish of Peru is Conchitas, or "little conchs". The "little conchs" turn out to be small pectens. The reason for being a favorite is at once apparant - the delicious flavor, accompanied by a pleasant appearance and a smooth texture. One way of preparing these two inch scallops is to boil in the shell with a small piece of bacon, similar to clams casino. Another method is au naturel - - like oysters on the half-shell with a slice of lemon. There are probably other good recipes for preparing this tender, tasty morsel; however, au naturel preserves the shell. In Peru the whole scallop is used, while we in the states throw away one half by only eating the muscle. Conchitas are shipped to inland areas in South America, but must be fresh for maximum quality. It is likely that all our Gulf Coast pectens are excellent fare, and could be as popular as Conchitas in Peru..

SOME INTERESTING BRACKISH WATER SPECIES NEW FOR TEXAS by H. Ode

Brackish water gastropods all the world over have been poorly studied. They are usually not treated by fresh water specialists and are mostly given the cold shoulder by those dealing with purely marine forms. Thus, for the amateur conchologist, a wide field of discovery is still left in the upper parts of the Texas Coastal bays whose shorelines cover a considerable distance.

In April of last year, Mrs. Boone and Mrs. Glass collected some interesting specimens of a small gastropod crawling in the mud of a small beach near the Houston Yacht Club. The place is rather dirty and polluted by civilization. In August, 1967, I visited the spot in the hopes to collect a number of these shells. However, after looking for half an hour, while being roasted by the sun, the best I could do was pick up a single dead shell of the species. A small container was filled with superficial beach-mud and debris. Even after washing and drying, this material did not look very promising but under the microscope it was a different story. A whole regiment of the little gastropods marched into sight, all shells being drab colored. They had dug in during the day to escape the sun.

There was still another surprise, a live specimen of a species about which so far I had entertained a completely erroneous idea. The clue to the true identities of both species is furnished in a paper by J. E. Morrison in Volume 78 of the Proceedings of the Biological Society of Washington (31 Dec. 1965, pages 217-224). In this paper four species are described from the Mississippi delta, three of which are of common occurence on the Texas Coast, indicating a wide distribution along the North and Northwestern shores of the Gulf of Mexico.

The species collected by Mrs. Boone and Mrs. Glass and myself alive near the Houston Yacht Club very closely resembles the newly described Odostomia barretti Morrison 1965. Perhaps not surprisingly this little shell is found sometimes in numbers in beachdrift near the passes on the Texas Coast. I am somewhat surprised by the allocation of these shells--said to have been made on the basis of shell characters--to the genus Odostomia and myself would have ventured a guess closer to Littoridina for them. Study of the anatomical details undoubtedly will give Morrison's allocation more certainty.

The 2nd species mentioned above has been named Odostomia weberi Morrison 1965. Shells of this little mollusk are usually present in beachdrift along the entire Texas Coast. On the basis of the record presented by the drift I had thought that the species was a truly marine one, but the finding of live specimens in upper Galveston Bay and the type locality, Barataria Bay, La., show it to be a truly brackish water species. Thus far I had tentatively connected these shells with the name Cyclodostomia didyma Bush 1895, described from sand samples taken in Bermuda. Here again the allocation of the species to the genus Odostomia needs further confirmation by a study of the anatomy of the weak parts of the animal.

Morrison's paper further has introduced a taxononic change. The name of the sometimes common little Probythinella shells has been changed. They are now placed in the newly erected genus Vioscalba and are given the specific name louisianae. Hence what in the past I have reported as Probythinella protera has become Vioscalba louisianae. The shells originally described by Pilsbry from the Pliocene of Florida are stated to be specifically different and constitute a different species of the genus Vioscalba. The Texas beach shells conform well with Morrison's description and resemble his figure perfectly. Live specimens have been collected by Dr. H. Harry in Cotton Lake (oral communication) in the Trinity River Delta of Upper Galveston Bay and beach drift specimens have been collected by me as far south as South Padre Island.

So far not seen in Galveston Bay is the 4th species described by Morrison: Mulinia pontchartrainensis Morrison 1965. Mrs. Boone and Mrs. Glass collected at the same spot a number of live Mulinias but as far as I can make out the species appears to be M. lateralis. It would appear probable however, that M. pontchartrainensis like the other deltaic species has a distribution wider than the Mississippi delta and Texas collectors should be on the lookout for it.

In the same sample mentioned above a few other species were present. First there were several dead Littoridina (Texadina) sphinctostoma and a few Assiminea c.f. succinea. None of this material was alive. The only other bivalve species collected was Macoma mitchelli. Thus it appears that quite a few constituents of the Louisiana brackish water fauna extend all the way down along the Texas Coast and it is to be expected that many of the Texas coastal bays harbor a rich fauna of brackish water Hydrobiids and Pyramidellids, in particular the bays along the eastern part of the Texas coast. An especially nice hunting ground--this is indicated by the sometimes large number of brackish water shells on Matagorda Beach--appears to be the bay system close to the mouth of the Colorado River. The bays there are probably less polluted than Galveston Bay because the area is less densely settled and industrial establishments are fewer.

BOOK REPORT by Dr. W. W. Sutow

MARINE SHELLS OF THE PACIFIC by Walter O. Cernohorsky
Pacific Publications. Sydney - 1967. 248 p. - - - $8.95

Cernohorsky well-known author, whose extensive descriptions of the molluscan fauna of Fiji have appeared particularly in many issues of VELIGER has recently published this book on shells of the Pacific Islands.

The first 38 pages of the book review general aspects of shell collecting, providing short sections on items such as the use of shells; early collectors, collections and expeditions; the shell and animal; collecting techniques; and, arranging a collection. Included are two useful chapters on unusual subjects; one on removal of the radulae and the other on photography of shells.

The main body of the book describes 440 species of seashells . A count of the number of species for each of the various families listed yielded the following figures: Conidae 30, Terebridae 62, Olividae 9, Cypraeidae 92, Triviidae 7, Ovulidae 9, Mitridae 150, Muricidae 47, Colubridae 2, Cymatiidae 18, and Bursidae 8. Concise but good descriptions are given for each species. The usual size limits are noted. The habitat and range of distribution of each species are indicated.

All the photographs are in black and white. The shells are clearly shown but perspective in relation to size is distorted. Pictures of the small shells are blown up and those of the larger shells are reduced. Only by reading the text can one estimate the actual size of the illustrated shell. Some important families such as the Trochidae and Strombidae as well as the whole class of Pelecypoda are omitted. While the section on Conidae is much abbreviated, the chapter on Mitridae is exceptionally complete. A good feature is the compilation of selected references for each of the families discussed.

The book is recommended as a useful addition to the literature dealing with the molluscan fauna of Indo-Pacific in general and the South Pacific in particular.

many others collected and cleaned by Carlos on his excursions around Sanibel Island netted our treasury $40.95 which amount added greatly to the lowly $39.44 now in our account at the bank. Carlos further added to the evening's enjoyment by giving us tips on shelling in Florida and teaching us the "Sanibel Drags". He claims the only way to shell around Sanibel is to shuffle along feeling your way with educated toes. Sometimes you find rocks, pieces of shells, etc., but most of the time beautiful specimens. Our thanks to the Admiral and his "aide" for a great and educational evening.

* * * * * * * * * * * * * * * * * *

Shells are needed now for the shell store and specimen shells will be priced higher than the ones sold last year. Old, new, specimens, crafts, bric-a-brac - anything you think someone slse may want or children love. Call or drop them by

Dorothy Kister - Southwest
5302 Stillbrooke
PA 3-2494

Jeane Dashiell - Northwest
130 Hickory Ridge
SU 1-2728

SHELLING TRIP by Elsie Shivers

January the 17th was a lovely, cool day--just right to go shelling. Constance Boone, Leola Glass and I went to Galveston. We hit Stewarts Beach first where we found Olivellas, Natica pusilla Say, and several species of Epitoniums in the drift. In the sand we found Oliva sayana Ravenel, Tellina iris, and Polinices duplicatus Say. Constance found a live Epitonium albidum at the jetties, and we picked some Siphonaria pectinata Linne off the rocks.

We didn't find much at 61st Street, but I did pick up a pair of dead Pandora trilineata Say. Finding the pickingspretty slim there, we went on to Offats Bayou, where we got some nice Nassarius vibex and some pairs of dead Laevicardium mortoni Conrad, and several Odostomia impressa Linne. Constance's was the find of the day as she picked up two nice pair of dead Cumingia tellenoides vanhyningi Rehder and live Trachycardium muricatum Linne. There were also Congeria leucopheata Conrad and Brachidontes recurvus Raf. to be had on the rocks in the water.

We stooped, walked and dug, and in the process separated the amateur from the veterans. By the next day I had what they laughingly informed me were known as the "Padre Island Bends". Lets go see if I can get them again - soon.

In September, 1968, the Congress of European Malacologists will be held in Vienna, Austria. The American Mal. Union has arranged three chartered flights to Vienna for those who wish to attend. Members of our group are eligible to participate. Detailed brochures will be available at our next meeting. Reservations will be closed on May 20.

ARE YOU AWARE t h a t by Dorothy Kister

to remove the tough membrane from the giant Escargot shell, it takes six months to grow and strengthen fingernails. Letter openers, knives, dental tools are of little use in removing the delicious meat from the above-mentioned shell. Upon finding the Escargot, the animal is removed by a simple motion of the hand, somewhat as a spatula is used around the sides of a bowl. Moon Valley is the location of these prize finds and plenty of empty shells are available just by following in the footsteps of the moon hunters, who leave the shells behind, carrying home the meat in coolers. For directions on how to reach Moon Valley contact:

Mr. Dick Tracy The Houston Post Houston, Texas

Texas CONCHOLOGIST

Volume IV, Number 8 April, 1968

NOTES & NEWS

April 24, 1968, 7:30 p.m., regular monthly meeting in the Southwest Service Center 4503 Beechnut. The program will feature on-the-scene taped interviews with the famed mollusk hunter, Ernie Libby, a former member of The Houston Conchology Group. The sound will be illustrated by color slides. Ernie will recount, in his unique style, the perils of the South Pacific safari to capture that elusive mollusk, the "aurak".

* * * * * * * * * * *

REPORT - March Meeting

Mrs. Anne Spears gave a brief discussion on the A.M.U. meeting to be held in Corpus Christi, Tex., in July. An additional $50.00 was voted on by the membership for this meeting.

John Edstrom would like to know the amount of space needed by those planning to exhibit their shells in next month's shell fair in Sharpstown.

Mrs. Constance Boone and Mrs. Leola Glass presented the program for the evening. Various aspects of collecting Unionids from Texas streams were discussed. Also, beautiful displays of freshwater bivalves were exhibited. Door prizes of the bivalves were given along with Florida shells presented by Admiral Carlos Cardeza.

REMEMBER - MAY 9 - 10 - 11, 1968. SHELL FAIR - SHARPSTOWN MALL

* * * * * * * * * * *

A LETTER TO THE EDITOR by W. W. Sutow, MD

While thinking about the museums I visited in Honolulu, I wondered if the readers may not desire a check-list of shell collections, readily accessible to the public for shell study of Gulf species. Editorialized descriptions about such collections may be most useful for many of our club members. Perhaps your staff can provide such a compilation in some future issue of the TEXAS CONCHOLOGIST???

Also, what do you think of a regular feature in the TEXAS CONCHOLOGIST that would furnish concise but meaningful descriptions of books, not otherwise reviewed, available in the library. Such a summary by someone interested in the book or the subject matter, may be more useful to club members then a mere listing of titles. One, two or three such short reviews can be published monthly. The new books obtained by the library will merit, of course, more extensive reviews.

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

Fam. Naticidae

Of this world wide family several species can be collected alive on the Texas beaches.

Natica canrena Linne 1758. Only rarely have specimens of this widespread offshore species reached the beach. It is probably more common in south Texas than at Galveston. According to ref. 17, common along the whole coast in mud in the outer shelf assemblage. One live and several very fresh specimens were collected at South Padre Isl. (Speers).

Figured in: 1, 3, 4, 5, 6, 17.
Previous references: 12, 17, 18.
Localities: Galveston (coll. Odé), Freeport (coll. Dexter), Mustang Isl. (Speers), and South Padre Isl. (Speers).

Polinices duplicatus Say 1822. The popular "moonshell" of the Texas beaches is often found alive both in the bays and on the outer beaches. There are two typical forms of this species, one with a flat coil (Gulf) and one with a more elevated spire (bay). Dead specimens often contain hermit crabs. Very large specimens can be found after storms near High Island. In the Galveston area this species appears to be more frequent than farther south. According to 17, common in silty sand, inlet assemblage and in prodelta slope assemblage.

Figured in: 1, 3, 4, 5, 6, 11, 17.
Previous references: 11, 12, 14, 15, 17, 19, 20, 22, 23, 24.
Localities: Abundant along entire Texas Coast.

Polinices hepaticus Roding 1798. Only a few shells of this very characteristic brownish natica (Pol. brunneus) have been collected in Texas. Live shells are known of the Port Aransas area and from Port Isabel (coll. Dexter). Dead shells have been picked up on Padre Isl. (coll. Speers).

Figured in: 1, 3.
Previous references: listed by Reed (see ref. 11).
Localities: Port Aransas, Padre Isl. and Port Isabel.

Tectonatica pusilla Say 1822. Dead shells of this species are quite common along the entire Texas Coast. Live specimens can be collected on the mudflats of Bolivar and San Luis Pass during low tide. The species also occurs alive around Port Aransas and Port Isabel near inlet areas.

Figured in: 1, 3, 4, 6, 11.
Previous references: 11, 12, 14, 15, 19, 20, 22, 23.
Localities: Common along entire Texas Coast.

Sinum perspectivum Say 1831. This species is quite common along the entire Texas Coast, where it lives in the sand in inlet areas. According to 17: "few in silty sand of inlet assemblage." It can be easily collected at Bolivar and San Luis Pass during very low tide. The species also lives on the outer beaches of Mustang and Padre Islands. The shell is much too small to contain the large white animal and is almost completely covered by the mantle.

Figured in: 1, 3, 4, 5, 6, 7, 11, 17.
Previous references: 11, 12, 14, 15, 17, 19, 20, 22.
Localities: Common along entire Texas Coast.

Sinum maculatum Say 1831. This species, which lives in much deeper water than the previous one, has only very rarely been found on the beaches of South Padre Island (coll. Speers, Boone). Also taken offshore by shrimpers.

Figured in: 3, 4, 6.
Previous references: None
Localities: South Padre Island.

Remarks: Several other species have been mentioned for Texas:
Polinices lactea Guilding 1833. Listed in 13, 22,

Polinices leptalea Watson 1880. Listed in 22.
Polinices tenuis Recluz 1850. Listed in 22.

RECOLLECTIONS OF A FABULOUS SHELLING TRIP IN 1938 . . . . by Helmer Ode

In 1936 I sent some shells collected on the southern beaches of the Netherlands to Dr. v. Regteren Altena. He was then busy writing his thesis, which concerned the study of fossil and recent marine shells of that country. In due course Altena sent me a copy of his labors and I was tickled to death to see my name in print for the first time. Also, I learned from that work the location of a spot, called "de Kaloot", particularly rich in pliocene fossil shells. It is a mudflat in the Schelde Estuary, located at the southwest corner of the Island of Zuid Beveland, close to Flushing.

The scouring of the tide has deepened the waters of the Schelde at some spots to such depths that Pliocene formations are eroded. Many of these formations outcrop in Belgium and England and many of the shells they contain have been described by such well known naturalists as Sowerby, Nyst and Westendorp. It was long known to Dutch shell collectors that unusual shells could be collected at various spots along the coast, but little systematic work had been done to establish the exact nature of this beach material until Altena did his careful analysis. Having some time on my hands I decided that a few days camping and shelling on the "Kaloot" was just the thing for me. Never shall I regret the time.

So one morning my bicycle packed with camping gear, carried me one hundred miles to the Kaloot. I was young and ambitious in those days, a freshmen at

Leyden, and the current fad tas to ride the bicycle and never to use public transportation. It would just not have been sporting! The day was beautiful, hardly any wind (important during a trip of 100 miles) and in the late afternoon I arrived full of pep at the place of destination, a big honest-to-goodness dutch dike. Beautiful well-kept farm country, loaded with crops stretched as far as the eye could see, with here and there a farmhouse; on the other side the estuary was spread out with a long spit of mudflats reaching out toward the west. At one spot a somewhat higher part of this spit clearly showed a rich accumulation of shells. Toward the south glittered deep water, carrying the traffic to Antwerp; still farther away to the south, from somewhere below the horizon, a big pure white cloud of steam was rising skyward from the Chemical Industry. It all looked beautiful. I decided then and there to camp at the foot of the dike at the seaward side. A small, but well kept farm house nearby, looked like the proper place to make some inquiries. Two old gentlemen in the typical local attire--shirts with silver buttons--and on wooden shoes, answeredmy summons, and were immensely tickled that someone would want to spend the night in a tent at the seaward side of the dike. However it was allright. Of course they were interested why I would do a foolish thing like that. Being young and not quite experienced with the ways of older folks, I must have missed the twinkles in their eyes. So I started full of pride to exhibit my knowledge. Talked about shells, fossils, tides, erosion, etc. At the end of my lecture I was quickly cut down to size. One of them asked innocently "I thought that even Eocene fossils could be found here". My face must have registered such amazement that they both burst out laughing. It turned out that they knew all about the rare shells and we became good friends. They promised to supply me with bread, fresh vegetables, eggs and water, which solved the grocer's problem.

After dinner they came out to inspect my quarters and were much intrigued by the down sleeping bag. However, they preferred their own beds. In our conversation I quickly discovered that they had seen far more of the world than I had, read more and understood quite well the nature of the unusual shells which often washed ashore near their home.

The next morning dawned bright and early. After a hearty breakfast first the somewhat higher spit of sand was inspected and in the next hour many a thrill of new discovery was experienced. One after the other the pliocene shells enumerated in Altena's thesis came into my hands. Especially the large Pectens were a sight to behold. Later I roamed the flats farther down and the wonders never ended, but the sand spit was apparently the place where most material had accumulated. It was unbelievable: beautiful, large, tropical shells on a dutch beach. Pecten maximus westendorpianus, Voluta lamberti, Standella rugosa. One still hinged specimen of Cardita chamaeformis with vivid colors, as if it lived the day before, I can still see before my mind's eye. Here I must have acquired the taste for crawling hours on end on my knees through the mud.

The weather was gorgeous: soft fall sunshine, a gentle breeze and then the view! Looking out between the almost invisible land into the North Sea, the setting sun right in front, I saw the big steamers coming and going to Antwerp and some smoke rising from distant points below the horizon. Overhead gulls and terns wheeled about in the breeze. In the evening several large bags of shells constituted the harvest of the day. When it became slowly dark the light of various lighthouses came and went at the horizon and the gliding ships presented a sparkling picture in the distance. I shall never forget this view enjoyed in a feeling of perfect contentment, lying in the soft lush grass high up on the dike.

During the night I awoke because the tent was flapping. When I secured the lines a few drops of rain came down, but little did I realize that all my collecting except for a few landsnails would be done forever at this marvelous spot. The morning

came gray and rainy. First I had to go to my friends over the dike to get some eggs, a loaf of bread and some water. As I had done often without a mishap, I put the eggs one in each pant pocket and carried the loaf and the water with my hands. Now it happened that on the way back to my tent, a colony of rather rare landsnails had chosen to come out in the open. Some of them had crawled up on some vegetation engaged in the same thing as I was: getting breakfast. This was one time I regretted to have a fast reaction. At the moment the shells were spotted I bent down and immediately on both my sides a soft crushing could be felt. Scrambled eggs à la poche!

Meanwhile the weather was deteriorating rapidly. Gusts of rain were now coming in over the water and where the previous day the sea had looked placid angry little waves showed. The glorious view had disappeared behind a gray curtain and only the somber hooting of buoys and ships, the occasional cry of a bird and the chatter of the waves could be heard. The latter did not sound encouraging and what was worse the water had risen to within 15 feet of my tent, while most of the flats were rapidly being covered by murky turbulent water. Reports from the weather station obtained from my friends over the dike mentioned a deepening depression, winds from the southwest (the worst direction), rain, etc. There was nothing else to do than to pack up and go home. Because of the rapidly rising tide, there was no time for cleaning up, other than to remove the contents of my pockets and to stuff them with old paper. The tent had to be taken down quickly.

I had by no means collected enough material to satisfy my curiousity about this wonderful place. While I stuffed by canvas bicycle bags with a soaking tent, the pots and pans and other gear the thought crossed my mind: "if instead of all this stuff I could take shells". Suddenly the rain, wind and wetness were forgotten and the pans snatched out of the bags. Wading through the water to the higher spit where I had on the previous day spent so many hours collecting shells, I filled pan after pan with shell rubble and dumped the contents directly in one of the bags. How small the bag seemed! Afterward, I guessed that there must have been at least 50 lbs. of rubble in it. The bag bulged out precariously but held, while water dripped through its bottom. After securing the pans somehow on the handlebars of the bike, and taking leave of my new friends I started home, clanging and clunking on the way. Many a surprised stare must have accompanied the crazy fool desparately trying to balance a very unequally loaded bicycle, with a kitchen outfit tied to the handlebars.

Half way home, after many hours in the rain, during which the thought: "is it really worth the trouble?" became more and more insistent--. I heard a ripping noise. The bag had started to come apart! Then--I confess--I chickened out, went to the ne t railway station--fortunately close by--tied securely my 50 lbs., more precious than gold, and traveled back in luxury. The train was full and hot, but a whole corner was my allotted share. Nobody dared to sit side by side with a soaking wet clamdigger which ever four hours of rain had failed to wash clean of mud and scrambled eggs, and a stinking bag oozing a murky dark water.

The deep sea harbors many unusual forms of life. Some forms which were thought to be extinct have been brought up from great depths. Examples are the coelacanth fish, Latimeria, the Sea lily, Rhizocrinus, and the archaic mollusc Neopilinia, which is neither a clam nor snail, and which is classified in a sixth class, the Monoplacephora. Also, the little squid, Spirula, whose shells are quite common on Texas beaches, and the black "squid" Vampiretheutis are living fossils. Figures and discussions of these can be found in Vol. II, No. 3 of "Sea Frontiers".

MOLLUSCANA by W. W. Sutow, M.D.

Rongelap, Marshall Islands. March 3, 1968.

We returned from a most successful "aurak" hunt a few hours ago. Successful but tough. I still feel rocky - and my body aches from bruises as I record these field notes. The notes will serve as a preface to the report to be given to the Conchology Group regarding our search for the elusive aurak or the Strombus taurus.

The Rongelap lagoon this year was rough - rougher than it has been for the past ten years, the natives said. The day was bleak - the wind strong - and threatening clouds were piled up on all sides. We started out nonetheless for Eniaetok. Several time before, I had negotiated the distance to Eniaetok, the "long island". The first two of them, years ago, had been by two-man outrigger canoe and sail. I sat six or nine inches above the water as my friend John had maneuvered the canoe skillfully. It had taken about four hours then - and my life preserver had been the coconut belt. This year we used Josi's twin outboard motor job - we made Eniaetok in 23 minutes. But that was only the beginning.

The aurak experts decided that the richest hunting grounds lay three islands further out. I had never been beyond Eniaetok so I was totally unprepared when we roared past the long island. We smashed into truly rough water and big waves. The islets here were too small to offer any protection from the wind action on the water. I was too busy ducking spray and hanging on to feel any seasickness from the bouncing we were taking. We finally made it to our destination some 20 minutes beyond Eniaetok.

The boat was anchored - and there, in water as shallow as armpit depth at low tide, the creatures were found. We had indeed come to the home of the Strombus taurus!

How we collected the specimens over the four hours we spent there, how these animals live, the nature of the home environment - these have been photographically documented. In addition, the verbal description of our activities have been taped by the inimitable Ernie Libby. The slides and sound will be presented to the members of our Conchology Group at the first opportunity.

* * * * * * * * * *

Talking about Ernie, our former member seems to have infected the inhabitants of the whole island of Saipan with his highly contagious enthusiasm for shell collecting. It seems rather definite that Ernie and his family will be spending a part of their home leave here in Houston this coming August. If an opportunity can be arranged, Ernie has promised to provide us with a first hand report on shelling on Saipan. That would be a treat indeed.

* * * * * * * * * *

During our many bull sessions this year with the native people on Marshall Islands, I inquired about the use of "squid hooks" for catching octopus. To my great surprise, the Marshallese professed ignorance of this contraption that impressed me in Hawaii. In the Marshalls, the fishermen spear the cephalopods. Incidentally, if you ever intend to hunt these wily octopus Marshall Island style, be sure to go after them immediately following a thunderstorm. Sebio, my Marshallese informant and a veteran fisherman, says that the octopus always comes out of its lair and can be found sitting outside its usual hiding place after such storms.

SOUTH PADRE ISLAND SHELL FAIR REPORT by Constance Boone

A gold ribbon should be given tothe members of the South Padre Island Shell Club for persevering and going on with the annual shell fair. Hurricane Beulah left the pavillion in a sad state, and the fair had to be held in the cabanas. Floods after the hurricane and this whole winter have hurt shelling and hampered building repairs. But the show went on; the weather finally cooperated on Saturday and Sunday for exhibitors and visitors. Anyone who saw Betty Allen shivering and chattering on Friday before the fair as she met incoming exhibitors dismayed with the strong north winds whistling through the cabanas will remember this fair with kind thoughts for those dedicated South Padre Islanders!

Judges were Dr. Harald Rehder, head of the Department of Mollusks of Smithsonian Institution; Howard Lee of the Texas Game and Fish Department in Austin; and Carl Young, Corpus Christi High School math teacher and president of the Coastal Bend Shell Club.

The following awards will be of interest to Houston club members:

Mrs. Betty Allen, Philadelphia Academy Award for her exhibit on the "Evolution of a Shell Collector." Mrs. Allen is one of our subscribers.

Mrs. Audrey Holiman, Edinburg, sweepstakes winner for most blue ribbons and winner of a silver tray in a division. Mrs. Holiman is a new subscriber.

Mrs. Nawona Gary, San Marcos, Hall of Fame winner for her tree snail exhibit.

Mrs. Constance Boone, winner of the Anne Speer's Trophy for the best exhibit on work on shells of the Texas Coast. This exhibit featured the work of Dr. Helmer Odé and Mrs. Anne Speers in our Texas Conchologist and included some of the work done by the exhibitor. This exhibit received a blue ribbon and a silver tray in the educational division. Mrs. Boone also won a blue ribbon for her exhibit on self-collected fresh water mussels.

Mrs. Leola Glass, second place winner in the beachcomber's division. Mrs. Glass' theme was "How to Survive on the Beach by Beachcombing". Her display featured everything from false teeth to fresh cabbage and a turtle, plus wearing apparel and housing equipment.

Mrs. Mildred Tate, second place winner in the advanced exhibitor's division, with deep water Texas shells as the theme.

* * * * * * * * * * * *

Twelve Turbonilla abrupta Bush, 1899, were collected alive from trails on the flats at very low tide on February 10, 1968, by Mrs. Constance Boone, at Galveston ship channel. These Turbonillas are about 4 mm. in length, are milky white, and have deep sutures. The animal shows through pinkish when the shells are taken alive, and the operculum is pale pink.

* * * * * * * * * * * *

Shells collected during the South Padre Island Shell Fair by Houstonians were not very numerous. Recent floods have destroyed many mollusks in the formerly productive bay areas, but there are still some species living. Paul McGee was busy filling a garbage can with specimens to take back for the Oceanographic Center of the Houston Public School System. He had a live Fasciolaria hunteria, some Turbonillas and an Echinoderm from the jetties, and dug a Cyrtopleura costata and collected Neritina virgineas in the bay. Mildred Tate, Constance Boone, and Leola and Berkeley Glass were there a week. Collected alive were Nerita fulgurans, Littorina anguliferas, Littorina nebulosas, and hundreds of beautiful Pedipes

mirabilis (in colonies under channel rocks). Constance Boone got one live Smaragdia viridis.

The library committee is pleased to report the gift of a collection of reprints, many of them early Dall publications for our growing library. The reprints include materials on Pacific and Atlantic marine shells, and some of the publications are on land and fresh water shells. This spurs the committee to start a serious system of cataloging, and money has been made available for necessary materials.

Efforts are continuing to enlarge exchange papers in the library. Four years of the New York Shell Club Notes has just been received.

* * * * * * * * * * * * *

CORPUS CHRISTI SHELL SHOW REPORT by Constance Boone

Mrs. Mildred Tate of Lake Jackson, one of our own members, won the Shell of the Show (with her Umbraculum you saw last spring at one of our meetings) at the annual shell fair of the Coastal Bend Shell Club. The event was held in the new Corpus Christi Museum on March 9 and 10, with Dr. Helmer Odé presiding as senior judge. The Philadelphia Academy Award was presented to Dr. George Metz for his outstanding exhibit of self-collected shells from Alaska. Mrs. Rubye Womack of Ferriday, La., won the tricolor award for her rare world-wide shells. Mr. and Mrs. Scotty Clayton received the sweepstakes award for getting the most blue ribbons. Mrs. Hollis Q. Boone won a blue ribbon on an exhibit of color variations in self-collected Strombus Pugilis alatus.

The show reflected the growing interest in marine biology. One wall was filled with shells cataloged by the Corpus Christi students of marine biology. Students also had aquariums. Exhibits are telling more of the story of collecting, and exhibitors are spending more time on displaying themes and giving more information.

The Corpus Christi Club is assisting in preparing the new Marine Wing of the Museum which will be open this summer. Carl Young, president of the Coastal Bend Club, is acting as curator of shells for the museum.

* * * * * * * * * * *

On three occasions and in three different seasons Mrs. Constance Boone has collected two recently named Odostomias alive on the mud flats on Galveston Bay near the Houston Yacht Club. Mrs. Leola Glass introduced Mrs. Boone to this area. In April, 1967, many of the Odostomia weberi Morrison 1965 were collected alive in tiny spidery trails in the red mud near high tide line. These Odostomias are rather glistening and pinkish when alive and have operculums that seem pale pink when the animal is still living. During the summer Dr. Helmer Odé made a trip to this beach to collect some of these Odostomias but did not go to the far end where they were found in trails. However, he collected some in the drift and came up with another shell he got alive but not in a trail. Helping to answer what the two shells were (because we did not know in April we had Odostomia weberi!), he discovered Morrison's paper of December, 1965, describing the two Odostomias from Louisiana. The second Odostomia was Morrison's Odostomia barretti, not yet recorded as having been found in Texas. On September 12, 1967, Mrs. Glass and Mrs. Boone made another trip to the beach on a low tide and found both Odostomias in trails at the high tide line. Odostomias are not described as traveling in trails, so it was again interesting to discover them in this manner. In February of 1968 I made another trip to this beach on a low tide and again both species were collected in trails. Specimens preserved in alcohol were sent to the Smithsonian in September, 1967, since this may help extend the range of these Odostomias, and Morrison's work was done with dead specimens.

Texas CONCHOLOGIST

Volume IV, Number 9 May 1968

NOTES & NEWS

May 22, 1968, regular monthly meeting to be held at 7:30 p.m. in the Southwest Service Center, 4503 Beechnut. Dr. Helmer Odé will surprise us with something!!!!!

* *

More plans were discussed on the Shell Show. George Major, a friend of the Sutow family and also a member of our Club donated 100 pair of earrings to be sold at the Show.

A letter from the AMU gave a resume of events planned for the Convention. A flier will come out in May asking how many are planning to come. Connie Boone reported briefly on plans for the Barbecue.. Fern Heinke showed ID tags to be worn at the meeting by members. Mrs. Dexter showed "Texas Bills" that will be used for the BBQ favors.

Dorothy Kister was thanked for four years of hard work as Asst. Editor. She now needs more shelling time.

Dr. Sutow presented a program of slides and tape from Rongelap, Marshall Islands and Ernie Libby, where the elusive Aurak was hunted down and brought back alive.

*** * * * * * * * * * * * * * * * * * * *

The Gulf Coast Shell Club will have its Sixth Annual Shell Show on June 8 and 9 at Holiday Inn on Eleventh Street in Beaumont. You do not have to be a member of this shell club to enter this show. Shell show categories and rules are available upon request by writing Mrs. J. B Bishop, Jr., 1760 Wexford Dr., Vidor, Texas, 77662. Even if you do not enter, Houston members will find this display of shells very interesting and informative. Dr. W. W. Sutow has been asked to judge the show.

* * * * * * * DUES ARE DUE AT THE MAY MEETING * * * *

DORIS ODOM'S CLAM FRITTER RECIPE

One egg
One teaspoon salt
One-fourth cup milk
One cup flour
One teaspoon baking powder
One cup ground raw clams

Drop by teaspoons into deep fat. Watch mouths begin to water as the puffy, crisp fritters develop. Doris says they never reach the table at her house; the kids wait for each batch to be ready.

Incidentally, clamming in Texas waters is a little bit harder than for those Easterners used to this recipe. Wyatt Odom and Harold Geis dig them in polluted Offats Bayou and replant them in cleaner waters down Galveston bay. After they have had a chance to cleanse themselves, (the clams, that is!) they are redug for use. Harold's speciality is clam chowder, with which he keeps on enticing workers to continue work for Sunday sessions on the Survey of the Mollusks of the Gulf waters he is conducting.

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR
Helmer Ode' - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas

ASSOCIATE EDITOR
Dorothy Kister - PA 3-2494
5302 Stillbrooke
Houston, Texas

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING and CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

At the conclusion of Volume IV, we will instead of proceeding with out list, reprint the first 36 references for the benefit of those who did not subscribe to our earlier Volumes. A few words may be said also about the progress made. So far, about 60 families containing slightly over 200 species have been treated. This means that we are not yet halfway as there are still about 50 families with about 240 species to go. The treatment of some of these will have to be postponed for some time until critical comparisons of the material with type specimens can be made. In others there are some taxonomic difficulties to be straightened out. However, we shall proceed in our next Volume with those families which in our opinion are reasonably clear cut. Updating of previously treated groups as was promised earlier is in our opinion less important than to give a survey of as yet untreated groups. For many families updating practically means a complete rewriting of the previous text, because several species have to be added to our list any many new localities for dead and living shells were discovered. In particular, the remarks in which a brief statement concerning offshore species is given are completely insufficient now recent investigations have shown a rich and varied offshore fauna. However, they may serve the purpose of acquainting the reader wich some species reported in the literature.

REFERENCES

1. Abbott, R. T. (1955) American Seashells, D. Van Nostrand Co., Inc., 541 p.

2. McLean, R. A. (1951) Scientific Survey of Puerto Rico and the Virgin Islands, Vol. 17, Part 1. "The Pelecypods or Bivalve Mollusks of Puerto Rico and the Virgin Islands", New York Academy of Science, 183 p.

3. Warmke, G. L. & Abbott, R. T. (1961) Caribbean Seashells, Livingston Publ. Co., 346 p.

4. Perry, L. M. & Schwengel, J. S. (1955) Marine Shells of the Western Coast of Florida, Paleontological Research Inst., Ithaca, New York, 318 p.

5. Morris, P. A. (1956) A Field Guide to the Shells of the Atlantic and Gulf Coasts, Houghton Mufflin Co., Boston, 236 p.

FOUR AMERICAN HASTULA SPECIES

Joseph P. E. Morrison, U. S. National Museum

Genus HASTULA H. & A. Adams 1853

(Genera Recent Mollusks, Vol. 1, p. 225)

Type species: Terebra strigillata Linnaeus, by subsequent designation by Cossmann Essais de Paleoconch. Comp., vol. 2, p. 53, 1896.

The genus Hastula includes species of Terebridae that live in the intertidal surf-zone of sandy beaches and that burrow under the sand every time a wave washes them out, just as do the Coquina clams (Donax). The four known American species of Hastula are different in details of shell sculpture, radular teeth, and geographic distribution.

HASTULA LUCTUOSA Hinds 1844

figures L

1844. Terebra luctuosa Hinds, Proc. Zool. Soc. London 1843, p. 157
1844. Terebra luctuosa Hinds, Thesaurus Conch., p. 181, pl. 45, fig. 121.
1885. Terebra luctuosa Tryon, Man. Conch., vol. 7, p. 32, pl. 10, fig. 83.
1958. Hastula luctuosa Keen, Sea Shells Trop. W. Amer., p. 494, fig. 981.
1968. Hastula luctuosa Morrison, A.M.U. Report 1967, p. 49.

The microsculpture of this eastern Pacific species includes crowded rows of spiral punctae. The radular teeth (hypodermic needles) are typical of those known for the genus; they are about 0.630 mm in length. It is recorded in the USNM collections only from Cape San Lucas, Baja California; Mazatlan, Acapulco, and Tehuantepec, Mexico; Panama, and San Jose, Pearl Islands, Panama. Such scattered locality records indicate a lack of full collection rather than limited occurrence. Both light and dark color forms of this species living together on San Jose Island, Panama, are darker than the western Atlantic cinerea.

HASTULA MARYLEEAE R. D. Burch 1965

figures M

1965. Hastula maryleeae R. D. Burch, Veliger, vol. 7, p. 242, pl. 31, fig. 4.
1967. Terebra (maryleeae) Odé & Speers, Texas Conch., vol. 3, no. 8.
1968. Hastula maryleeae Morrison, A.M.U. Report 1967, p. 49.

There are micro-spiral striations on the shell of this species, but the spiral rows of pits or punctae typical of most Hastula species are completely lacking in maryleeae. The color of these shells is so extremely variable that very dark purplish shells may be living in the same population with others that are almost completely ivory-white. The radular teeth (hypodermic needles) of maryleeae are very minute, measuring about 0.153 mm long.

Hastula maryleeae was collected more than a century ago by Berlandier in Texas and by Sallé in Vera Cruz, even though it was not recognized as a distinct species until after 1960. It is now known to be living from Galveston Island, Texas, southward all the way to Playa El Morro, south of Vera Cruz City; from Mujeres Island, Quintana Roo, Mexico; and from the east coast of British Honduras.

HASTULA SALLEANA Deshayes 1859

figures S

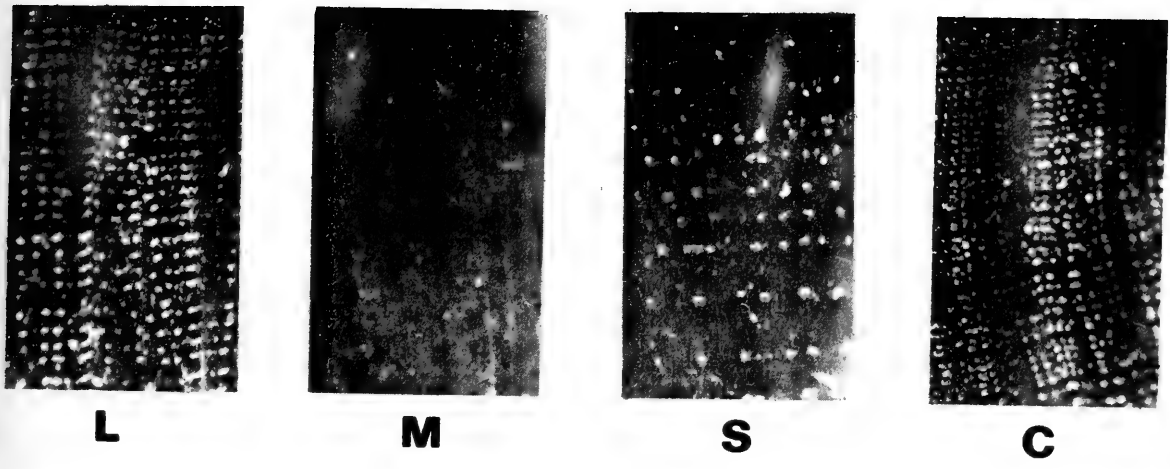
1859. Terebra salleana Deshayes, Proc. Zool. Soc. London 1859, p. 287.
1860. Terebra salleana Reeve, Conch. Icon. XII, pl. 24, sp. 129.
1885. Terebra (cinerea) salleana Tryon, Man. Conch., vol. 7, p. 31, pl. 10, fig. 78.
1893. Terebra cinerea Singley, 4th Ann. Report Geol. Surv. Texas, p. 332.
1952. Terebra cinerea Pulley, Texas Journ. Sci. 1952, p. 177, pl. 3, fig. 10.
1954. Terebra salleana Abbott, Amer. Sea Shells, p. 267.
1960. Terebra cinerea Parker, Am. Assn. Petr. Geol., Rec. Sed., p. 320, pl. 4, fig. 5.
1961. Terebra salleana Moore, Gulf Res. Reports, vol. 1, p. 31.
1961. Terebra salleana Warmke & Abbott, Carib. Sea Shells, p. 133.
1967. Terebra (salleana) Odé & Speers, Texas Conch., vol. 3, no. 8.
1968. Hastula salleana Morrison, A.M.U. Report 1967, p. 49.

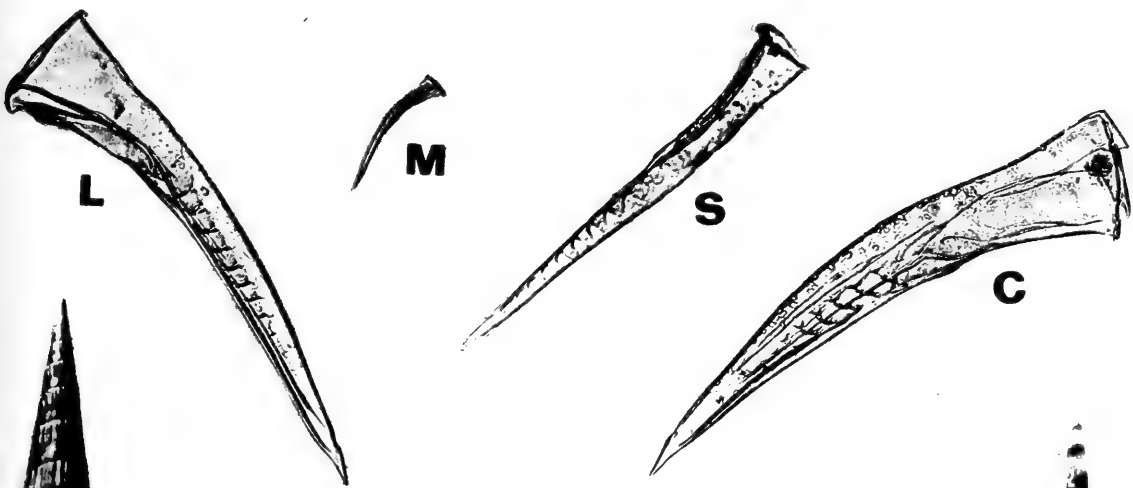
This Gulf of Mexico species differs from the West Indian cinerea in microscopic shell sculpture; the spiral lines of punctae of salleana are much more widely spaced than are those on the shells of cinerea. All early records of cinerea from the Gulf by Singley and others should be accepted as records for salleana if the microscopic sculpture does not prove otherwise. The elongate conical (hypodermic needle) radular teeth of salleana, measuring approximately 0.472 mm in length, are apparently a little smaller than those of cinerea. The slightly smaller size of the radular teeth examined, in more or less direct proportion to the size of the shells concerned, may not be of any appreciable significance.

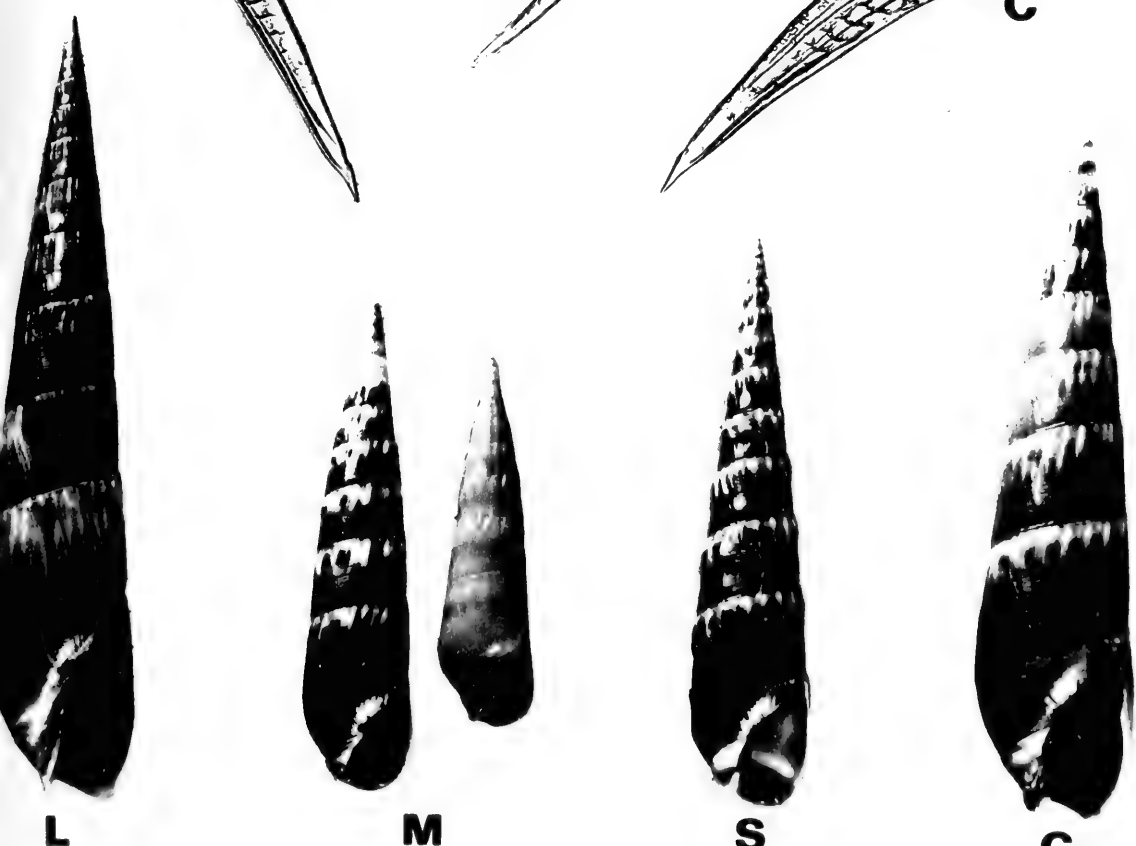
Hastula salleana is recorded only from Gulf of Mexico shores to date. It has been found living from Mexico Beach, Bay Co., Florida, west across Alabama and the barrier islands of Mississippi to Chanaleur Island, Louisiana; from Cameron Parish, Louisiana, along the Texas coast and southward to Vera Cruz City, Mexico. The sandy beaches along the south shore of the Gulf of Mexico in southern Vera Cruz, Tabasco, Campeche, and Yucatan States, have not yet been searched for populations of Hastula. In nearly every collection of Hastula from the Texas coast and from Vera Cruz, the two species salleana and maryleeae have been found living together. Even if only two specimens are concerned, they can always be separated by the difference of the spiral microscopic sculpture of the two species.

Plate I. Shell sculpture; radular teeth; shells

Figures L. Hastula luctuosa Hinds 1844. Eastern Pacific
Figures M. Hastula maryleeae R. D. Burch 1965. Texas and Mexico
Figures S. Hastula salleana Deshayes 1859. Gulf of Mexico
Figures C. Hastula cinerea Born 1778. Florida; W. Indies to Brazil


L
M
S
C


L
M
S
C


L
M
S
C

HASTULA CINEREA Born 1778

figures C

1685. -------- -------- Lister, pl. 979, fig. 37. "Barbados"
1778. Buccinum cinereum Born, Index Mus. Caes. Vind., p. 262.
1780. Buccinum cinereum Born, Test. Mus. Caes. Vind., p. 267, pl. 10, figs. 11-12.
1822. Terebra aciculina Lamarck, Anim. sans Vert., vol. 7, p. 290.
1838. Terebra aciculina Kiener, Coq. Viv., vol. 1, p. 18, pl. 6, figs. 13-13b.
1844. Terebra fatua Hinds, Proc. Zool. Soc. London, 1844, p.150.
1844. Terebra fatua Hinds, Sowerby's Thesaurus, p. 158, pl. 42, fig. 28.
1845. Terebra cinerea Orbigny, Sagra's Cuba, vol. 2, p. 152.
1850. Terebra jamaicensis C. B. Adams, Contr. to Conch., no. 4, p. 58.
1857. Terebra jamaicensis Deshayes, Journ de Conch., v. 6, p. 80, pl. 5, fig. 9.
1865. Terebra jamaicensis Troschel, Geb der Schneck, v. 2, p. 32, pl. 2, figs. 10.
1885. Terebra jamaicensis Tryon, Man. Conch., vol. 7, p. 31, pl. 9, fig. 58.
1937. Terebra (Hastula) cinerea M. Smith, E. Coast Marine Shells, p. 133, pl 51, fig. 2
1950. Terebra jamaicensis Clench & Turner, Occ. Pap. Dept. Moll., M.C.Z., vol. 1 no, 15, p. 297, pl. 38, fig. 22.
1954. Terebra cinerea Abbott, American Sea Shells, p. 266, pl. 26g.
1960. Hastula cinerea Marcus & Marcus, Bol. Fac. Fil. Cien. Letr. Univ. S. Paulo N. 260, Zool. No. 23, pp. 25-66, 5 t.
1961. Terebra cinerea Warmke & Abbott, Caribbean Shells, p. 133, pl. 25b..
1968. Hastula cinerea Morrison, A.M.U. Report 1967, p. 49.

For many years all Western Atlantic Hastula were lumped under the name of cinerea because the specific characters of the group were not completely understood. Now we know that this species lives only on the East Coast of Florida, from Talbot Island, Duval County, southward; on the shores of the Bahamas, Cuba, Jamaica, Hispaniola, Puerto Rico, St. Thomas, St. Croix, St. Kitts, Nevis, Guadeloupe, Dominica, Barbados, Grenada, Tobago and Trinidad Islands; and on the continental shores from Wounta Haulover, Nicaragua, southward to Devils Beach, near Colon, Panama; Cartagena, Colombia; and eastward on Brazilian shores between Goyanna, Pernambuco, and Itanhaem Beach, 60 miles south of Santos, Sao Paulo.

One original specimen of Terebra jamaicensis, USNM No. 6597, was sent to Wm. Stimpson by C. B. Adams. This paratype, the only such known original, which should be considered the lectotype, agrees with all other cinerea in microscopic sculpture, almost identical to that of the Eastern Pacific species luctuosa. The apiral rows of punctae on the shell surface may be so crowded that they produce a velvety appearance under lower magnification. The long-conical (hypodermic needle) radular teeth of cinerea (first figured by Troschel) measure about 0.620 mm in length. The excellent ecological and morphological studies by the Drs. Marcus have shown that H. cinerea paralyzes with its poison teeth, and then swallows whole small Polychaete worms of the families Spionidae and Opheliidae.

Odé & Speers (Texas Conchologist, vol. 3, no. 8, 1967) considered all Texas Hastula as one species because they did not realize that the non-specific variations of color masked two biological species that may live together in the same sands. In nearly every collection of Hastula from the Texas coast and Vera Cruz maryleeae and salleana were found living together. They are not in direct competition; since the hypodermic needle teeth of maryleeae are only about one-fourth the size of those of salleana, we assume they are predators on different food animals.

6. Smith, M. (1951) East Coast Marine Shells, Edward Brothers, Inc., 314 p.

7. Olsson, A. A. & Harbison, A. (1953) Pliocene Mollusks of Southern Florida, Monograph 8, The Academy of Natural Science of Philadelphia, 438 p.

8. Abbott, R. T. (1958) The Marine Mollusks of Grand Cayman Island, British West Indies, Monograph 11, The Academy of Natural Science of Philadelphia, 138 p.

9. Richards, H. G. (1962) Studies on the Marine Pleistocene, Part I & II, Transactions of American Philosophical Society, New Series, Vol. 5, Part 3, 141 p.

10. Olsson, A. A. & McGinty, T. L. (1958) Recent Marine Mollusks from the Caribbean Coast of Panama, Bulletin of American Paleontology, 39, No. 177, Paleon. Research Inst., N. Y.

11. Pulley, T. E. (1952) Illustrated Checklist of Marine Mollusks of Texas, Texas Journal of Science, 4, 167-199.

12. Hulings, N. C. (1953) An Investigation of the Benthic Invertebrate Fauna from the Shallow Waters of the Texas Coast. Masters thesis, T.C.U.

13. Johnson, C. W. (1934) List of Marine Mollusca of the Atlantic Coast from Labrador to Texas, Proceedings of the Boston Society of Natural History, Vol. 40, No. 1., 204 p.

14. Parker, R. H. (1950) Macro Invertebrate Assemblages of Central Texas Coastal Bays and Laguna Madre, Bulletin of American Association of Petroleum Geologists, Vol. 43, 2100-66.

15. Ladd, H. (1951) Brackish Water & Marine Assemblages of the Texas Coast, Publication of the Institute of Marine Science, 2, (1), 125-163.

16. Whitten, H. L. Rosene, H. F., & Hedgepeth, J. W. (1950) The Invertebrate Fauna of Texas Coast Jetties; A Preliminary Survey, Publication of the Institute of Marine Science, 1, (2), 52-87.

17. Parker, R. H. (1960) Ecology and Distributional Patterns of Marine Macro-Invertebrates, Northern Gulf of Mexico, in Recent Sediments, Northwest Gulf of Mexico, American Association of Petroleum Geologists, Tulsa, 302-337.

18. Parker, R. H. & Curray, J. R. (1956) Fauna and Bathymetry of Banks of Continental Shelf, Northwest Gulf of Mexico. Bulletin American Assoc. of Petroleum Geol., 40, 2428-2439.

19. Rice, W. H. (1960) A Preliminary Checklist of the Mollusca of Texas, Inst. of Marine Science, Port Aransas, Tex.

20. Parker, R. H. (1955) Changes in the Invertebrate Fauna, Apparently Attributable to Salinity Changes in the Bays of Central Texas, Journal Paleontology, 29, 193-211.

21. Clench, et al (1942) to date) Johnsonia, Monographs of the Marine Mollusks of the Western Atlantic, Vol. 1 thru IV, Dept. of Mollusks, Museum of Comparative Zoology, Harvard University, Cambridge, Mass.

22. Dall, W. H. (1889) A Preliminary Catalog of Shell-Bearing Mollusks & Brachiopods of the Southeastern Coast of the United States, Smithsonian Institute, U. S. National Museum Bulletin, No. 37, 221 p.

23. Moore, D. (1958) Additions to Texas Marine Mollusca, Nautilus, 71:4, p. 124-128.

24. Richards, H. G. (1939) Marine Pleistocene of Texas, Bulletin Geol. Soc. Amer., 50, 1885-98.

25. DuBar, J. R. & Clopine, G. (1961) Late Pleistocene Deposits in the Vicinity of Houston, Tex., A Preliminary Investigation, Trans. Gulf Coast Assoc. Geol. Soc., Vol. 11, 83-108. (Most of the molluscan data in this paper appear to be based on: Deussen, A. (1924), "Geology of the Coastal Plain of Texas, West of the Brazos River", U. S. G. S. Prol. Paper 126, 139 p). Not included in our listing is the following paper which contains an enumeration of Galveston well material with many interesting species (obsolete nomenclature): Singley, J. A. (1893), Preliminary Report on the Artesian Wells of the Gulf Coastal Slope, Geol. Survey of Texas, 4th Annual Report 1892, p. 85-119.

26. Hildebrand, H. H. (1954) A Study of the Fauna of the Brown Shrimp Grounds in the Western Gulf of Mexico, Publication of the Institute of Marine Science, Vol. 3, (2), 231-366.

27. Breuer, E. G. (1957) An Ecological Survey of the Baffin and Alazan Bays, Texas, Publication of the Institute of Marine Science, Vol. 4, 134-155.

28. Simmons, E. G. (1957) Ecological Survey of the Upper Laguna Madre of Tex., Publication of the Institute of Marine Science, Vol. 4, 156-200.

29. Springer, S. and H. R. Bullis (1956), "Collections by the 'Oregon' in the Gulf of Mexico", U. S. Dept. Int. Fish and Wildlife Service Special Report, Fisheries No. 196, Washington, D. C., p.1-34.

30. Gunter, G. (1950), "Seasonal Population Charges of Certain Invertebrates of the Texas Coast, Including the Commercial Shrimp", Publication of the Institute of Marine Science, 1, (2), 7-52.

31. Coomans, H. E. (1958). A Survey of the Littoral Gastropoda of the Netherlands, Antilles and other Caribbean Islands in: Studies on the Fauna of Curacao and other Caribbean Islands, Vol. 8, 42-111.

32. Voss, N. A. (1959). Studies on the Pulmonate Gastropod Siphonaria Pectinata (Linnaeus) from the Southern Coast of Florida. Bull. Mar. Sci. Gulf and Caribbean, Vol. 9, 84-89

33. Moore, D. R. (1962). The Systematic Position of the Family Caecidae., Bull. Mar. Sci. Gulf and Caribbean, Vol. 12, 695-701.

34. Rusnak, G. A. (1960). Sediments of Laguna Madre in: Recent Sediments, Northwest Gulf of Mexico, Amer. Assoc. Petr. Geol., Tulsa, 153-196.

35. Hedgpeth, J. (1950). Notes on the Marine Invertebrate Fauna of Salt Flat Areas in Aransas National Wildlife Refuge, Texas. Publ. Inst. Mar. Sci., Vol. 1, (2), 103-109.

36. Olsson, A. A. (1956). Studies on the Genus Olivella. Proc. Acad. Nat. Sci., Phila., Vol. 108, 155-225.

Texas CONCHOLOGIST

Volume V, Number 1 August, 1968

NOTES & NEWS

NEXT MEETING: Our next meeting will be held at the usual place, Beechnut Street, on Wednesday, August 28th, beginning at 7:30 p.m. The program will be presented by Dr. Odé on Papers presented at the AMU Meeting, by Dr. Sutow on Impressions of the AMU Meeting, and Mrs. Boone on the Barbecue dinner arranged by our Club. Mr. Dexter will have slides on Sea Life that will be very interesting to both experienced and new shellers.

****

Helene Fennesey, our Secretary-Treasurer, and her two girls left August 1st for Bangkok where they will be living for some time. Dues should no longer be sent to her but to Mrs. Connie Boone, 3706 Rice Blvd., 77005, Houston, Texas. Dues are $2.00 for Subscription Members and $1.00 per year for Members of the Outdoor Nature Club. Since the cost of the Conchologist has gone up, issues will not be mailed to Members whose money is not received by Oct. 1st.

The E. L. Libbys were here during the month of June. His eye surgery was very successful. We hope their next visit will allow them to spend more time with us.

Margie and Wilbur Woods visited and shelled in the Bahamas and Bimini and returned with many fine specimens, including a Rooster-tail Conch.

Jean Dashiell, our Program Chairman, requests the Members who have displays that they would be willing to bring and display at each meeting. Contact her so that she can schedule them. PLEASE VOLUNTEER SO THAT SHE DOESN'T HAVE TO PHONE EVERYONE.
Those of you who picked up more shells than you want to keep, please bring them to meetings to be put in the Shell Store next Spring. We are already packaging them.

****

DUES SHOULD BE PAID AS SOON AS POSSIBLE

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode' Mrs. Anne B. Speers

Family Strombidae

Of this widespread tropical family of gastropods only one species is regularly found on Texas beaches.

Strombus pugilis alatus Gmelin 1790. Offshore dredging has shown that populations of this species are common in relatively shallow water. Beach specimens in the Galveston-Freeport area of the Texas coast are almost always old, discolored and fragmentary. Fresh beach material and rare live specimens are known from Padre Island.

Figured in: 1, 3, 4, 5, 6, 11, 17, 21.
Previous references: 11, 12, 17, 19, 20, 22, 26, 29.
Localities: All Texas Beaches.

Remarks: Although S. raninus and S. costatus have been listed for offshore waters, it is unlikely that these species at the present live off the Texas Coast. Live Strombus gigas has been obtained from the coral reefs off Galveston (see Tex. Conchol. Vol. IV (6), p. 246-48).

Family Anomiidae

A family of rather nondescript irregularly formed bivalves of sessile habit. Their most remarkable feature is the growth history of the right valve. Juveniles are free swimming but soon a notch appears in the margin of the right valve which then grows around the byssus, by which the animal, as an adult,

is attached to its substrate. In Texas two genera, Anomia and Pododesmus, each with a single species.

Anomia simplex Orbigny 1845. This is the common jingle shell of the Texas beach. Sometimes found alive on bay oysters. Offshore it is one of the most widespread bivalves on the muddy shelf.

Figured in: 1, 2, 3, 4, 5, 6, 11, 17,
Previous references: 11, 12, 14, 15, 16, 17, 18, 19, 20, 22, 24, 51,
Localities: Common along the entire Texas Coast.

Pododesmus rudis Broderip 1834. Until recently this species was in Texas only known from dredged material but now a live specimen is known from the jetty at Port Isabel (coll. Young) and a dead valve was collected at Sabine Beach (coll. Odé). Pododesmus differs from Anomia by the outer sculpture of the shell and its muscular impression.

Figured in: 1, 2, 3, 4,
Previous references: 18, 19.
Localities: Sabine Beach, Port Isabel.

Family Triphoridae

This most interesting family of small left handed gastropods has many representatives in the Gulf of Mexico and Caribbean region. However on the muddy Texas Coast occurs but a single species, but offshore on the coral reefs many other species live, which we shall not mention here.

Triphora nigrocincta C.B. Adams 1845. The decision whether this species should be considered as a subspecies of the European T. perversa we will leave to the experts. The Texas species occurs probably alive in most bays, because dead shells are regularly found in drift near the passes and inlets.

Live material is known from Port Aransas.

Figured in: 1, 3 , 4, 5,
Previous references: 11, 14, 15, 19,
Localities: In drift along the entire Texas Coast.

Remarks: A number of species of Triphora has been listed in previous publications. They are:

T. turristhomae Orbigny 1842 (ref. 18)
T. intermedia C. B. Adams 1850 (ref. 18)
T. melanura C.B. Adams 1850 (ref. 18)
T. pulchella C.B. Adams 1850 (ref. 12, 18)

A.M.U. Convention in Corpus Christi

Those who attended the annual convention of the A.M.U. in Corpus Christi returned home full of new impressions, shell data and enthusiasm. At the reception on Sunday evening, hosted by the Beaumont Shell Club, many old friends were greeted and new ones made. A treasure hunt on the beach Monday evening provided a sense of adventure and while some dug for treasure other collectors, quite hopeless cases apparently, hunted Hastula maryleeae in the surf. On Tuesday Wat Sutow presented ourClub's report during the "Shell Club" night.
The Barbecue, at Welder Wildlife Foundation, sponsored by our and the Galveston Clubs, showed southern hospitality in the beautiful setting of the Texas coastal landscape. Those who went landsnailing had a good time. The banquet on Thursday night was enjoyed by all and the only regret felt by those present was their inability to visit the offshore Texas coral reefs shown in a movie by Tom Pulley.

The scientific papers presented at the meeting ranged from literary quotations to biochemistry and many presentations were of intrest to local collectors. Of particular interest was the symposium on endangered species. Whereas most marine mollusca do not appear to be endangered seriously yet(human encroachment wipes out small local populations of bay and coastal forms) it is clear that the enormously rich fresh water fauna of the North American continent--richest in the world--is not only seriously endangered but already partly extinct. The causes are twofold: (1)pollution by industry, city sewage and refuse, and (2) the impounding of flowing water behind river dams. Land snail faunas are perhaps less directly endangered but also here, especially where species are extremely localized in arid regions, suburban expansion, highway construction and irrigation projects are bound to take their toll of the fauna.
All of us who attended this convention--the largest so far in A.M.U. history--owe a debt of gratitude to Ann Speers, Chairwoman of the Organising Committee, who did a splendid job. Many members of the hosting clubs spared neither time nor effort to make the convention a memorable event. Our own club in particular owes much to the efforts of Connie Boone who organised the Barbecue. Members should make plans to attend next years meeting in Marinette, Wisconsin (2nd half of July).

Visitors

A number of visitors came to Houston after the annual Convention of the A.M.U. in Corpus Christi closed.
Mr. William Lyons, of the Marine Labratory, St. Petersburg, Fla., who is engaged in a systematic survey of the Western Florida shelf and who presented an interesting

paper on the project, "Hourglass", visited with Dr. H. Geis and Dr. Ode and inspected some turrids dredged in offshore Texas waters. Several days later Dr. D. Moore of Miami, Fla., dropped in to discuss and see material of the Caecidae and Vitrinellidae. He confirmed that more than 15 different species of Caecids occur in offshore Texas waters.
Dr. J.P.E. Morrison, Dr. David Stansbery and Miss Carol Stein visited with Mrs Connie Boone and went shelling at spots of malacological intrest. Dr. Harold Rehder traveled to Lake Jackson where he inspected some of the puzzling and rare shells, dredged offshore Freeport, which are in the collection of Mrs. Mildred Tate.

BOOK REVIEW by W. W. Sutow,M.D.

Habe, T. and Ito K.: SHELLS OF THE WORLD IN COLOUR. VOLUME I, THE NORTHERN PACIFIC. Osaka, Japan Hoikusha, 1965, 176 pp., $10.00

This is the first volume of a planned series of illustrated manuals on seashells of the world. This book is in the same size and format as the original Japanese editions of the well known books on shells of Japan by Kira and by Habe. Volume I covers the Northern Pacific.

Among the mollusks of the Northern Pacific, many intraspecies variations are known to occur and several examples are shown. Certain of the species are found on both sides of the Pacific Ocean and in those cases, specimens from each shore have been illustrated. Since the coloring of many cold-water species are neither beautiful nor distinctive, many were photographed only in black and white. Half of the 56 plates, however, are in full color.

A scan of the pages suggests that emphasis was placed on species distributed through the western half of the Pacific Ocean but many that are found primarily along the eastern fringe of the Northern Pacific are also included. The family most numerously represented in this book is the Buccinidae, 125 species from this family being shown. Among the Muricidae, 34 species are pictured.

During the preparation of this book, several new genera and species were noted. These have been documented in VENUS, 24: 16-45, July 1965, in an article by T. Habe and K. Ito under the title, "New genera and Species of Shells chiefly Collected from the North Pacific". The newly identified mollusks are shown in the book.

The text is in Japanese but the photographs are clearly marked and nomenclatural identification is easy. The volume fills a literature gap in the study of North Pacific mollusca.

This month, let us look again at the cephalopods. The bits of information printed below were abstracted from the following two references:

1. Clarke, M.P.: "A Review of Systematics and Ecology of Oceanic Squids". In ADVANCES IN MARINE BIOLOGY, Academic Press, Vol. IV. pp 91-300, 1966.
2. Akimushkin, I.I.: "Cephalopods of the Seas of U.S.S.R." (Translated from the Russian). 223 pp. Available from the U.S. Department of Commerce, Washington D.C.

Harvesting squids seems to be an important economic venture indeed. The yearly world catch was estimated to be 818,000 tons in 1963. The leading countries in squid fishing were: Japan (309,100 tons); Korea (86,600 tons); Spain (15,400tons) Canada (10,800 tons); Taiwan (9,300 tons); and U.S.A. (7,400 tons).

The greatest portion of the squids was ear-marked for human consumption. Squids have a protein content of about 20%, which makes them almost as good a source of protein as fish. Other important uses for the squids include preparation of animal foods and also manufacture into fertilizers. Squids comprise the major bait for several types of commercial fishing.

The squid "ink" has long been used for writing and has also been made into dyes. Sepiolite ("meerschaum") is prepared from crushed fragments of the inner shell of the cuttlefish. Sepiolite is a fine polishing powder and a good molding material for jewelers. The material also serves as an ingredient for cosmetics. In dental work, Sepiolite is employed in cleaning and filling teeth. It is reported that ambergris, usually associated with sperm whales, can orginate also from cephalopod mollusks.

These references suggest that the usually small marketed squids can be caught by seining. For these oegopsid squids the use of "jigs" (grapnel type hooks) seems widespread. Apparently the technique is that of "snaring" or "snagging". Colored lures or actual baits are attached to such jigs. The jig is jerked up and down in the water and the squid takes the moving jig.

The octopus is another cephalopod that taxes the ingenuity of wouldbe be fisherman. Octopuses have been caught by spinning reels, using a many-hooked anchor and a bait of white china or colored rags. Traditionally, in some areas, the octopus hunt occurs at night with torch and spear. The Japanese, and others elsewhere, have long been sucessful with the dangling clay pots. The octopus takes refuge in the pot and is pulled up. In some South Seas Islands, the natives build a network or maze of palm branches in shoals. At low tides, the octopuses hide in the branches and are collected. In Hawaii the "squid

hook" seems to be popular. The ones I have seen consisted of a large cowry, most often Cypraea mauritiana, tied face-to-face with a fist-sized anchor rock. The octopus wraps itself around the cowry bait and will resist vigorously any atempt to pull the bait out of its grasp. Then finally, there is the Polynesian trick of tying a large holothurian ("sea cucumber") to a weighted line and lowering it into reef crevices. This will scare the octopus from its refuge.

* * * * * * * * *

RANDOM NOTES APROPOS A BEACHDRIFT SAMPLE FROM MATAGORDA BEACH

By H. Ode

In a previous issue (Vol. IV, No. 5) a brief report on the November 1967 trip to Matagorda was published. Of necessity then no data could be given concerning the smaller species of shells in the beach drift but now that part of the sample has been investigated under themicroscope I will present a few observations which I hope will interest our readers. The main interest of the sample was not so much the large number of species, including a few new to me and some rare forms, but resided rather in the excellent state of preservation of many of the shells. Many were of such fine quality that it seems safe to infer that these shells washed ashore alive or had been alive a very short time before stranding in the tide line.
There is little doubt that many of the specimens of Cyclostremiscus pentagonus Gabb (=trilix Bush) are perfectly fresh. These shells are shiny and glassy and have a light greenish yellow color, in brief they differ sharply in appearance from the old worn and chalky specimens so common in beachdrift. Similarly several juvenile specimens of Solariorbis infracarinata, perfectly shiny and glassy, point to the conclusion that also this species is living close by. Clear and glassy specimens of Teinostoma biscaynense and Vitrinella floridana were quitecommon in the sample and again there can be hardly any doubt that these species also must live in the immediate surroundings. Fresh shells of both these species resemble each other to a suprising degree if one is only familiar with the old dead shells, but can immediately be told apart by the presence of an umbilical callus in Teinostoma. A single old specimen, not completely intact, of a Vitrinellid unkown to me, shows that the small shell fauna of Texas still harbours uncollected or at least un reported species. No fresh shells of Cyclostremiscus suppressus were taken. All specimens were old and chalky and this may indicate that this species is a bay rather than a surf form. It is very rarely taken in shallow offshore dredge samples. On the other hand a larger series than I ever obtained before of excellent specimens of Solariorbis blakei in the sample strengthens my belief that this species belongs in the

surf zone. Meioceras nitidum was only present in old chalky specimens but both Caecum pulchellum and the shell I have called Caecum glabrum were present in perfectly fresh, glassy specimens. Both speices have been collected alive in the more southerly bays but their fresh condition in the drift at Madagorda may indicate they also live closely offshore. Young specimens of Caecum pass through a coiled stage. In the sample a remarkably large coil was found, shaped precisely like an old phonograph horn. Caecum species when full grown lose the coiled part and become plugged at the additional opening, so that they finally resemble a somewhat curved piece of pipe. Mrs. E. Shivers recently coined a descriptive name for them: "little maggot shells"

Very fresh specimens of Cyclostremella humilis abounded again, but alas, no specimens with the animal in it were spotted. I suspect that this is caused by the cleaning and drying of the sample. By keeping a sample moist with seawater and picking it unwashed under the microscope perhaps live specimens can eventually be spotted.

In the preliminary report I stated that Cerithium variabile does no longer occur alive at Matagorda. The microscope however disclosed a juvenile specimen of which it is hard to believe that it was notrecently alive. Additional investigations at this location are called for.

A somewhat inappropriate feeling of accomplishment I felt when I spotted two specimens of Epitonium albidum with the animal still in the shell. The commom and widespread occurence of this species in beachdrift along the Texas Coast makes it highly probably that it lives in the surf zone, but until now live specimens had eluded me.

A large series of another Epitonium species, probably apiculatum, is rather puzzling, because it seems to merge on one hand with Epitonium novangliae and on the other into forms like humphreysi or tollini. Mrs. Boone has collected both forms alive at other locations along the Texas coast.

Quite interesting are several very small juvenile Modulus modulus appearing quite fresh. The only spot on the Texas Coast where this species is known to live at present is Heald Bank (offshore Galveston). It is thus possible that it may live also closer to shore near Matagorda.

I was quite pleased to get a large series of over 50 specimens of our smallest Turbonilla species, T. elegantula, several of which were in a very fresh state, shiny and clear as glass. This species has for a Turbonilla rather swollen whorls and the columella possesses a small ridgelike fold. Never before had I obtained T. elegantula in such large numbers, at the most 2 or 3 in previous samples.

Turbonilla hemphilli appearently is a bay form, because only chalky material was present in the sample. However another Turbonilla species, which I am hesitant to name, but which is not rare in drift (finely ribbed, slender, and with a brown band), was also picked fresh and glassy. Two other much rarer Turbonilla species, which I cannot name are in typical beachworn condition.

to be continued

Texas CONCHOLOGIST

ME V, NO. 2 SEPTEMBER, 1968

NOTES & NEWS

SEPTEMBER MEETING

OUR NEXT MEETING WILL BE HELD ON SEPTEMBER 25TH AT THE SERVICE CENTER, 4503 BEECHNUT, STARTING AT 7:30 P.M. DR. T. PULLEY WILL SHOW A MOVIE OF THE FLOWER GARDENS, A CORAL REEF OFF GALVESTON.

REPORT AUGUST MEETING

OUR LAST MEETING WAS WELL ATTENDED. AFTER THE MINUTES OF THE LAST MEETING WERE READ, MRS. A. SPEERS, MRS. C. BOONE, DR. W. SUTOW AND DR. H. ODÉ GAVE THEIR IMPRESSIONS OF THE A.M.U. CONVENTION HELD THIS SUMMER IN CORPUS CHRISTI. A MOTION THAT THE PRESIDENT OF OUR CLUB BE AUTHORIZED TO APPOINT WITH THE APPROVAL OF THE OTHER OFFICERS A REPLACEMENT TO FILL THE UNEXPIRED TERM OF OFFICE WHEN A VACANCY OCCURS DURING THE YEAR, WAS PRESENTED AND TABLED FOR ACTION AT THE NEXT MEETING. THE EDITOR REPORTED THAT MR. K. WEAVER HAS OFFERED TO TYPE FOR A SMALL FEE THE MASTERCOPY OF THE COMING ISSUES OF THE TEXAS CONCHOLOGIST. THIS OFFER WAS GLADLY ACCEPTED BY THE MEMBERSHIP. DR. W. SUTOW PRESENTED A MOTION TO INCREASE THE DUES FOR THE CONCHOLOGIST TO $3.00 PER VOLUME (9 ISSUES) BEGINNING WITH VOLUME 6. THIS MOTION CARRIED.

THE DEXTERS SHOWED A BEAUTIFUL SERIES OF SLIDES OF TEXAS BEACHLIFE, INCLUDING A VERY STRIKING PHOTOGRAPH OF NEOSIMNIA UNIPLICATA. AFTER THIS PRESENTATION THE MEMBERS ADMIRED A COLLECTION OF SHELLS HARVESTED THIS SUMMER IN THE BAHAMAS BY MR. AND MRS. WILBUR WOODS.

THE EDITOR REMINDS ALL MEMBERS AND CORRESPONDENTS THAT COPY FOR THE CONCHOLOGIST HAS TO BE IN POSSESSION OF THE EDITORIAL STAFF BY THE FIRST OF THE MONTH. THIS INCLUDES REPORTS OF MEETINGS, NEWS ITEMS, ETC. HE ALSO REMINDS SUBSCRIBERS THAT NO OCTOBER ISSUES WILL BE MAILED UNLESS THE SUBSCRIPTION FEE OF $2.00 IS PAID.

MAY SHELL SHOW

IN THE PREVIOUS ISSUE WE OMITTED A BRIEF REPORT CONCERNING OUR MAY SHELL SHOW. AS IN PREVIOUS YEARS THE SHOW WAS A GREAT SUCCESS. OUTSTANDING WAS THE EFFORT OF THE MEMBERS ENGAGED IN THE SELLING BOOTH. MANY OF THE EXHIBITS WERE OF EXCELLENT QUALITY. A BELATED THANKS TO ALL WHO CONTRIBUTED TO THE SUCCESS OF THE SHOW.

ELSIE SHIVER'S HUSBAND MET WITH A SERIOUS ACCIDENT. ALL CLUB MEMBERS WISH HIM A SPEEDY RECOVERY.

oooOooo

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

EDITOR
Helmer Ode - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas 77401

ASSOCIATE EDITOR
Lloyd F. Meister - WA 6-3812
6520 Avenue I
Houston, Texas 77011

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING and CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Ode Mrs. Anne B. Speers

FAM. TELLINIDAE

MANY SPECIES OF THIS WORLDWIDE FAMILY OF BIVALVES ARE FOUND ALONG THE TEXAS COAST. THE FOLLOWING GENERA ARE REPRESENTED: TELLINA, MACOMA, TELLIDORA AND STRIGILLA. FOR THE GENUS TELLINA WE WILL INDICATE THE SUBGENERA.

TELLINA (LACIOLINA) MAGNA SPENGLER 1798. RARE SPECIMENS OF THIS SPECIES HAVE BEEN FOUND ON SOUTH PADRE ISLAND, A FEW OF THEM ALIVE (COLL. SPEERS). DEAD SHELLS HAVE BEEN TAKEN ON HEALD BANK (COLL. GEIS).

FIGURED IN: 1, 2, 4, 5, 6, 21.
PREVIOUS REFERENCES: NONE
LOCALITIES: SOUTH PADRE ISLAND

TELLINA (PHYLLODINA) SQUAMIFERA DESHAYES 1855. THIS SPECIES ALSO KNOWN AS PHYLLODA SQUAMIFERA IS LISTED IN REF. 17 AS BEING COMMON ALONG THE ENTIRE TEXAS COAST IN INTERMEDIATE SHELF ENVIRONMENT. ONLY A SINGLE JUVENILE VALVE IS KNOWN FROM MCFADDIN BEACH (COLL. ODÉ).

FIGURED IN: 1, 17, 21.
PREVIOUS REFERENCES: 17.
LOCALITIES: MCFADDIN BEACH

TELLINA (MERISCA) AEQUISTRIATA SAY 1824. SO FAR THIS CHARACTERISTIC SPECIES, WHICH IS ALSO KNOWN UNDER THE NAME QUADRANS LINTEA CONRAD 1837, HAS BEEN FOUND MAINLY SOUTH OF ST. JOSEPH ISLAND. DEAD VALVES ARE NOT UNCOMMON ON THE GULF BEACH AT PORT ARANSAS AND PORT ISABEL. TWO LIVE SPECIMENS WERE COLLECTED ON THE BEACH AT SOUTH PADRE ISLAND (COLL. SPEERS). ACCORDING TO REF. 17 COMMON ALONG THE WHOLE COAST IN INTERMEDIATE SHELF ENVIRONMENT.

FIGURED IN: 1,2,3,4,5,6,12,17,21.
PREVIOUS REFERENCES: 12,14,17,51.
LOCATIONS: MCFADDIN BEACH (ONE-VALVE, COLL. ODÉ), PORT ARANSAS, PORT ISABEL.

Texas Melanella (M. jamaicensis) was absent, but two much rarer species were present. These probably derive from offshore waters. Several fresh Strombiformis bilineata confirm that this species lives along the entire Texas Coast but it is more common in the Port Aransas area than at Galveston.

As I have remarked before juvenile specimens of Acteon punctostriatus are often quite common in drift. This was again the case. It may be that more than one species is involved in the Texas beachdrift. There seems to be a difference in the nuclear whorls of some of these shells, most of which are hardly more than nuclear shells themselves. At the present I cannot report anything more definite, but I mention this so that others may look into the problem.

Pelagics were sparingly present in the sample. The most common of all in Texas, Creseis acicula, occurred in a few shells and Cavolina's were missing. Apparently both these genera are more common in summertime in beachdrift. However, I obtained my second specimen of an Atlanta sp. from this drift. It is small and rather fresh. Offshore at least four species of this genus can be obtained from dredge material, but the minute shells of this genus rarely reach the beach.

In comparison to the gastropod fauna the bivalve fauna was poor, but not devoid of interest. In the last three years I had failed to collect any shells of Lepton lepidum, which used to be occasionally common at Galveston. Therefore I was glad to spot several live specimens of this shell in the sample. It is a quite attractive paper thin, rather flat bivalve, which when viewed rightly unter the microscope shows irridescent color and a characteristic net of radiating irregular striae. Also in the sample were a few fresh pairs of Mysella planulata, in Texas, a rather widespread bivalve, but because of its small size not often collected in quantity. Another Leptonid, very globose and somewhat quadratic in shape may conclude the list. It is present in small numbers in fine beachdrift practically all Texas beaches, but its name is unknown to me. A figure of it, misidentified as Mysella planulata can be found in Robert H. Parker's paper of 1959 in: Petr. Geol., Vol. 43, 2100-2166, pl. II, fig. 21.

These notes prove once again that beachdrift collecting with the help of a microscope can be quite productive. More systematic sampling at regular time intervals will undoubtedly speed up our understanding of the fauna. In conclusion I would like to make a plea for more shell collectors to become microscope workers. Beachdrift collecting has apart from its own interest the advantage of not depleting a live fauna; moreover, it is intrinsically unbiased i.e. everything is looked at regardless of beauty. With shell-collecting becoming fast a popular pastime for many, the danger is real that if all collectors insist on obtaining only live shells the fauna of a particular area will get impoverished. Overcollecting in Florida has already caused irreparable loss and the same may happen to any other part of our coast, including Texas. From the standpoint of beauty, many of the small shells are far superior to their bigger brothers and there is the advantage that no messy cleaning operations are necessary, and storage is simple.

BOOK REVIEW

BY W. W. SUTOW, M.D.

HABE, T. AND KOSUBE, S.: SHELLS OF THE WORLD IN COLOUR. VOLUME II. THE TROPICAL PACIFIC. OSAKA, JAPAN, HOIKUSHA, 1966, 193 PP. $10.00.

THE SECOND VOLUME OF THIS NEW JAPANESE SERIES PURPORTS TO ILLUSTRATE THE SHELLS FROM THE PACIFIC OCEAN PORTION OF THE SO-CALLED INDO-PACIFIC PROVINCE. SINCE THE WARM CURRENTS THAT FLOW THROUGH HERE APPROACH THE JAPANESE ISLANDS, THE PREVIOUS VOLUMES ON JAPANESE SHELLS BY KIRA AND BY HABE HAVE INCLUDED MANY SPECIES THAT ARE DISTRIBUTED WIDELY OVER THE TROPICAL PACIFIC OCEAN. MOST OF THE SPECIES SO DESCRIBED HAVE NOT BEEN INCLUDED IN THIS NEW VOLUME. WHEN THEY ARE REPEATED, ATTEMPTS ARE MADE TO SHOW SPECIMENS ACTUALLY TAKEN IN THE TROPICAL PACIFIC OR VARIATIONS OF THE SPECIES. THEREFORE, ALL THREE VOLUMES MUST BE USED CONCURRENTLY. ALSO, IT IS NOTED THAT THE MAJORITY OF THE SPECIES EXTEND INTO THE INDIAN OCEAN. THE AUTHORS, HOWEVER, INDICATE THAT THEY ARE PLANNING TO PREPARE AND PUBLISH A SUBSEQUENT BOOK ON SHELLS OF THE INDIAN OCEAN.

THE BOOK CONTAINS 68 COLOUR PLATES AND FULLY MAINTAINS THE STANDARDS SET BY PREVIOUS JAPANESE PUBLICATIONS. ALTHOUGH THE WRITTEN DESCRIPTIONS ARE IN JAPANESE, THERE ARE SUFFICIENT ENGLISH NOTATIONS (INCLUDING COMMON NAMES!) TO FULLY IDENTIFY ALL SHELLS IN THE BOOK. OF PARTICULAR IMPORTANCE AND SPECIAL USEFULNESS ARE THE 23 PLATES SHOWING BIVALVES EXCLUSIVELY. REFERENCES TO PELECYPODA OF THIS REGION ARE HARD TO COME BY AND THIS VOLUME FILLS A REAL NEED.

A NUMBER OF NEW MOLLUSKS ARE ILLUSTRATED. THESE PREVIOUSLY UNDESCRIBED GENERA AND SPECIES ARE SCIENTIFICALLY DOCUMENTED IN AN ARTICLE BY HABE AND KOSUGE IN VENUS, 24: 312-341, 1966 ("NEW GENERA AND SPECIES OF TROPICAL AND SUBTROPICAL MOLLUSKS").

oooOooo

REPRINT

AN INTERESTING REPRINT HAS BEEN ISSUED BY DOVER PUBLICATIONS, INC. THE BOOK "MOLLUSKS" WRITTEN BY PAUL BARTSCH IN 1934 FOR THE SMITHSONIAN SCIENTIFIC SERIES HAS BEEN REPRINTED. WRITTEN FOR THE GENERAL READER, THIS BOOK IS NOT INTENDED AS A GUIDE TO THE IDENTIFICATION OF SHELLS FOR THE COLLECTOR, BUT IT RATHER AIMS TO MAKE MOLLUSKS UNDERSTOOD AS ANIMALS. MANY PARTICULARS ABOUT THEIR LIFE HABITS ARE GIVEN, ENLIVENED BY MUCH ANECDOTICAL MATERIAL. FOR ONLY TWO DOLLARS THE READER GETS MANY GOOD QUALITY ILLUSTRATIONS AND A NUMBER OF PHOTOGRAPHS OF WHICH SIX ARE IN COLOR. THERE ARE FIVE CHAPTERS, ENTITLED: THE RANKING OF INVERTEBRATES, THE BIVALVES, THE TOOTHSHELLS, THE SNAILS AND THEIR ALLIES, AND THE OCTOPUSES, SQUIDS AND THEIR KIN.

FOR THOSE WHO ARE NOT FAMILIAR WITH THE NAME OF DR. P. BARTSCH, IT MAY BE MENTIONED THAT DR. BARTSCH, WHO DIED ABOUT TEN YEARS AGO, WAS CURATOR OF THE DIVISION OF MOLLUSKS OF THE U. S. NATIONAL MUSEUM.

Texas CONCHOLOGIST

UME V, No. 3 OCTOBER 1968

NOTES & NEWS

OCTOBER MEETING

OUR NEXT MEETING WILL BE HELD ON WEDNESDAY, OCTOBER 25TH AT THE SERVICE CENTER, 4503 BEECHNUT, STARTING AT 7:30 P.M. MR. CHARLES DOH WILL PRESENT THE PROGRAM, "AUSTRALIAN SHELLING". SLIDES OF UNDERWATER SHOTS MADE ON THE AUSTRALIAN CORAL REEFS WILL BE SHOWN!

REPORT SEPTEMBER MEETING

THIS TIME THE MEETING STARTED WITH THE BEST PART. DR. TOM PULLEY SHOWED AND NARRATED THE MOVIE HE MADE OF THE OFFSHORE TEXAS CORAL REEFS. FOR MANY OF OUR MEMBERS, NOT FAMILIAR WITH A CORAL REEF FAUNA THIS WAS AN EXCELLENT INTRODUCTION TO THE CONDITIONS EXISTING ON THE OFFSHORE TEXAS REEFS.

MRS. CLAIRIE VAN ERP WAS ELECTED AS SECRETARY-TREASURER. DR. W. SUTOW REPORTED THAT $24.75 OVER THE ALLOTTED AMOUNT IS NECESSARY TO PURCHASE MAGAZINE SUBSCRIPTIONS FOR THE LIBRARY. THIS AMOUNT WAS AUTHORIZED BY THE MEMBERSHIP. IT WAS MOVED AND VOTED THAT THE DATE OF THE NOVEMBER MEETING BE POSTPONED TO THE FIRST WEDNESDAY IN DECEMBER. BUD ANDERSON ASKED FOR SLIDES OF THE ACTIVITIES OF OUR CLUB TO BE SHOWN AT THE MAY MEETING OF THE OUTDOOR NATURE CLUB. MRS. I. K. SHEFFIELD SHOWED SOME BEAUTIFUL SHELLS DREDGED ON THE PACIFIC COAST OF MEXICO.

USE YOUR LIBRARY. . . .SOME OF THE THIRD $100 OF BOOKS AUTHORIZED FOR PURCHASE BY MEMBERS HAVE ARRIVED ! WE REMIND YOU THAT THE BOOKS ARE HOUSED AT THE WEST UNIVERSITY BRANCH OF THE HARRIS COUNTY PUBLIC LIBRARY, LOCATED AT 6108 AUDEN STREET IN WEST UNIVERSITY. HOURS ARE MONDAY THROUGH THURSDAY, 8:30 A.M. TO 8 P.M., FRIDAY 8:30 A.M. TO 6 P.M., AND SATURDAY 8:30 A.M. TO 12:30 P.M. MRS. THELMA SANDERS, HEAD LIBRARIAN, HAS THE BOOKS ON HER OFFICE SHELF, AND THEY ARE KEPT FOR USE BY THE CLUB MEMBERS ONLY. YOU WILL FIND THE RULES AND SPACES FOR CHECKOUTS IN A RED FOLDER ON THE MIDDLE SHELF.

THE BEACH TRIP, PLANNED FOR OCTOBER 6TH WAS RAINED OUT AND NOBODY HAD THE COURAGE TO BRAVE THE ELEMENTS. ON NOVEMBER 3RD HELMER ODÉ WILL LEAD A BEACH WALK FOR THE SIERRA CLUB AT THE SAME LOCATION. MEMBERS OF THE CONCHOLOGY GROUP ARE CORDIALLY INVITED TO JOIN. WE ASSEMBLE AT 9 A.M. AT THE FERRY LANDING ON BOLIVAR PENINSULA.

THIS SUMMER MRS. J. DASHIELL PICKED UP A VERY MUCH WORN SPECIMEN OF CRUCIBULUM AURICULA GMELIN ON GALVESTON BEACH. THIS SPECIES IS NOT RARE TO THE TEXAS OFFSHORE WATERS, BUT THIS IS THE FIRST SPECIMEN FROM THE BEACH THAT HAS COME TO OUR ATTENTION.

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

FAM. TELLINIDAE.

TELLINA (EURYTELLINA) NITENS C. B. ADAMS 1845.

SMALL SPECIMENS OF THIS SPECIES CAN BE FOUND ON MUSTANG ISL. AND FURTHER SOUTH. IT LIVES IN DEEPER WATER THAN T. TAYLORIANA AND ITS COLOR IS A DIFFERENT SHADE OF BRIGHT PINK. ALSO THE CONCENTRIC SCULPTURE IS MUCH FINER THAN IN JUVENILE T. TAYLORIANA. ACCORDING TO REFERENCE 17 COMMON ALONG THE WHOLE TEXAS COAST IN INTERMEDIATE SHELF ENVIRONMENT. ONE LIVE AND ONE FRESHLY DEAD PAIR WERE COLLECTED FROM GORGONIA ROLLS AT SOUTH PADRE ISLAND.

FIGURED IN: 21

PREVIOUS REFERENCES: 19

LOCALITIES: SOUTH PADRE ISLAND (COLL. SPEERS, ODÉ)

TELLINA (ANGULUS) VERSICOLOR DE KAY 1843. THIS IS A NOT UNCOMMON SPECIES ON MOST TEXAS GULF BEACHES. DEAD SHELLS ARE REGULARLY FOUND IN BEACHDRIFT AT GALVESTON AND PORT ARANSAS. LIVE SPECIMENS HAVE BEEN COLLECTED AT ROCKPORT, RANSOM ISL., CORPUS CHRISTI BAY AND PORT ISABEL. ACCORDING TO 14 ALIVE IN INLET INFLUENCE ENVIRONMENT AT ROCKPORT AND ALIVE IN INLET HYPERSALINE ENVIRONMENT OF LAGUNA MADRE. ALIVE OFFSHORE (11).

FIGURED IN: 4,6,14,21.

PREVIOUS REFERENCES: 11,14,15,18,19,20.

LOCALITIES: NOT UNCOMMON IN DRIFT ALONG THE ENTIRE TEXAS COAST.

TELLINA (ANGULUS) TEXANA DALL 1900. THIS SPECIES IS NOT UNCOMMON IN THE BAYS AROUND CORPUS CHRISTI FROM WHERE DALL ORIGINALLY DESCRIBED IT. DEAD SHELLS ARE RARELY FOUND ON THE OUTER BEACHES.

FIGURED IN: 4,6,21.

PREVIOUS REFERENCES: 15,19,24,25,44 (SAN ANTONIO BAY)

LOCALITIES: GALVESTON (ALIVE IN WEST BAY), ROCKPORT, PORT ARANSAS.

TELLINA (ANGULUS) TAMPAENSIS CONRAD 1836. THIS SPECIES IS NOT UNCOMMON AROUND PORT ARANSAS AND PORT ISABEL, WHERE LIVE SPECIMENS CAN BE COLLECTED. LESS COMMON AROUND GALVESTON ISLAND. HERE DEAD SHELLS HAVE BEEN COLLECTED AT SAN LUIS PASS AND A LIVE ONE AFTER HURRICANE CARLA. ACCORDING TO 14 ALIVE IN OPEN AND ENCLOSED HYPERSALINE LAGOON ASSEMBLAGE OF LA-

guna Madre.
Figured in: 1,4,6,14,17,21.
Previous references: 11,14,17,19,28,34.
Localities: Galveston Isl., Port Aransas, South Padre Island.

Tellina (Scissula) iris Say 1822. In view of the widespread occurrence of this small species along the Texas coast, it is strange that it has never been listed earlier in faunal lists, except 19. The species can be collected alive on the mudflats of Bolivar Point, San Luis Pass and around Port Aransas and Port Isabel. Fragments of dead shells are common in beachdrift all along the Texas coast. Specimens collected at Galveston appear larger than the ones usually collected at Port Aransas.
Figured in: 6,21.
Previous references: 19.
Localities: common along the entire Texas coast.

Tellidora cristata Recluz 1842. This is a not uncommon species along the Texas coast. Dead valves can be regularly found in beachdrift. Live specimens have been dredged along North jetty in Galveston (coll. Geis) and in Corpus Christi Bay, Aransas Bay and South end of Laguna Madre (coll. Speers). According to 17 common along sandy bottom of inlet and deep channel assemblage.
Figured in: 1,4,5,6,11,14,17,21.
Previous references: 11,12,14,15,17,19,20,21
Localities: Regularly found on Texas Gulf beaches.

Strigilla mirabilis Phillippi 1841. This small species appears regularly in beachdrift from St. Joseph Isl. southward. Uncommon at Galveston and Freeport. Some very young specimens were once found alive on St. Joseph Isl. (coll. Odé). Dredged alive in the bays near Port Aransas and Port Isabel in inlet influence water (Speers).
Figured in: 2,8,
Previous references: 11,12 (alive offshore), 15,19,24,25.
Localities: Galveston, St. Joseph Isl., Port Aransas, Port Isabel.

Strigilla gabbi Olsson and Mcginty 1958. A few specimens of this recently described species have been found on the Gulf beaches near Port Aransas (coll. Speers, Odé) and near Port Isabel (coll. Speers). The species was also obtained in large numbers from a foundation excavation at Rockport (coll. Speers) and from a clump of whipcoral (coll. Odé).
Figured in: 10
Previous references: none.
Localities: Port Aransas, Port Isabel.

Macoma tageliformis Dall 1900. This is a common Texas beachshell. Live specimens have been taken offshore (11), but are seldom if ever washed up on the beaches. Remarkable is the total absence of juvenile material, or specimens showing even a shread of ligament, in beach drift. According to 17 common in clayey sediments on prodelta slope assemblage.
Figured in: 2,3,17.
Previous references: 11,17,19,20,26.
Localities: dead shells common along entire Texas coast.

Tellinidae to be continued. . . . .

MOLLUSCANA

BY W. W. SUTOW, M. D.

NOW IN ITS 15TH YEAR OF PUBLICATION, THIS IS JAPAN IS A TOPNOTCH, LARGE-FORMATED, SLICK-PAPER ENGLISH ANNUAL PUT OUT BY THE DAILY NEWS PAPER ASAHI SHIMBUN IN JAPAN. THE CURRENT (1968) EDITION FEATURES AN ARTICLE ENTITLED "FISHES OF THE RIVER, FISHES OF THE SEA", A BEAUTIFULLY ILLUSTRATED PICTORIAL NARRATIVE OF JAPAN'S GLOBAL FISHING OPERATIONS. ONE OF THE FASCINATING SECTIONS DEALS WITH "FISH CUISINE IN JAPAN". FOR EACH MONTH OF THE YEAR FOUR "FISH" DISHES ARE PRESENTED. A SHORT DESCRIPTION OF THE PREPARATION OF EACH DISH IS APPENDED (WITH BLACK AND WHITE PHOTOGRAPHS) AND THE FINAL ARRANGEMENT (WITH TYPICAL JAPANESE ARTISTRY) IS PICTURED TANTALIZINGLY IN COLOR. MOLLUSKS ARE INCLUDED AMONG THE GASTRONOMICAL DELIGHTS.

THE JAPANESE HAVE LONG RECOGNIZED THAT THERE ARE CERTAIN TIMES OF THE YEAR WHEN EACH SPECIES OF FISH (OR MOLLUSKS) IS MOST DELICIOUS WHEN EATEN. FOR EXAMPLE, IN FEBRUARY, THE "KENCHIN-ZUME" OR STUFFED SQUID AND THE "TAKO" OR BOILED OCTOPUS ARE AT THEIR BEST. IN JULY, THE "AWABI" OR ABALONE IS FEATURED. IN NOVEMBER THE "HAMAGURI" (A VENUS CLAM) AND "AKAGAI" (AN ARK BIVALVE) DISHES ARE RECOMMENDED. IN DECEMBER THE OYSTER IS THE CUISINE'S MOLLUSK OF THE MONTH.

ooOoo

HERE IS A TIP FOR THE SHELL COLLECTOR WITH A GOURMET'S INTERESTS, WHO SEEKS THE MOLLUSKS. IF TWO BIVALVES ARE KNOCKED TOGETHER, A CLEAR LIGHT RINGING SOUND MEANS THAT THE ANIMAL IS STILL ALIVE. A DULL THUD INDICATES THAT THE MOLLUSKS IS DEAD (ACCORDING TO THE ABOVE ARTICLE.)

ooOoo

ANOTHER PUBLICATION THAT PROMISES TO BE OF SOME APPEAL TO THE MALACOLOGICAL EPICURE IS THE NEW TIME-LIFE SERIES ON FOODS OF THE WORLD. THE FIRST UNIT I SAW WAS ENTITLED THE COOKING OF PROVINCIAL FRANCE. THE BOOK WAS LIBERALLY SPRINKLED WITH TEXTUAL AND ILLUSTRATIVE REFERENCES TO SHELLFISH, ESPECIALLY MOLLUSKS. AMONG THE MOLLUSCAN DELICACIES I SPOTTED WERE MUSSELS, SCALLOPS, OYSTERS, "BLACK WINKLES" AND CLAMS.

ooOoo

MAN IS NOT THE ONLY ANIMAL THAT FEASTS ON THE MOLLUSKS. THE COVER OF MAY 24, 1968 ISSUE OF SCIENCE FEATURES A CLOSE-UP PHOTOGRAPH OF THE CALAPPA (CRAB) CRACKING OPEN THE BANDED TULIP SHELL (FASCIOLARIA TULIPA). THE COVER PICTURE IS ONE OF THE ILLUSTRATIONS FOR THE ARTICLE ENTITLED "SHELL OPENING BY CRABS OF THE GENUS CALAPPA" BY J. B. SHOUP (160:887-888). THE AUTHOR INDICATES THAT A NUMBER OF DECAPOD CRUSTACEANS PREY UPON MOLLUSKS, BREAKING THEM OPEN AND FEEDING ON THE SOFT PARTS. AMONG SUCH CRUSTACEANS ARE THE XANTHIDAE, PORTUNIDAE, OCYPODIDAE, PALINURIDAE, AND PAGURIDAE.

THE CALAPPINAE HAVE SPECIALLY DEVELOPED CLAWS THAT ARE MANIPULATED LIKE BLUNT-TOOTHED CAN-OPENERS OF THE OLD-FASHIONED TYPE. THE GRIM DETAILS OF HOW THAT CRAB CHIPS OUT A SPIRAL SLIT IN THE EXTERNAL SHELL OF THE MOLLUSKS ARE DESCRIBED.

After positioning the mollusk, the crab inserts the tooth of it's right claw into the aperture of the mollusk. Using motions much like the action of the jaws of a pair of pliers, small bits of the shell are broken off until the animal inside can be pulled out and devoured.

ooOoo

Bivalves of Surinam

by H. Odé

The student of Gulf of Mexico mollusks is to a large extent dependent for his sources of information on papers and treatises concerning adjacent faunal areas, mainly the Caribbean. An interesting addition to the knowledge of this fauna was recently published by C. Van Regteren Altena. In a paper entitled "The Holocene and Recent Marine Bivalve Mollusca of Surinam, Studies in the Fauna of Surinam and other Guyanas", Vol. 10, p. 163–179, The Hague, 1968, M. Nyhoff, he described a number of new species of bivalves from Surinam and published a checklist of bivalves for that country. This list is extremely interesting for the Texas collector, because it shows how widespread many of the species are, which can be collected on the Texas Coast. Thus it is not impossible that several newly described species will turn up in the Gulf of Mexico. Of the 126 species of bivalves listed about 56 have been found on the Texas Coast.

ooOoo

Malleus in the Northwest Gulf of Mexico

by H. Odé

In a recent paper Boss and Moore (1) discussed the occurrence of the Atlantic hammer oyster Malleus (Parimalleus) candeanus d'Orbigny on the American coast. This remarkable species has a distribution from Bermuda to Yucatan, but so far has never been found in the North Western Gulf of Mexico. In a previous issue of this publication we reported an extensive collecting trip to the Flower Gardens and another prominence somewhat more east, the so called 24 fms. lump. In the material collected by diving on these coral reefs a number of Malleus candeanus was collected alive, and picking of coral debris disclosed a great number of fragments. This note establishes thus a significant extension of the range of this interesting bivalve. The shells in question are now part of the northwest Gulf of Mexico mollusk collection of the Houston Museum of Natural Science, now being assembled. The identification of these shells has been verified by Dr. H. Rehder during his visit to Houston in February 1968.

(1) Boss, K. J. and Moore, D. R., (1967), Notes on Malleus (Parimalleus) candeanus (d'Orbigny), (Mollusca: Bivalvia), Bull. Mar. Sci., Vol. 17 (1), p. 85–94.

ooOoo

Odostomia (Menestho) bushiana Bartsch 1909

by H. Odé

On the Texas Coast live a number of small gastropods, all called by the generic name Odostomia. It seems to me that it is inappropriate that several of these species should be classified in a single genus. Species such as O. impressa, O. seminuda, O. bushiana, all three found in Texas, belong to a group of relatively heavy, thick shells, ornamented by strong spirals, which may or may not be broken up into separate knobs or pustules. I would prefer to use for all these shells the generic name Menestho. Whereas impressa and seminuda are well known species, commonly listed in faunal lists and often described in various publications, O. bushiana seems to have escaped the attention of those engaged in faunal studies.

O. bushiana is less abundant on the Texas coast than impressa, but beach worn material can be regularly collected in beach drift in Matagorda Bay and sometimes in the drift of the outer beaches of Galveston Island and elsewhere along the Texas coast. O. bushiana is in my opinion the most elegant of the closely related group of impressa, seminuda and bushiana, and some others not yet known from Texas. Previous references to O. bisuturalis from Texas are probably erroneous, but it is possible that O. trifida will be found in Texas. From all these bushiana can be easily differentiated by the single complete spiral on the whorl and the broken up pattern of the others. Mrs. A. Speers was the first to recognize this species in the Texas fauna. The species was described by Bartsch in 1909 from 10 fathoms in Naragansett Bay:

1909 Odostomia (Chrysallida) bushiana Bartsch, Proc. Bost. Soc. Nat. Hist., Vol. 34 (14), p. 99, pl. 13, fig. 44.

Previous references to this species in Texas are few:
1967 Odé, H., Texas Conchologist Vol. 4 (3), p. 24.

There can be hardly any doubt that the species has habits identical to O. impressa, i.e. it lives in the bays and probably parasitizes Crassostrea.

Its range extends over the whole Texas Coast, from Sabine Beach, Galveston, Matagorda Bay, Aransas Bay to Port Isabel. It is not known to me whether it has been reported from area between New England and Texas. It is, however plausible that some references to O. seminuda in the literature for Texas are in error and pertain to O. bushiana.

The photograph has been taken by Mr. Clyde Dexter from a lot of dead but reasonably well preserved shells collected from drift at Palacios, Texas.

In conclusion of this brief note I would like to point out that Bartsch has placed several of the Menestho species in the genus Chrysallida, apparently solely on the basis of surface sculpture. I believe that at least for O. seminuda and probably O. gemmulosa this allocation is not appropriate.

ooOoo

Introducing Mildred Tate

by Constance Boone

In some of the coming issues of this publication, information on shells from offshore waters of Texas will be reported by someone many of you already know. However, to acquaint new members and correspondents with this new contributor, we'd like to tell you a little about this transplanted "Okie" who has adopted Texas beaches as home.

Mildred Tate spent her first night in Texas sleeping out on the Galveston Beach. When she arrived to visit her sailor husband (during World War II) there simply was no room available. She spent her first night wandering down the sea wall and walking piers, marveling at the towering waves shuddering at the shore with frothy booms. Later she found out what she thought was a normal sight was really the advance of a hurricane.

A year or so later she moved to Freeport with her four children to join her husband who had come to work for Dow. The only place they could find to live was too small for four active youngsters, so Mildred headed for the beach nearly everyday- - - - and began to pick up shells.

It wasn't long before she helped organize the Surfside Beachcombers' Shell Club. There she met Mrs. Winifred Martin who ran the Country Store. After ordering shells from Japan for the club members to share, the idea was born to help set up a shell museum and shell store in conjunction with the Country Store, and so she began to order and catalog specimen shells. She also began to trade Texas shells and start her own foreign collection, now totalling over 8,000 speci-

mens. Among these is a collection of shells from Romeo Lumawig of the Phil-lipines. Romeo was a native who trawled for fish and who began to collect shell for Mildred, coming up with such shells as the Tibia martini, a rediscovery. His collecting areas were carefully mapped and recorded.

Living in the Freeport area, the natural thing for an avid collector to do was to haunt the shrimpers for shells. Thus was born a lasting friendship with Allen Kight, who has grown to love shells, too. The efforts of Mildred to find names of shells he has brought in for several years has led to one of the best collections of off-shore Texas shells. It hasn't been a collection put together just for show. The two have combined their efforts to learn about the animals of the mollusks appearing in the trawls and dredges of the "Jamie K," Mr. Kight's boat. Mildred has preserved many of the mollusks kept alive on the shrimper. Going beyond adding to their collections, she has shared her specimens and knowledge with the major museums such as Harvard, Philadelphia Academy of Sciences, and the Smithsonian. The exhibit of deep water shells at the Houston Museum of Natural Sciences is Mrs. Tate's. Dr. T. E. Pulley, director of this museum, has been a friend and consultant for many years.

Mildred has worked with other shrimpers in obtaining very deep water material. She has some rare shells from the 225 fathom range in the Gulf of Mexico, trawl by Hollis Forrester on the "Leslie Loreen," including the Gaza superba, Murex beaui, and Lima bullisi, the latter shell being the only complete one known. Her Morum dennisoni is one of the 26 uncovered in a recent survey of this species. Most of you visiting Texas shell shows during the last few years are aware of th fabulous shells Mildred has been able to exhibit. Her prizes are numerous, including the Philadelphia Academy of Sciences trophy.

The most impressive thing about this off-shore material is the fact that most of it is typical of the Caribbean area. She often gets shells that aren't supposed to be in the Gulf of Mexico offshore Texas. She is anxious to help the major museums become aware of the shells still to be listed from here, and participate in the present survey of Northwest Gulf of Mexico mollusks.

But we'll let her tell you her story of shells. As most of you know, you have a hard time finding a place to buy Texas specimen shells from offshore, and finding a place to see them is even difficult. To be invited to see Mildred's collection at her home is a treat most of us vie for. She has been most generous with her time to show collectors what is out there offshore if they can find a boat, a dredge, some willing hands, etc!

However, Mildred isn't home much these days. Most of her waking hours are spent at the Brazosport Museum of Natural Science, a non-profit educational institution for the exploration and conservation of natural sciences, located in downtown Lake Jackson. She serves as volunteer curator of this musuem which was started approximately three years ago by a group of Lake Jackson citizens. The city has provided the building; funds are derived from gifts and memberships. The exhibits and collections have been built by local citizens. Open Tuesday, Thursday, Saturday, and Sunday, the museum is visited by thousands of youngsters and adult groups from a wide area.

Mildred's aim is to build the finest display of Gulf Coast shells, so that collectors may come to see what is here and to find a source for identification. A good collection is already set up, as well as other displays of sea life and educational exhibits of shell structure, egg cases, etc.

Mildred keeps the joy of finding shells. There is always something new to see, to observe, to catalog, in her viewpoint, and going to the beach with her is never a "bust". We expect that you will look forward to the installments of information she will begin to share with us.

ooOoo

A Checklist of Texas Mollusks dating from 1849. Part III

by H. Odé

In the following and concluding part covering the land and fresh water mollusks, only the names employed by Roemer are given. Dr. H. D. Murray was so kind to send a few remarks concerning this list, which the reader will find at the conclusion of this list.

2. Fresh Water Shells
   31. Unio costatus Conrad (Unio undulatus Barnes). Common in Comal Creek near New Braunfels.
   32. Unio hydianus Lea. Observations on the genus Unio, 2, p.14, tab. 6, fig. 14. With remark by Phillippi. In Comal Creek near New Braunfels.
   73. Planorbis lentus Say. In stagnant water in the Salado Valley along the road from New Braunsfels to Fredericksburg.
   74. Planorbis liebmanni Dunker. In flotsam of the Guadalupe River at New Braunfels.
   75. Physa heterostropha Say. In the Guadalupe River at New Braunfels.
   76. Melania rufa Lea. Observat., Vol 3, Tab 5, fig. 8. Very common in the Comal Springs at New Braunfels.

3. Land Snails
   44. Helix alternata Say. New Washington at Galveston Bay.
   45. Helix arborea Say. In flotsam of the Guadalupe River at New Braunfels.
   46. Helix avara Say. New Braunfels.
   47. Helix berlanderiana Moric. New Braunfels.
   48. Helix caduca Pfeiffer. New Washington on Galveston Bay.
   49. Helix chersina Say. New Braunfels.
   50. Helix convexa Raf. New Braunfels. Common.
   51. Helix fallax Say. New Braunfels.
   52. Helix hippocrepis n. sp. Latin diagnosis of Phillippi.
   53. Helix indentata Say. New Braunfels.
   54. Helix labyrinthica Say. New Braunfels.
   55. Helix minuscula Binney. New Braunfels.
   56. Helix pustula Say. New Braunfels.
   57. Helix roemeri n. sp. San Saba Valley. Latin diagnosis by Phillippi.
   58. Helix septemvolva Say. Very common on Galveston Island and together with Succinea texasiana n. sp. (Pfeiffer) the only landmollusk there.
   59. Helix texasiana Moric. New Braunfels.
   60. Helix thyroides Say. In flotsam in the Guadalupe River at New Braunfels.

61. Bulimus n. sp. About equally large and of the shape of the German Bulimus radiatus Brug., colored white, this species is quite common in middle Texas, from Houston to New Braunfels.
62. Bulimus gossei b, Pfeiffer, Mon. Helic., New Braunfels. (Only a single species observed)
63. Glandula truncata DeKay (Planorbis glans Say) New Braunfels.
64. Pupa contracta Say. Together with the following Pupa species found in flotsam of the Guadalupe River at New Braunfels.
65. Pupa exigua Say.
66. Pupa minuta Say.
67. Pupa pellucida Pfeiffer.
68. Cylindrella goldfussi Menke. In flotsam at New Braunfels.
69. Cylindrella roemeri n. sp. New Braunfels. (Latin diagnosis by Pfeiffer.
70. Succinea texasiana n. sp. Very common on Galveston Island. (Latin diagnosis by Pfeiffer)
71. Helicina tropica Lam. Very common over the Whole of Texas on shrubs and trees.

ooOoo

Remarks by H. D. Murray

The above list of mollusks dating from 1849 by Roemer is one of the earliest such lists for the State of Texas. Although Singley (1893) was aware of Roemer's material, Singley made but one reference to Roemer in the 1893 publication. In referring to Planorbis havanensis Pfeiffer, Singley (1893, p. 315) stated, "This species is said to have been collected by Dr. F. Roemer in Texas; the locality not given. I have not seen it". The above quotation was repeated by Strecker (1935, p. 35), and as far as I can determine this is the only reference by either Singley or Strecker to Roemer's material.

The species of land and fresh-water mollusks listed by Roemer are also listed later by either Singley (1893), by Strecker (1931, 1935), or by both authors. It is interesting to note that in this list by Roemer, all species, except for about five species, were collected in or around New Braunfels, Comal County, Texas. This locality is unusual because at New Braunfels there are two species of mollusks having highly restricted habitats. Item 76 of Roemer's list, Melania rufa Lea, is surely Goniobasis comalensis Pilsbry. Roemer's note that M. rufa was "very common" is clearly not the case today. Although G. comalensis is present in the general area, the populations are decidedly small, and the habitat has been invaded by two species of oriental operculates, Melanoides tuberculatus and Tarebia granifera. A second species of restricted distribution on Roemer's list is Helix hippocrepis Pfeiffer, item 52. This highly restricted species, now Polygyra hippocrepis (Pfeiffer), is known to occur in but two places in the world and both of these localities are in Comal County, Texas. This author is decidedly concerned because the habitat in New Braunfels for P. hippocrepis is now being disturbed by construction, and this population stands a chance of extirpation.

Literature Cited:

Singley, J. A. 1893. Contributions to the natural history of Texas; pt. I, Texas Mollusca. Geol. Survey Texas, Fourth Ann. Rept., p. 297–343.

Strecker, J. K. 1931. The distribution of the Naiades or pearly fresh-water mussels of Texas. Baylor Univ. Mus., Special Bull. no. 2, 69 p.

_____. 1935. Land and fresh-water snails of Texas. Trans. Texas Acad. Sci., 17:5–43, 2 pls.

ooOoo

A List of Marine Mollusca Originally Described from the Northwest Coast of the Gulf of Mexico

by H. Ode'

Considering the length of the Texas Coast line, including all bay shores it is remarkable that so few mollusks have been described as new from Texas. Indeed few species have their type locality in Texas. Many species which are quite common on the Texas offshore shelf have been described for the first time from other areas in the Atlantic where they may be far less common.

The reason for the lack of interest in the Northwestern part of the Gulf of Mexico can be easily understood. The large muddy shelf extending far out into the sea has made the beach drift less interesting than that of beaches at many other localities in the U.S.A., such as Cape Hatteras. The absence of coral reefs close to shore coupled with a complete lack of rocky shores further has contributed to a less intensive study of the Texas mollusk fauna than that of Florida and the Antilles. In this brief list we will review some of the mollusks which have originally been described from Texas, including some from Louisiana and Mexico. When we review the list, it is at once apparent that many species which are quite common on our beaches, are not in this list. This is probably not as surprising as may appear at first glance. The Texas fauna has close affinities with the Carolinian fauna and thus many of the Texas species were first described from the more accessible beaches of the East Coast and Florida. A rich beach such as Padre Island remained uncollected for many years because of its relative inaccessibility. Even today the middle portion of the Texas Coast is still uncollected, and a clear idea about a possible change of fauna in that area has not been obtained.

The list opens with the important contribution by Phillippi who described a number of shells sent to him by Roemer when he visited Galveston. The following species were listed.

1. Natica texasiana Phillippi 1849. This species had earlier been described as Natica duplicata Say 1822 and is now known as Polinices duplicatus Say 1822, our well known moonshell.
2. Pinna squamosissima Phillippi 1849. This name is according to Turner in Johnsonia Vol. 3, p. 320 a synonym of Atrina serrata Sowerby. There is something of a puzzle here because Roemer also lists P. muricata, which also is a synonym of A. serrata. On the Galveston beach the two species of Atrina, serrata and seminuda, which are easily kept apart, can often be collected in quantity.

3. Dentalium texasianum Phillippi 1849. This is a common species in beach dri and also commonly dredged on the shelf.
4. Donax tumidus Phillippi 1849. Common in beachdrift all along the Texas Co
5. Donax texasiana Phillippi 1849. Common in beachdrift all along the Texas Coast. Considered a race of Donax variabilis.
6. Donax roemeri Phillippi 1849. Probably identical with the previous species
7. Periploma angulifera Phillippi 1849. According to Dr. J. Rosewater a synonym of P. margaritaceum Lamarck and P. inequivalvis Schumacher. A very common beach shell on Texas beaches.
8. Amphidesma deforme Phillippi 1849. I have not verified the true identity of this shell.
9. Mactra rostrata Phillippi 1849. The identity of this species is unknown to me.

After this auspicious start many years passed before any new species were call to the attention of malacologists. We include in our list here the following species which is characteristic for Texas, although it was not originally described for Texas.

10. Tellina tayloriana Sowerby 1867. Described from Mexico. Type locality restricted to Tampico (Boss in Johnsonia). Common on most Texas beaches.

When Dall started his systematic investigations of the marine faunas of the North American continent a number of new species was added to the list. The first of these was described from an area far removed from Texas, but it will be added to our list because Texas is the only locality in which it has been found regularly.

11. Epitonium sericifilum Dall 1889. Although originally described from Honduras, the Texas coast is the only locality from where the species has bee regularly collected. It reaches a maximum size of slightly under half an inch (11 m.m.)

In a paper describing the fauna in a deep well Harris described a new species from Galveston.

12. Eriphyla galvestonensis Harris 1895. This species has been recently synonymized with Crassinella lunulata by Harry. It probably represents a smooth form of this species which is common on the Texas Coast.
13. Macoma leptonoidea Dall 1895. Described from material sent by Mitchell from Matagorda Bay. The species is unknown to me.
14. Macoma mitchelli Dall 1895. Described by Dall from material collected by Mitchell in Matagorda Bay, Texas. It is widespread along the Texas coast.
15. Amaea mitchelli Dall 1895. This famous species was also sent to Dall by Mitchell who collected it on the beach of Matagorda Island.
16. Terebra texasiana Dall 1898. Now known as Terebra flammea Solander. Reported by Dall from specimens sent to him by Mitchell.
17. Tellina texana Dall 1900. This small bivalve was described by Dall from the Gulf of Mexico. In spite of its name its type locality is given by Johnsonia (Vol. 4, p. 312) as Charlotte Harbour, Fla.

To be continued. . . . .

Texas CONCHOLOGIST

ME V, No. 4 NOVEMBER 1968

NOTES & NEWS

November Meeting

As reported earlier our November meeting will be held on Wednesday, December 4th, at the Service Center, 4503 Beechnut, starting at 7:30 p.m. Mr. and Mrs. H. B. Short and Mrs. Fern Henke will present a program "The other side of the shell", which deals with shellcraft from both an esthetic and amusing standpoint.

Report October Meeting

Dr. W. Sutow reported on the newly received acquisitions for the library. The Monograph on american landmollusks by Pilsbry was on display. Charles Doh presented a series of very interesting and beautiful slides – many underwater shots – made during his and Helen's recent trip to Tahiti, Fiji and Heron Islands. Some excellent doorprizes were also furnished from the harvest of that trip and a number of their shells was on display.

Coming Trips

December 8th, beachtrip to San Luis Pass. We will assemble at 9 o'clock at the Galveston side of San Luis Pass bridge. Leader to be announced.
January 18th, beachtrip to Matagorda Beach. We assemble at 8:30 a.m. at Matagorda Beach on the beach and shell at the mouth of the Colorado River and, conditions permitting, further on the beach. Leader: Mrs. C. Boone.

Annual Shell Fair at South Padre Island

The 9th Annual Shell Fair sponsored by the South Padre Island Shell Club will be held this year on February 23, 1969. Anyone may enter this competitive event. There are 12 divisions, with many classes, open to beginners as well as advanced students or collectors of mollusks. Information about advance reservations for exhibit space, list of categories, rules, and awards may be secured by writing to Mrs. Betty Allen, Box 822, Post Isabel, Texas 78578.

Dr. Joseph Rosewater of the Smithsonian Institution Department of Mollusks and new president of the American Malacological Union will serve as senior judge. Assisting him will be Dr. W. W. Sutow of our own club and Mr. Howard Lee of the Texas Department of Wildlife.

In addition to divisional trophies, the Hall of Fame trophy for former blue ribbon winners, the Anne Speers award for the most significant contribution to the present knowledge of the marine mollusks of the Texas coast, and the Philadelphia Academy of Natural Sciences award, there has been added this year a new trophy, the Gary award, to go to the outstanding exhibit on the land snails

.....CONTINUED ON PAGE 43

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

MACOMA CONSTRICTA BRUGUIERE 1792. A COMMON TEXAS BEACH SHELL, BUT LIVE SPECIMENS ARE SELDOM FOUND ON THE GULF BEACHES. THIS SPECIES IS A COMMON BAYDWELLER IN ALL TEXAS BAYS. ACCORDING TO 14 ALIVE IN OPEN BAY MARGIN ENVIRONMENT AT ROCKPORT.

FIGURED IN: 2,3,4,5,6,11,14.

PREVIOUS REFERENCES: 11,14,15,19,20,24.

LOCALITIES: COMMONLY ALIVE IN ALL TEXAS COASTAL BAYS; DEAD SHELLS COMMON ON ALL GULF BEACHES.

MACOMA TENTA SAY 1834. THIS SPECIES IS LESS COMMON THAN BOTH M. CONSTRICTA AND M. TAGELIFORMIS. DEAD SHELLS ARE OCCASIONALLY FOUND AT GALVESTON, BUT ARE MORE COMMON AROUND PORT ARANSAS AND PORT ISABEL. LIVE SPECIMENS HAVE BEEN TAKEN ON THE MUDFLATS AT GALVESTON AND AT PORT ARANSAS AND PORT ISABEL.

FIGURED IN: 2,3,4,5,6,14,22.

PREVIOUS REFERENCES: 14,19.

LOCALITIES: GALVESTON, FREEPORT, ST. JOSEPH ISL., ROCKPORT, PORT ARANSAS, PORT ISABEL.

MACOMA MITCHELLI DALL 1895. VALVES OF THIS BAY SPECIES ARE QUITE RARE ON TEXAS GULF BEACHES. THE SPECIES LIVES IN TEXAS COASTAL BAYS AND IS PROBABLY QUITE WIDESPREAD THROUGHOUT THIS ENVIRONMENT. REID (34) REPORTED IT IN THE DIET OF THE CROAKER IN EAST BAY OF GALVESTON BAY. IN REF. 17 STATED TO BE COMMON IN RIVER-INFLUENCED LOW-SALINITY LAGOONS AND ESTUARIES. HUNDREDS OF DEAD BUT COMPLETE AND FRESH SPECIMENS WERE ONCE TAKEN FROM BOTTOM SEDIMENT OF CLEAR LAKE (ODÉ). COLLECTED ALIVE AT BLACK JACK PENINSULA, CORPUS CHRISTI BAY (SPEERS). SOMETIMES VALVES MAY SHOW TRACES OF A FAINT PINK COLORATION.

FIGURED IN: 14,17

PREVIOUS REFERENCES: 11,14,17,19,20 (ALIVE)

LOCALITIES: GALVESTON BAY, FREEPORT, SARGENT, PALACIOS, PORT ARANSAS.

MACOMA BREVIFRONS SAY 1834. THERE IS SOME DOUBT ABOUT THE CORRECT NAME OF THIS SPECIES, BUT UNTIL THAT MATTER HAS BEEN RESOLVED WE SHALL USE THE NAME M. BREVIFRONS. THIS SPECIES IS REGULARLY FOUND AT GALVESTON, AND SOMETIMES

alive at Port Aransas. It coincides in form and shape with the figure of M. brevifrons in ref. 2, but is totally different from that of M. brevifrons in ref. 3. According to ref. 14 alive in open-hypersaline environment of the Laguna Madre and alive in open bay-margin assemblage at Rockport. A large number of live specimens was collected on the Gulf beach of Mustang Island in Oct. 1964 (Speers), and the species has been reported in the Texas Conchologist.
Figured in: 2,3,4,5,6,14.
Previous references: 11,14,19,28,34.
Localities: Galveston Isl., Sargent, Port Aransas

Remarks: Many other tellins have been mentioned in the literature for the Texas coast.
Tellina laevigata Linne 1758 has been reported by Singley. At the time of this report M. tageliformis was still undescribed. We suspect this species is meant.
Tellina radiata Linne 1758 is mentioned in 18 from offshore coral banks. There are unconfirmed reports of beach specimens found after hurricanes.
Tellina promera Dall 1900. Offshore coralbanks (18). Listed in 24 for the Pleistocene (Macoma mera)
Tellina tenera Say 1822. Listed in 24 for the Pleistocene. T. tenera is a synonym of T. agilis Stimpson, a species most likely not to occur in Texas. Probably T. texana or T. versicolor.
Strigilla carnaria Linne 1758. Listed in 24 for the Pleistocene.
Macoma limula Dall 1895. Reported in 14 alive in open-bay-margin assemblage from Rockport.
Macoma leptonoidea Dall 1895. Described by Dall from Matagorda Bay
Macoma extenuata Dall 1900. Mentioned in 18 for offshore coralbanks.

Family Dreissenidae.
A family of brackish water mussels. A single species occurs in Texas.

Congeria leucophaeata Conrad 1831. This small and not very attractive mussel lives in brackish water in the upper parts of all Texas bays. It is attached by byssus to underwater objects. Occasionally specimens are numerous on outer Gulf beaches, when wood and other debris have washed down rivers and so reaches the beach. The taxonomy of this species is quite involved.
Figured in: 6
Previous references: 24.
Localities: Living in the brackish water parts of all Texas coastal bays. Dead shells often in beachdrift.

to be continued.....

In previous issues we have asked our readers to report to us interesting finds of the species and families treated in this column so that the records may be brought up to date. We repeat here this request.

DISTORSIOS OFFSHORE TEXAS

BY MILDRED TATE

ALL THINGS MUST HAVE A BEGINNING- - -SO, HARD AS IT IS FOR ME TO SIT QUIETLY DOING A REVIEW ON PAST OBSERVATIONS WHILE EXCITEMENT RUNS HIGH WITH OUR LATEST FINDS, WELL, IT'S NOT EASY! HOWEVER, AS MY LEARNED COLLEAGUES HAVE WISELY ADVISED ME TO GIVE AN ORDERLY REPORT, TRULY I WILL TRY. FIRST, LET ME JUST MENTION ONE OF OUR NEWEST ACQUISITIONS FROM OFFSHORE FREEPORT. WOULD YOU BELIEVE A BEAUTIFUL LITTLE Typhis LIVES HERE IN OUR GULF?

IT IS OUR DESIRE TO SHARE WITH YOU THE DISCOVERY AND DISCUSSION OF THESE SHELLS THAT LIVE OFF OUR TEXAS COAST WHICH, FOR A COMBINATION OF REASONS, ARE SELDOM, IF EVER, FOUND ALONG OUR SHORE LINE. WE INTEND TO DISCUSS MOLLUSKS FOUND WITHIN THE AREA BETWEEN 96 AND 93 DEGREES WEST TO 28 DEGREES NORTH, FROM 10 TO 45 FATHOMS, WITH AN OCCASIONAL MENTION OF SPECIES FOUND IN 225 FATHOMS. MORE RESEARCH IS REQUIRED BEFORE WE CAN DISCUSS THE TYPHIS. I HAD HOPED TO START MY REPORTS WITH THIS BEAUTIFUL MOLLUSK, BUT INSTEAD, LET'S TALK ABOUT THE GENUS Distorsio, RODING, 1798. REVIEWING THE NOMENCLATURE, ONE CAN READILY UNDERSTAND WHY THIS GENUS IS COMPOSED OF DISTORTED, MIXED-UP SHELLS! WE HAVE TWO SPECIES WELL REPRESENTED IN OUR MATERIAL:

Distorsio (Rhysema) clathrata LAMARK, 1816
Distorsio (Rhysema) mcgintyi EMMERSON AND PUFFER, 1953

(REFERENCE: JOHNSONIA, VOL. 3, NO. 36, PAGES 236-242)

Distorsio clathrata IN OUR COLLECTION REACHES TWO AND THREE-FOURTHS INCHES, OR 70 MM, IN LENGTH, THE COLORS RANGE FROM WHITE TO PINKISH BEIGE. THE LARGEST PART OF THE BODY WHORL SEEMS TO SWELL WITH PRIDE, ALMOST BURSTING TO SHOW OFF THIS BEAUTIFUL COLORING, CROSSED BY PURE WHITE RIDGES AND AXIAL CORDS, RELAXING INTO A QUIET WHITE, THEN BURSTING AGAIN INTO A BLAZE OF GLISTENING BROWN AND WHITE FOR THE SHIELD. (SORRY ABOUT THAT! PLEASE SEE REFERENCE BOOKS FOR SCIENTIFIC DESCRIPTIONS.)

THIS SHELL IS NOT UNCOMMON IN OUR GULF AND HAS BEEN TAKEN ALIVE FROM 18 TO 35 FATHOMS.

Distorsio mcgintyi FIRST APPEARED AS A DEAD SHELL BROUGHT IN FROM 45 FATHOMS IN 1960. THE FIRST LIVE MATERIAL CAME IN AUGUST, 1962, FROM 35 FATHOMS. IT HAS NEVER APPEARED COMMONLY, THOUGH IT SEEMS TO SHARE THE SAME HABITAT WITH Distorsio clathrata. OUR LARGEST IS TWO AND THREE-TENTHS INCHES, 58.35 MM., IN LENGTH. IT HAS COLORING THAT LEANS MORE TO THE YELLOW.

I HAVE BEEN UNABLE TO EXTRACT THE ENTIRE MOLLUSK FROM THIS GENUS, HOWEVER, ENOUGH HAS BEEN KEPT INTACT TO REPORT THE FOOT AREA OF Distorsio clathrata IS CREAM WITH SMALL PINK, RED, AND ORANGE DOTS, AS REVEALED VIEWED UNDER THE MICROSCOPE. Distorsio mcgintyi HAS A MARBLED DESIGN OF DEEP RED, GIVING THE APPEARANCE OF CREAM SPLOTCHES ON A DEEP RED BACKGROUND.

COMPARISONS SHOW BOTH TO HAVE THE ENTIRE SURFACE COVERED WITH A VERY THIN YELLOWISH PERIOSTRACUM. CLOSER OBSERVATION SHOWS Distorsio clathrata TO HAVE A SINGLE LONG HAIR IN EACH KNOB, WHILE Distorsio mcgintyi HAS A GROUP OF FROM TWO TO TEN THAT SEEM TO BE RESTRICTED TO THE FIRST SIX AXIAL RIDGES OF THE BODY WHORL, STOPPING AT THE SHOULDER ANGLE. I COULD SEE NO DIFFERENCE IN THE SERIES OF OPERCULUMS.

I WAS HAPPY TO HAVE FROZEN SPECIMENS OF EACH SPECIES TO USE FOR THIS STUDY.

NONE OF THE REFERENCES AVAILABLE TO ME LIST DISTORSIO MCGINTYI FROM OUR AREA. IT JUST MIGHT BE THAT THIS IS A NEW RANGE TO BE RECORDED.

THE HOURS HAVE PASSED - - - THE WHOLE DAY HAS BEEN SPENT LOOKING OVER DISTORSIOS. BELIEVE ME, THE GENUS DISTORSIO HAS A VERY SPECIAL WAY OF GETTING TO YOU!

P.S. SHIFTING TIME AND DIRECTIONS, IT WAS MY GOOD FORTURE ON OUR RECENT FOSSIL TRIP THAT MY FIRST SHOVEL OF BLACK DIRT REVEALED A PERFECT SPECIMEN OF DISTORSIO - - - KNOWN AS DISTORSIO SEPTEMDENTATA GABB, SOME 40 MILLION YEARS OF AGE. EVOLUTION SEEMS ALMOST TO STAND STILL WITH THIS PARTICULAR SHELL, HOWEVER, I FEEL QUITE CERTAIN THAT CLOSER STUDY WOULD REVEAL A DIFFERENCE, FOR IN A SERIES OF THE FOSSIL SHELLS D. CLATHRATA AND D. MCGINTYI CHARACTERISTICS ARE BOTH REVEALED. LET'S JUST LEAVE THIS QUESTION FOR OUR GEOLOGISTS!

ooOoo

NEW BEACH FIND

BY CONSTANCE BOONE

THREE DEAD SPECIMENS OF A NEWLY DESCRIBED TECTIBRANCH SNAIL FROM TEXAS WERE COLLECTED FROM BEACH DRIFT TAKEN FROM THE CHANNEL AREA NEAR THE COAST GUARD STATION ON SOUTH PADRE ISLAND, ACROSS FROM PORT ISABEL, TEXAS, LAST FEBRUARY DURING THE SHELL CLUB FAIR THERE. AT TIMES THE DRIFT JUST IN FRONT OF THE OLD TOWER POSTS YIELDS VERY INTERESTING MATERIAL. THIS TIME THE PRIZE CONSISTED OF THREE SPECIMENS OF VOLVULELLA (PARAVOLVULELLA) TEXASIANA HARRY. DR. HAROLD W. HARRY OF THE A. AND M. MARINE LABORATORY AT GALVESTON AND OF RICE UNIVERSITY, NAMED THIS NEW SPECIES IN A PAPER APPEARING IN VOL. 10, NO. 2, OF THE VELIGER, OCTOBER, 1967.

IN DESCRIBING THIS NEW SPECIES, HE ALSO SET IT UP IN A NEW SUBGENUS, PARAVOLVULELLA. THIS LITTLE SHELL IS A TINY, CYLINDRICAL, GLASSY WHITE MOLLUSK, WITH NARROW APERATURE, VERY ELONGATE. IT AND A FEW RELATED SPECIES WERE FORMERLY CALLED BY THE GENERIC NAME RHIZORUS. A COMPLETE REVIEW OF THIS GENUS IS DISCUSSED IN DR. HARRY'S PAPER, A REPRINT OF WHICH HAS BEEN SENT TO OUR LIBRARY.

ooOoo

IMPORTANT REPRINT: JOHNSONIA: VOLUME I

LONG OUT OF PRINT, THIS USEFUL MONOGRAPH SERIES ON WESTERN ATLANTIC CONIDAE, MURICIDAE, STROMBIDAE, CARDIIDAE, ETC., IS NOW ONCE AGAIN AVAILABLE. REPRODUCED IN ITS ORIGINAL SIZE, ORIGINAL PAPER, AND BEAUTIFULLY SOFT-BOUND, IT MAY BE OBTAINED FOR ONLY $15.00 (POSTAGE AND PACKING FREE) FROM W. AND R. MCCAULEY, 1919 SANDY HILL ROAD, APT. C-12, NORRISTOWN, PA. 19401. IF YOU ALSO WISH VOLS. 2, 3 AND 4, WRITE: DR. W. J. CLENCH, MUSEUM OF COMPARATIVE ZOOLOGY, CAMBRIDGE, MASS. 02138, U.S.A.

Cyclostremella humilis Bush 1897

by H. Odé

This minute gastropod is common in beachdrift on the outer beaches of the Texas Coast. Originally described by Katherine Bush from Cape Hatteras, it has been rarely reported since that time. Collectors have recently become aware of the rich faunas of smaller species in beachdrift in Florida and Texas and it has become apparent that occasionally, particularly in the winter months, astronomical numbers of Cyclostremella wash ashore on Texas beaches. Mrs. A. Speers has informed me that in the Port Aransas area the species is not as common as on the Freeport–Galveston beaches.

The occasional richness of beachdrift is best illustrated by the following observation. In a small handfull of fine drift collected at San Luis Pass in January 1965 I collected far over 2000 specimens which extrapolated to 40,000 specimens per gallon of drift. Usually the microscope will reveal in any sample of fine drift several specimens of this minute snail.

The shell is somewhat irregularly coiled and sometimes has reticulated appearance when the spiral striae are well developed. When the shells are quite fresh they are glassy clear, but after death they become milky white and lose their translucency. In spite of their widespread occurrence most Texas collectors have never seen the species, although statistically it must be by far the most common gastropod at Galveston. Live animals have been collected and are probably quite common on the beach. However, the minuteness of these shells and the washing and drying operations necessary for easy collection of small forms make the procurement of good live material very difficult.

Moore has studied the animal and came to the conclusion that it is not a vitrinellid. The shell itself possesses various characteristics which place it outside that family. The most important of these are the heterostrophic nuclear whorls and the peculiarly shaped groove at the suture. Moreover the operculum has a spiral in it. Moore has proposed a separate family, the Cyclostremellidae, for it.

The synonymy is as follows:

1899, Cyclystremella humilis, Bush, K. J. Trans. Conn. Acad. Sci., Vol. 10 (3), p. 97–144, pl. 22–23.

1966, Cyclystremella humilis Bush, Moore, D. B. Bull. Mar. Sci., Vol. 16, p. 480–484, figs. 1–5.

The range of this species is still unknown, but it seems probable that it is a "Carolinian" species, as it is known from Cape Hatteras, Northwestern Florida and Texas. I expect it to range southward into Mexico.

Previous references for Texas are:

1964, Moore, D. B., PH.D. thesis, University of Miami, Fla.

1966, Moore, D. B., (see synonymy).

1966, Odé, H., Texas Conchologist, Vol. 2, (6) and ibid, Vol. 3 (9),(1967).

1967, Harry, H. W., Marine Mollusca of Galveston, Texas. Tentative and preliminary list, Marine Lab. Tex. A. and M. Univ., Galveston, Texas

From collection data it seems safe to infer that C. humilis is a surfzone and inlet inhabitant. Some bay samples contain a small number of them, but these shells may have washed into the bays. Also it is largely unknown in dredge material from the continental shelf. All this indicates a surfzone ecology for the species.

The photograph was made by Mr. Clyde Dexter from a lot of about 2000 shells collected at San Luis Pass in January 1965. The maximum size is slightly over 1 mm. diameter, but in drift the majority of specimens will be considerably smaller than 1 mm.

ooOoo

TWO REPRINTS

by H. Odé

Two interesting reprints of particular value for the student of Gulf of Mexico marine shells recently reached my desk.

"Explorations on the West Coast of Florida and in the Okeechobee Wilderness", by Angelo Heilprin was the first publication concerning the beautifully preserved mollusks of the Caloosahatchee Pliocene of Florida. It is a reprint (1964) of the 1887 article in Vol. 1 of the Transactions of the Wagner Free Inst. of Science.

The other reprint (1963) is of T. A. Conrad's "Fossil Shells of the Tertiary Formations of North America".

Both books were reprinted by the Paleontological Research Institution, 109 Dearborn Place, Ithaca, New York, and can be ordered from them.

MOLLUSCANA

BY W. W. SUTOW, M. D.

PHOTOGRAPHS OF MOLLUSKS CONTINUE REGULARLY TO APPEAR ON THE COVERS OF THE PRESTIGIOUS JOURNAL, SCIENCE, THE WEEKLY PUBLICATION OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. THE ISSUE OF JULY 26, 1968, FEATURES A BLOWUP OF A POSTLARVAL GLAUCOTHOE (OF THE COCONUT CRAB, BIRGUS LATRO) PEEKING OUT FROM A GASTROPOD SEASHELL.

THE PICTURE ILLUSTRATES THE ARTICLE ENTITLED "SHELL USE: AN ADAPTATION FOR EMIGRATION FROM THE SEA BY THE COCONUT CRAB" BY E. S. REESE OF THE UNIVERSITY IF HAWAII (SCIENCE, 161:385–586). EXPERIMENTAL AND FIELD OBSERVATIONS BY THE AUTHOR INDICATE THAT THE COCONUT CRAB EMIGRATES FROM THE SEA DURING THE POST-LARVAL STAGES AND LIVES IN EMPTY GASTROPOD SHELLS DURING THIS VULNERABLE PERIOD OF TRANSITION TO TERRESTRIAL ADULTHOOD. THIS PATTERN OF BEHAVIOUR TOWARDS SHELLS REFLECTS THE HERMIT CRAB ANCESTRY OF THE COCONUT CRAB. THE BEHAVIOUR IS NOTED DURING THE POSTLARVAL STAGE AND IN THE YOUNG CRABS BUT IS LOST IN THE ADULT PERIOD. (ACCORDING TO THE DICTIONARY, THE TERM "GLAUCOTHOE" REFERS TO THE YOUNG HERMIT CR THAT HAS JUST COMPLETED THE LARVAL SWIMMING STAGE IN IT DEVELOPMENT.)

ADULT COCONUT CRABS DO NOT LIVE IN SHELLS. INSTEAD, THEY LIVE IN BURROWS ON THE LAND. THE CRABS CRAWL INTO THE HOLES HEAD FIRST. THE EXPERT NATIVE CRABBERS REACH IN BOLDLY AND EXTRACT THE COCONUT CRABS FROM THE REAR. WHEN ONE REALIZES THAT THE POWERFUL PINCERS CAN SNIP THROUGH A LEAD PENCIL, IT TAKES EXPERIENCE (AND COURAGE) TO STICK A HAND BLINDLY INTO THE CRAB LAIR EVEN THOUGH ONE KNEW THAT THE PASSAGEWAY WAS NOT BIG ENOUGH TO ALLOW THE CRAB TO TURN AROUND.

ooOoo

THE COVER OF THE AUGUST 23, 1968, ISSUE OF SCIENCE DISPLAYS A STRIKING PHOTO-GRAPH OF THE WESTERN UNITED STATES SPECIES, PECTEN DIEGENSIS. THE PHOTOGRAPH ILLUSTRATES THE ARTICLE BY GEORGE R. CLARK, II,: "MOLLUSK SHELLS: DAILY GROWTH LINES" (161:800–802).

CLARK'S STUDY WAS BASED ON GROWTH MEASUREMENTS ON 12 JUVENILE SPECIMENS OF THIS PECTEN SPECIES THAT WERE ALLOWED TO GROW UNDER LABORATORY CONDITIONS AT THE KERCKHOFF MARINE LABORATORY, CORONA DEL MAR, CALIFORNIA. THE PATTERNS OF GROWTH CURVES DURING AN OBSERVATION PERIOD OF 51 DAYS WERE CAREFULLY ANALYZED

IT IS IMPLIED THAT THE DISTANCE BETWEEN TWO ADJACENT CONCENTRIC LINES ON THE SUR-FACE OF THE VALVES ("GROWTH LINES") REPRESENTS THE GROWTH INCREMENT OF THE SHELL DURING A CERTAIN PERIOD OF TIME. GROWTH DISTURBANCE CAUSED BY ENVIRONMENTAL OR BIOLOGICAL STRESS IS REFLECTED BY CLOSER SPACING OF THE LINES OR EVEN ABSENCE OF GROWTH LINES. THUS, THE INTERPRETATION OF THE GROWTH PHENOMENON AS A BIO-LOGIC CLOCK IS SIMILAR IN CONCEPT TO THE WELL-KNOWN TREE-RING STUDIES. AMONG FOSSILS, THE AUTHOR SUGGESTS THAT "EACH SPECIMEN IN A FOSSIL ASSEMBLAGE COULD CARRY AN ENVIRONMENTAL RECORD IN ITS GROWTH LINES". CAREFUL ANALYSES COULD IN-DICATE WHETHER OR NOT THE DIFFERENT SPECIMENS REPRESENT A COMMUNITY ASSEMBLAGE AND WHETHER THE MEMBERS OF THE COMMUNITY MET A CATASTROPHIC DEATH OR LIVED OUT THEIR USUAL LIFE SPAN. IN BRIEF, ANOTHER POTENTIAL TOOL IS BEING DEVELOPED FOR GEOCHRONOMETRIC AND PALEOECOLOGIC DETECTIVE WORK.

ooOoo

....CONTINUED FROM VOL. 5, NO. 3, OCTOBER 1968-

A List of Marine Mollusca Originally Described from the Northwest Coast of the Gulf of Mexico

BY H. Ode'

18. Callocardia texasiana Dall 1900. Originally reported as Cytherea texasiana by Dall. He states that it was first collected by Wuerdemann (about 1856) during the earliest survey work on the Texas Coast and that later additional material from Galveston was received from Dr. Curley and Mr. Singley. The type locality was later fixed by Dall in the Eastern Gulf.

After this work by Dall it lasted about 50 years, during which only three new names appeared, before more work was done.

19. Dentalium texasianum cestum Henderson 1920. Described from Cavallo Pass (included in our list on the authority of Johnsons list of 1934).
20. Thais haemostoma haysae Clench 1927. This well known coarse form of Th. haemostoma was described from Grand Bayou, Mississippi delta, La. It is quite common on the beaches east of Freeport.
21. Sayella livida "Dall" Rehder 1935. Described by Rehder from Corpus Christi Bay. It was originally collected by Singley and reported by him as S. livida Dall in his faunal list. S. livida Dall is a nomen nudum.
22. Chione clenchi Pulley 1950. A common bivalve on the Texas Coast belonging to the C. latilirata complex. It is found regularly on the beaches and is dredged commonly alive on the shelf.
23. Anadara baughmani Hertlein 1951. An arcid from deeper water. Not uncommon on the Texas Coastal shelf.
24. Anadara springeri Rehder and Abbott 1951. A synonym of the previous species.
25. Littoridina (Texadina) sphinctostoma Abbott and Ladd 1951. The first of a number of brackish water mollusks to be described from the northwest Gulf shores. Common in most Texas bay systems. Type locality 1 1/2 miles north of Webb Point, San Antonio Bay.
26. Conus clarki Rehder and Abbott 1951. Described from material dredged 50 miles south east of Iberia parish, La. It belongs to the C. austini-frisbeyi complex which is typical for the Gulf of Mexico.
27. Pleurobranchaea hedgpethi Abbott 1952. A sea slug, whose type locality is Port Aransas. Also found at Port Isabel and in Mexico.
28. Corambella barataríae Harry 1953. Described from Barataria Bay and later also found at Port Aransas.
29. Murex branchi Clench 1953. Described from a specimen obtained offshore of Rockport. It may be synonymous with M. beaui Fisher and Bernardi.
30. Laevicardium fiski Richards 1954. Described from off the Mississippi delta and later reported for the Texas offshore.
31. Cerberella tanna Marcus and Marcus 1959. A small sea slug described from off the Sabine jetties.
32. Aplysia donca Marcus and Marcus 1959. Described from a for Aplysia small animal collected in a tide pool in sand, Port Aransas.

33. Discodoris hedgpethi Marcus and Marcus 1959. A small seaslug described from Port Aransas, the type locality.
34. Calliostoma (Kombologion) oregon Clench and Turner 1960. Described from 70 miles S.E. of Corpus Christi in 125 fathoms.
35. Terebra maryleeae Burch 1965. Described from Freeport. Not uncommonly alive in the tidal zone of sandy beaches, especially during the summer months.
36. Vitrinella texana Moore 1965. A coastal Vitrinellid found uncommonly at Port Aransas and Port Isabel and since then also found in Florida. Port Aransas is the type locality.
37. Vioscalba louisianae Morrison 1965. Described from Frenier Beach, Lake Pontchartrain, La. Reported earlier from Texas as Probythinella protera Pilsby which however is a Florida Pliocene shell. Occasionally common in Texas beach drift and living in Galveston Bay.
38. Odostomia barretti Morrison 1965. Type locality Heron Bay, Mississippi. It is living in Galveston Bay and can be found in beachdrift along the entire Texas Coast. The species is not an Odostomia but a hydrobiid.
39. Odostomia weberi Morrison 1965. Type locality Bayou Chene Fleur, Barataria Bay, La. It is surprising that in view of its wide spread occurrence in beachdrift on our beaches, this species was only recently described. It lives in Galveston Bay and probably all other bays of Texas. It may belong to the genus Cyclodostomia.
40. Volvulella (Para volvulella) texana Harry 1967. Type locality, 10 miles offshore, in 7 fathoms, southeast of base of Bolivar Peninsula (east of Galveston, Texas). Not uncommon in dredged material on the shallow shelf

When we look through this list a number of characteristic species is missing which probably are more common in the Northwest Gulf of Mexico than any where else. Some of these are: Macoma tageliformis, Pitar cordata, and Jouanettia quillingi. These three species are commonly dredged on the Texas shelf but were all described relatively late. Macoma tageliformis probably is the shell reported under various names of large tellins in the early faunal lists of Texas.

A number of species is probably omitted from this list. I have not had the time to verify the following species:

1. Tellina sayi Dall. (synonym for Tellina texana Dall.)
2. Mercenaria texana Dall 1902. The Texas form of M. campechiensis, characterized by the glossy central area on the outside of the shell.
3. Busycon spiratum galvestonensis Hollister.

42

It is not unlikely that this list will be extended by systematic and more intensive collecting in the future. The continental shelf extending in front of the Louisiana and Texas coast will undoubtedly yield several as yet unknown species and the continental slope will, when further explored, provide many more. Undoubtedly, I have overlooked several species. If my readers note these omissions I would appreciate it very much to be informed.

....CONTINUED FROM PAGE 33

OF TEXAS. SO YOU HOUSTON MEMBERS START CHECKING OUT AND USING THE FOUR-VOLUME SET OF BOOKS JUST PURCHASED FOR THE LIBRARY - - - LAND MOLLUSKS OF NORTH AMERICA BY HENRY A. PILSBRY.

ooOoo

FOSSIL COLLECTING TRIP BY CONSTANCE BOONE

PAULA HORN, LEOLA GLASS, CONSTANCE BOONE, AND MILDRED TATE WERE HOUSTON CONCHOLOGY CLUB MEMBERS WHO WENT ON THE FOSSIL TRIP TO THE BRAZOS RIVER NEAR BRYAN ON SATURDAY, OCTOBER 25. LED BY BRIAN COONEY OF LAKE JACKSON (HE'S THE VOLUNTEER CURATOR OF THE FOSSILS AT THE BRAZOSPORT MUSEUM OF NATURAL SCIENCE), THE "DIGGERS" FOUND FORTY MILLION YEAR OLD MOLLUSKS STILL PRESERVED IN THE RIVER CLIFFS. THIS LOCATION, UNDER THE RIVER BRIDGE ON HIGHWAY 21 BETWEEN CALDWELL AND BRYAN, IS THE TYPE LOCALITY OF THE STONE CITY BEDS OF TEXAS, OF THE MIDDLE EOCENE AGE. THE STONE CITY BLUFF ON THE BRAZOS RIVER IN BURLESON COUNTY WAS DISCOVERED IN 1848 BY FERDINAND ROEMER. IT IS 61.1 FEET THICK. BENEATH THE STONE CITY BEDS THERE ARE TWO FEET OF SPARTA SAND AND ABOVE THEM 24.2 FEET OF THE WHEELOCK MEMBER OF THE COOK MOUNTAIN FORMATION ARE EXPOSED AT THE BLUFF. THEY BELONG TO THE CLAIBORNE GROUP. THIS LOCALITY WAS DEPOSITED PROBABLY IN A LAGOON OR ESTUARY, CHIEFLY NEAR THE SEAWARD END OF THIS BODY OF WATER, WHERE THE SALINITY WAS NEARLY NORMAL AT TIMES.

SOME OF THE SHELLS COLLECTED INCLUDED ANOMIA SELLARDSI STENZEL, CONUS SAURIDENS CONRAD, DISTORSIO SEPTEMDENTATA GABB, FUSUS MORTONI LEA, AND OSTREA SELLAEFORMIS CONRAD. OTHER SPECIES WERE VOLUTES, NERITES, ARCHITECTONICAS, AND DENTALIUMS. SHARK TEETH, SOMETHING THAT APPEARS TO BE A KIND OF CUTTLE BONE, AND A CRAB CLAW WERE ALSO COLLECTED.

BULLETINS FROM THE UNIVERSITY OF TEXAS BUREAU OF ECONOMIC GEOLOGY WERE USED FOR REFERENCES.

ooOoo

TIMES AND HEIGHTS OF HIGH AND LOW WATER
GALVESTON CHANNEL

DECEMBER, 1968

DAY		HIGH A.M.	FT.	HIGH P.M.	FT.	LOW A.M.	FT.	LOW P.M.	FT.
1	SU	0.48	1.1	3.48	1.4	8.06	0.0	9.24	0.9
2	MO	0.54	1.1	4.30	1.5	8.30	-0.1	10.24	1.0
3	TU	1.06	1.1	5.12	1.5	9.00	-0.2	11.00	1.1
4	WE	1.18	1.1	5.48	1.5	9.30	-0.3		
5	TH			6.30	1.4	10.06	-0.3	11.54	1.1
6	FR	1.54	1.2	7.12	1.4	10.36	-0.3		
7	SA	2.12	1.2	7.54	1.3	0.12	1.2	11.12A	-0.3
8	SU	2.36	1.2	8.42	1.3	0.30	1.2	11.48A	-0.3
9	MO	2.42	1.2	9.24	1.2	1.12	1.2	12.24	-0.2

10	TU			10.06	1.2			1.06	-0.1
11	WE			10.30	1.1			1.48	0.0
12	TH			10.48	1.1			2.54	0.2
13	FR	10.24	0.7	11.00	1.0	5.30	0.6	4.24	0.4
14	SA	12.48P	0.9	11.12	1.0	5.54	0.3	6.06	0.6
15	SU	2.12P	1.2	11.24	1.0	6.30	-0.1	7.36	0.8
16	MO	3.18P	1.4	11.48	1.0	7.12	-0.4	9.00	0.9
17	TU			4.12	1.6	7.54	-0.7	10.00	1.0
18	WE	0.06	1.1	5.06	1.7	8.42	-0.9	10.42	1.1
19	TH	0.48	1.2	6.00	1.6	9.30	-1.0	11.18	1.2
20	FR	1.42	1.2	6.48	1.6	10.18	-1.1	11.42	1.2
21	SA	2.30	1.3	7.36	1.4	11.12	-1.0		
22	SU	3.24	1.2	8.30	1.3	0.24	1.1	12.00	-0.8
23	MO	4.18	1.1	9.12	1.2	1.06	1.0	12.48	-0.6
24	TU	5.24	0.9	9.42	1.0	2.18	0.9	1.42	-0.3
25	WE	7.12	0.8	10.06	0.9	3.24	0.7	2.36	0.0
26	TH	9.48	0.7	10.24	0.8	4.36	0.4	3.48	0.3
27	FR	12.36P	0.8	10.42	0.8	5.30	0.2	5.30	0.6
28	SA	2.12P	0.9	10.48	0.8	6.12	-0.1	6.12	0.7
29	SU	3.06P	1.1	10.54	0.8	6.54	-0.3	9.00	0.8
30	MO			3.54	1.2	7.30	-0.4		
31	TU			4.30	1.2	8.06	-0.5		

JANUARY 1969

1	WE			5.18	1.2	8.42	-0.6		
2	TH			5.54	1.2	9.18	-0.6	11.18	0.9
3	FR	12.42	0.9	6.30	1.1	9.54	-0.6	11.24	0.9
4	SA	1.30	0.9	7.00	1.1	10.24	-0.6	11.42	0.9
5	SU	2.18	0.9	7.30	1.1	11.00	-0.6		
6	MO	2.54	0.9	7.48	1.0	12.06	0.9	11.36A	-0.5
7	TU	4.00	0.8	8.06	0.9	12.42	0.8	12.12	-0.4
8	WE	5.12	0.8	8.18	0.9	1.18	0.6	12.48	-0.3
9	TH	6.42	0.7	8.30	0.8	2.06	0.4	1.30	0.0
10	FR	8.42	0.6	8.36	0.8	2.54	0.2	2.24	0.2
11	SA	11.06	0.7	8.48	0.8	3.42	0.0	3.36	0.5
12	SU	1.06P	0.9	8.30	0.8	4.36	-0.3	5.54	0.8
13	MO			2.30	1.1	5.36	-0.6		
14	TU			3.36	1.3	6.36	-0.8		
15	WE			4.24	1.4	7.30	-1.0		
16	TH			5.12	1.4	8.30	-1.1	10.48	1.0
17	FR	12.12	1.0	5.54	1.4	9.24	-1.1	11.00	1.0
18	SA	1.36	1.0	6.30	1.3	10.12	-1.1	11.30	0.9
19	SU	2.54	1.0	7.00	1.1	11.06	-0.9		
20	MO	4.06	0.9	7.24	1.0	00.00	0.7	11.48A	-0.7
21	TU	5.18	0.8	7.42	0.9	12.48	0.5	12.30	-0.4
22	WE	6.42	0.7	8.00	0.8	1.24	0.3	1.12	-0.1
23	TH	8.24	0.6	8.00	0.7	2.18	0.1	2.06	0.2

TIME CORRECTION FOR: SOUTH JETTY - HIGH: -.39 LOW: -1.0
SAN LOUIS PASS - HIGH: -.09 LOW: - .0

Texas CONCHOLOGIST

VOLUME V, No. 5 JANUARY 1969

NOTES & NEWS

Next Meeting

Our next meeting will be held on January 22 in the Service Center, 4503 Beechnut Street, starting at 7:30 p.m. Dr. H. Odé will speak on: Scientific names of mollusks.

Report November Meeting

After reading of the minutes of the previous meeting it was announced that the following books had been acquired by our library: Field Guide to the Shells of Hawaii, Directory of Conchologists, Blake Reprint Reports. New Members are Frances Arrighi, Margie Cooper and Nancie Miller. Mr. and Mrs. Short and Fern Heinke presented an interesting program: "The other side of the shell".

Report December 8th fieldtrip.

About 20 brave people gathered at the San Luis bridge to shell on the mudflats. In spite of much digging and sieving only a very few live shells were collected. Most conspicuous were some large live Terebra dislocata. A live Pandora trilineata and a live Nassarius vibex may also be mentioned. Later in the afternoon everyone went to Bryan Beach near Freeport where according to reports better luck could be expected. Almost everyone obtained here a nice color series of fresh specimens of Tellina alternata and Tellina tayloriana, while one of us was so lucky to pick up a perfect Amaea.

Interesting Beachfind at San Luis Pass.

by H. Odé

In the very first issue of this publication (Sept. 1964) it was reported that a live specimen of Glycymeris pectinata was dredged in 9 feet of water in Galveston Bay. Later, a single valve of this species has come to our attention. It was collected by Mrs. Mildred Tate on Surfside Beach near Freeport. This location is close to San Luis Pass, one of the inlets of the Galveston Bay System. Thus the beaches near San Luis Pass appear the most likely spot to collect this for Texas most unusual bivalve. Recently I visited the beach near San Luis Bridge and had the good fortune to pick up a single and still relatively fresh valve of the species. There can be little doubt that the species is indeed living in Galveston Bay.

ooOoo

PUBLISHED BY THE CONCHOLOGY GROUP, OUTDOOR NATURE CLUB
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. OUTDOOR NATURE CLUB members may subscribe by payment of $1.00 annual membership dues to the CONCHOLOGY GROUP. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

FAMILY MARGINELLIDAE.

A WIDESPREAD TROPICAL FAMILY OF WHICH MANY SPECIES ARE KNOWN. BECAUSE THEY MOSTLY LIVE IN THE CORAL COMMUNITY ONLY A FEW SPECIES COME CLOSE T THE TEXAS COAST. ONLY A SINGLE SPECIES ON THE BEACH.

PRUNUM APICINUM MENKE 1828. DEAD SHELLS ARE FAIRLY COMMON AROUND PORT ARAN AND PORT ISABEL. NOT KNOWN FROM THE GALVESTON AND FREEPORT AREA. A LIVE SPECIMEN HAS BEEN REPORTED IN REF. 11. GENERALLY ASSOCIATED WITH OTHER SUBFOSSIL SPECIES IN THE BAYS AROUND CORPUS CHRISTI.

FIGURED IN: 1

PREVIOUS REFERENCES: 11, 14, 19, 22

LOCALITIES: PORT ARANSAS AND PORT ISABEL.

FAMILY CYMATIIDAE

OF THIS WORLDWIDE TROPICAL FAMILY OF LARGE COLORFUL GASTROPODS MORE AN MORE SPECIES ARE FOUND ON TEXAS BEACHES. ONLY TWO OF THOSE ARE NOT RARE.

CYMATIUM POULSENI MORCH 1877. IN THE LAST TEN YEARS MANY COLLECTORS HAVE PIC UP THIS SPECIES ON SOUTH PADRE ISLAND. EVEN A FEW LIVE SHELLS ARE KNOW FROM THE BEACH AT SOUTH PADRE ISLAND (COLL. SPEERS). ONCE A BROKEN SHELL WAS COLLECTED AT FREEPORT. THE SPECIES IS MORE COMMON ON MEXI- CAN BEACHES SOME 50 TO 80 MILES SOUTH OF THE RIO GRANDE.

FIGURED IN: 3, 6, 21

PREVIOUS REFERENCES: 19, 21

LOCALITIES: FREEPORT, PORT ARANSAS, PADRE ISLAND.

CYMATIUM PARTHENOPEUM VON SALIS 1793. OF THIS UNCOMMON SHELL ONLY A FEW BE SPECIMENS ARE KNOWN FROM TEXAS. LIVE SPECIMENS ARE KNOWN FROM PORT ISABEL (SEE TEX, CONCHOL. VOL. 2, #1). DEAD SHELLS FROM FREEPORT (SU SIDE, COLL. TATE) AND SOUTH PADRE ISLAND.

FIGURED IN: 21

PREVIOUS REFERENCES: 21

LOCALITIES: FREEPORT, SOUTH PADRE ISLAND.

Cymatium pileare Linne 1758. Although this species occurs in offshore waters along the entire Texas coast, beach shells are only known from Mustang and Padre Islands, where several collectors have picked up specimens. Specimens with hermit crabs are occasionally fairly common along the Aransas causeway and in the inlet bay area of Port Isabel. Possibly these shells are brought in by shrimpers. A few live records are known: a juvenile at Cline's Point, Mustang Island (coll. Speers).

Figured in: 1,3,5,6,21

Previous references: 22

Localities: Aransas Pass, Mustang Island, Padre Island.

Cymatium nicobaricum Roding 1798. This species is rarer than C. pileare in offshore waters and a few dead specimens are known from South Padre Island (coll. Speers) and from the Port Aransas area (coll. Speers).

Figured in: 1,3,5,6,21

Previous references: 19,21

Localities: Port Aransas, Padre Island.

Cymatium muricinum Roding 1798. Dead shells containing hermit crabs are occasionally found in the inlet areas at Port Isabel (coll. Speers and others). One dead sub-fossil specimen was collected from a spoil bank on Mustang Island (coll. Speers) and another was collected along the causeway (coll. Boone).

Figured in: 1,3,5,6,21

Previous references: none

Localities: Port Aransas, Port Isabel.

Distorsio clathrata Lamarck 1816. This is the most common representative of this family on Texas beaches. Dead shells are quite rare at Galveston and Sargent (both coll. Odé), but become more common south of Port Aransas. Live specimens are not uncommonly dredged along the entire Texas coast in offshore waters, but are infrequently found on the Gulf Beach at South Padre Island, generally after storms.

Figured in: 1,3,5,6,21

Previous references: 11,17,18,19,20,21,26,29

Localities: Galveston, Sargent, Mustang Island, Padre Island.

Remarks:

Several other species have been mentioned in the literature. Of Cymatium krebei Morch 1877 several specimens were recently reported collected in the South Padre Island inlet area, but we have not examined the specimens. C. krebsi occurs in Texas offshore waters.

ooOoo

PREPARE FOR EXPLORATORY

By Mildred Tate

Friend Allen has just called - - brought in a bit of the Gulf floor - - alert husband Leo for trip to the dock - - take buckets, boxes, etc. to the Jamie K (fifth boat out at Western.)

Watching from the car, I see the work involved - - going down the ladder into the ice bins - - passing buckets up and over boat after boat - - until at long last all containers are transported into the car. How much more time was involved in bringing the material up from the Gulf into the ice bins? How long were the great nets down? Were they full each time they were raised above the deck? What strangers fell around your feet as they were released? All these questions and many more will be answered in detail at a later time - - but now is the time for work; rushing home to the sorting table our first glance reveals rubble, trash, dead bits of crabs and critters, mud and broken shell.

With gown, gloves, and sometimes mask (!), operation exploratory begins!

Many hours are spent examining and separating what is seeming trash from what seems to be trash from trash! Anything so obvious as a recognizable shell is promptly put aside with the rest of his look alikes - - broken shells are examined for anything that might be attached. Some specimens are placed in alcohol some go into my freezer. Very little is thrown away. Several days of sorting brings forth many fine specimens, but nothing new to our collection. We are about ready to start looking for micro material, when suddenly from a pile of debris that had been examined many times before appears our little Typhis. How could I have missed this little beauty? With no hope of having the animal (after three days of exposure), it was indeed a great surprise when I washed the little shell to find the animal now decomposed had retained the operculum for us to see!

Photos kindly provided by Dr. Emily Vokes, Tulane University.

What an individual this shell! At first glance one might think it to be a small Murex. On closer examination, the characteristic that lets this genus stand alone is discovered. The spines project from the shoulders on each whorl and are hollow like soda straws, opening into the aperture of the body whorl. This rare group of shells has developed a number of different forms. Which one in ours?

The response to our call for help has been most gratifying.

We now feel safe in saying that our little beauty is probably Typhis sowerbii Broderip, or possibly a new species much like it. Length 23 mm, width 14 mm, locality 28 degrees, 18' North; 94 degrees, 28' West; depth 28 fms, date August, 1968. A Mediterranean species that has been discovered in the Caribbean! Caribbean sea shells off Texas? Indeed they are.

Thanks to Emily Vokes, Myra Keen, T. E. Pulley, Harvey Bullis, and Harold Harry. And to Allen Kight who has just brought another rare one in for us to enjoy. (His latest is a live-taken Amaea mitchelli Dall which he froze for us to study. It is a bright, big beauty, dripping with purplish fludis, complete and almost perfect).

ooOoo

A Presidential Address of 1931

by Dr. Helmer Odé

The other day my wife started rummaging in an old box filled with books and papers stored in the attic. Out came a most interesting publication: The British Mollusca, by R. Winckworth, a reprint from the Journal of Conchology, Vol. 19, No. 7, June 1932. From it I will discuss a few parts of the introduction; the checklist which is the main part of the paper is here of less immediated concern.

My first remark may be summarized by quoting the last sentence of the introduction, which was delivered as a presidential address at the meeting of 1931. "As it is nearly thirty years since a list of British mollusca was put before the Conchological Society, I think you will admit it is time someone attemped to revise it. I have done so with much misgiving and I heartily thank all those who have encouraged me and given me help and advice." When so eminent an authority as Winckworth considered 30 years a long time before revision was attempted, I may be forgiven, although perhaps not excused, for sharing the same opinion. An up-to- date version of a similar list of western atlantic species of the coastline of the U.S.A. is in my opinion long overdue. The number of new species published in so many diverse sources makes it, for the non-professional, extremely difficult to keep abreast of all developments and a systematic list quoting the sources would be immensely helpful to both professional and enthusiasts alike.

Concerning the "lumpers and the splitters", Winckworth makes some interesting observations. From his address it is clear that he takes a rather pragmatic view of the concepts genus and species. He says that the concept "genus" is even more artificial than that of species. The splitters, according to Winckworth, justify their use of numerous generic names by the argument that a

WIDE USE OF A SINGLE GENERIC NAME TENDS TO OBSCURE AFFINITIES BETWEEN SPECIES. THE "LUMPERS" ON THE OTHER HAND MAINTAIN THAT IN DOING SO THE DIFFERENCES BETWEEN SPECIES AND GENUS ARE OBSCURED. "THE OPPOSITION BETWEEN "SPLITTERS AND LUMPERS" IS PARTLY ONE OF MENTAL OUTLOOK AND NEVER CAN BE HEALED", ACCORDING TO WINCKWORTH.

I MIGHT ADD THAT ONE'S ATTITUDE IN THIS QUESTION IS ALSO INFLUENCED BY THE AMOUNT OF SPECIALIZED KNOWLEDGE ONE HAPPENS TO HAVE. THAT IS TO SAY, IN CERTAIN GROUPS ONE COULD BE CONSIDERED A LUMPER, IN OTHERS A SPLITTER. HOWEVER SMALL MY KNOWLEDGE MAY BE CONCERNING THE ODOSTOMIAS OF THE GULF OF MEXICO, I HAVE ALWAYS BEEN STRUCK BY THE FACT THAT IN MOST AMERICAN PUBLICATIONS FORMS LIKE ODOSTOMIA IMPRESSA, ODOSTOMIA GIBBOSA AND ODOSTOMIA LAEVIGATA ARE PLACED IN THE SAME GENUS. THIS MAY BE BASED ON ANATOMICAL INVESTIGATIONS OF THE ANIMAL, IN WHICH CASE I AM WRONG IN MY PREFERENCE FOR PLACING THESE SPECIES IN THREE DIFFERENT GENERA. WINCKWORTH, WHO STATES, "TO STEER A MIDDLE COURSE OF GIVING GENERIC NAMES AS WIDE A MEANING AS POSSIBLE AND FREELY INTRODUCING SUBGENERA", WOULD HAVE PLACED THESE SPECIES INTO DIFFERENT GENERA AS HIS USE OF MENESTHO AND ODOSTOMIA IMPLIES. ODOSTOMIA LAEVIGATA MAY NOT HAVE A BRITISH EQUIVALENT. MORE EXPERT KNOWLEDGE THAN I POSSESS IS REQUIRED TO SETTLE THE QUESTION. HENCE IN THIS GROUP I FIND MYSELF A SPLITTER WHEREAS IN OTHERS, WHICH I STUDIED IN LESS DETAIL, I AM OFTEN QUITE PUZZLED TO SEE THE GENERIC DIFFERENCES. ON A SPECIFIC LEVEL, THE SITUATION IS DIFFERENT AGAIN. IN THE PAST, UNFORTUNATELY, SPECIFIC DISTINCTION HAS BEEN MADE ON VERY MINUTE DETAILS IN ORNAMENTATION, CHANGES IN THE FORM DUE TO AGE, ETC. OFTEN THESE DISTINCTIONS CAN BE SHOWN TO BE AN INSUFFICIENT GROUND FOR A NEW SPECIES WHEN ADEQUATE MATERIAL BECOMES AVAILABLE. THIS TYPE OF SPLITTING, ONCE CALLED LESS CHARITABLY "SPECIES MONGERING" IS A HEADACHE OF ALL TAXONOMISTS AND A CAUSE OF ENDLESS CONFUSION.

WINCKWORTH DEVOTES MOST OF HIS PAPER TO A DESCRIPTION OF POSSIBLE WAYS OF STUDYING LIVE ANIMALS AND THEIR HABITS. AQUARIA ARE OF COURSE THE FIRST THING ONE THINKS OF IN SUCH A STUDY, BUT WINCKWORTH HAS KEPT SMALL SPECIES OF BIVALVES ALIVE IN A WATCHGLASS FOR MORE THAN A WEEK AND NUDIBRANCHS IN A FINGERBOWL FOR MANY WEEKS. SALINITIES CAN BE KEPT CONSTANT BY ADDING FRESH WATER REPLACING THE EVAPORATED VOLUME.

ooOoo

LITTORIDINA (TEXADINA) SPINCTOSTOMA ABBOTT AND LADD 1951.

THE BRACKISH WATER FAUNA OF THE NORTHWESTERN GULF OF MEXICO HAD NOT BEEN STUDIED UNTIL 1950. IN 1951 ABBOTT AND LADD DESCRIBED THE FIRST HYDROBIID, WHICH WAS NOW PROVED TO BE THE FIRST OF SEVERAL AT THAT TIME UNDESCRIBED SPECIES. I VENTURE HERE TO GUESS THAT SEVERAL MORE WILL FOLLOW. IN 1965 TWO ADDITIONAL SPECIES WERE ADDED TO THE LIST BY MORRISON, WHO GAVE FOR THE TYPE LOCALITY OF "ODOSTOMIA" BARRETTI HERON BAY IN MISSISSIPPI AND FOR VIOSCALBA LOUISIANAE, BARATARIA BAY IN LOUISIANA. IT APPEARS NOW VERY LIKELY THAT THE BRACKISH WATER FAUNA IN THE MUDDY COASTAL BAY OF THE NORTHERN AND NORTHWESTERN GULF WILL TURN OUT TO BE UNIFORMLY DISTRIBUTED BECAUSE MORRISON'S SPECIES BOTH HAVE TURNED UP IN LARGE NUMBERS IN BEACH AND BAY DRIFT IN TEXAS. SEVERAL ADDITIONAL HYDROBIID FORMS IN MY COLLECTION STILL AWAIT IDENTIFICATION.

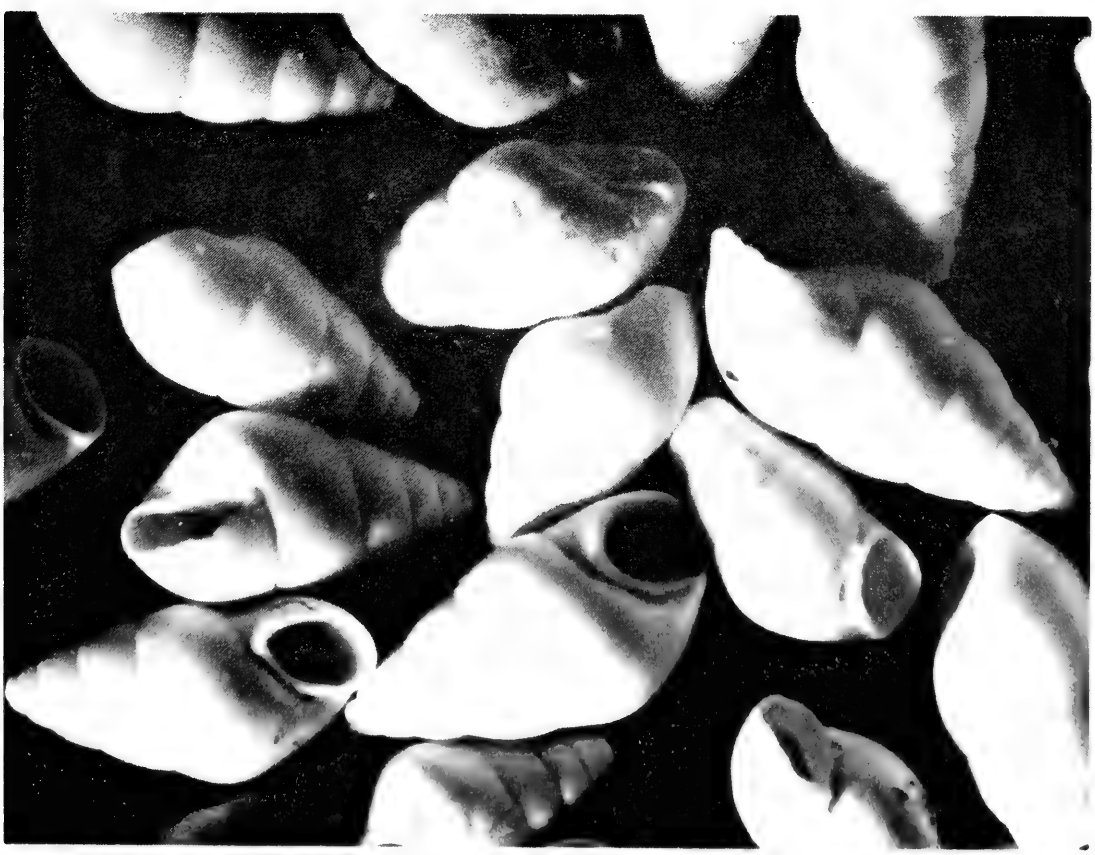
Littoridina sphinctostoma has a peculiar looking shell whose aperture is somewhat askew and constricted. By this characteristic shape mature specimens can immediately be recognized. The species was described from San Antonio Bay where it was dredged alive. Its occurence in beachdrift along the entire Texas Coast indicates that it eventually will be found in the brachish water portion of most of the Texas coastal bay systems. Live material is now known from Galveston Bay (coll. Boone) and has also been reported from the Mississippi delta (parker), Lake Pontchartrain (Solem) and the Rockport area in Texas (Parker).

Its synonymy is simple:

1951 Abbott, R. T, and Ladd, H. S., A new brackish water gastropod from Texas (Amnicolidae: Littoridina). Journ. Wash. Acad. Sci., Vol. 41 (10), p. 335-338.

References in the literature pertaining to Texas, Louisiana, and Mexico are as follows:

1951 Abbott, R. T., and Ladd, H. S. (see synonymy)
1951 Ladd, H. S., Publ. Inst. Mar. Sci., Vol. 2 (1), p. 125-163.
1955 Parker, R. H., Journ. Pal., Vol. 29, p. 193-211.
1955 Shepard, F. P., and Moore, D. G., Bull. Am. Ass. Petr. Geol., Vol. 39 (8).
1955 Shepard, F. P., and Moore, D. G., Bull. Am. Ass. Petr. Geol., Vol. 39 (8) p. 1463-1593, Pl. 38, fig. 2
1956 Parker, R. H., Bull. Am. Ass. Petr. Geol., Vol. 40, p. 295-376, Pl. 1, Fig. 5A, B.



1956 Shepard, F. P., Bull. Am. Ass. Petr. Geol., Vol. 40, p. 2537-2623, Pl. 3, fig. 11.
1959 Parker, R. H., Bull. Am. Ass. Petr. Geol., Vol. 43, p. 2100-2166
1960 Rice, W. H., A. Preliminary Checklist of the Mollusca of Texas, Inst. Mar Sci., Port Aransas, Texas.
1960 Parker, R. H., Recent Sediments Northwest Gulf of Mexico. Am. Ass. Petr. Geol., Tulsa, p. 302-337, Pl. 1, fig. 1.
1961 Solem, A., Nautilus, Vol. 74, p. 157-160.
1963 Garcia Cubas, A. Jr., Bol. Inst. Geol. Mex. Vol: 67 (4) 55 p.
1965 Odé, H., Texas Conchologist, Vol. 1 (9)
1967 Harry, H. W., Marine Mollusca of Galveston, Texas. Tentative and Preliminary List. Mar. Lab. Tex. A. and M. Univ., Galveston, Tex.

From this list it is seen that the range extends all the way into Mexico (Laguna de Terminos), east of Vera Cruz. The photograph was taken by Mr. Clyde Dexter from a large lot of dead shells collected by me at San Luis Pass, Galveston Island.

ooOoo

BOOK REVIEW

by Constance Boone

The Shell - Five Hundred Million Years of Inspired Design by Hugh and Marguerite Stix and R. Tucker Abbott, with photos by H. Landshoff. Published by Harry N. Abrams, Inc., 199 pages, 203 illustrations, including 82 hand-tipped plates in full color. Size about 12" by 14". $25.00 in bookstores. This is a most beautifully planned book by the owners of the Stix Rare Shell Gallery of New York. It is meant to inspire, to provide enjoyment for the armchair sheller, even the professional who might pause to feast his eyes on the continual wonder of mollusks. Dr. Abbott's information on the shells pictured makes it scientifically worthwhile.

If you got this book under your Christmas tree, you already know the pleasure of viewing the art of shells. However, if you want to purchase it now, it is available autographed from Dr. Tucker Abbott, Academy of Natural Sciences, 19th and the Parkway, Philadelphia, Pa., 19103, for $20.00 postpaid.

ooOoo

INTERESTING BEACH RECORD

by Constance Boone

In the last few months both Leola Glass and Constance Boone have each collected, on different dates, a live Terebra protexta Conrad on the sand flats near the bridge at San Luis Pass. This rather small Terebra is uncommonly found alive on our beaches; in fact, this is the first report of a live specimen from San Luis Pass. It lives usually in deeper water offshore. The specimens found were tannish, somewhat banded with brown on the lower whorls.

MOLLUSCANA

BY W. W. SUTOW, M.D.

The author of this feature had the pleasurable experience of acting as one of the judges of the 6th Annual Shell Show of the Gulf Coast Shell Club at Beaumont last July. During the judging I mentally tabulated the characteristics that seemed to earmark the displays that won the major trophies in this competetive exhibition. Since there has been some discussion about holding a competetive shell show within our own club, these subsequent remarks may serve as "something to think about" for the many members who may be entering competetion for the first time.

1. Originality. This refreshing quality is immediately noticed. I may refer to the subject matter or to the manner of presentation or to the interpretation of the data presented.

2. Unity. The entire exhibit is focused on its objective. Each part of this display contributes to the impact of the whole. Extraneous material and non-relevant facts are ruthlessly trimmed. (For example, a growth series or color variation series usually have no places in exhibits for the family or genus categories. A single specimen, not four or five, suffices to exemplify a species.)

3. Appropriateness. All organized competetive shell shows define classes and categories and divisions for the exhibits. Each exhibit must be entered in the appropriate classification. The judges are bound by the regulations. All non-appropriate entries are automatically eliminated from the judging. Therefore, it is critically important that the entry belongs in the proper category and meets the spirit and the requirements of that category.

   Unfortunately, some displays do not exactly "fit" competetive categories. This dilemma must be worked out satisfactorily with the exhibit committee before the judging. If the exhibit is planned with competetion in mind, it will usually pay to "slant" the exhibit for a specific category.

4. Effectiveness. What makes an effective display - a prize winner? The exhibit that clearly and directly and quickly identifies its purpose has a big edge in catching the eye and interest of the judge. This can be done simply by a short title for the exhibit or an explanatory text that forms a part of the display.

   Details as correct spelling, uniformity of labelling, and completeness of identifying data add to the worth of the display. Appropriate illustrations (photographs and diagrams) can greatly improve an exhibit. All printed material should be pertinent and brief.

5. Research Effort. Time and effort spent in planning and designing the exhibit will make themselves apparent in many ways noticeable to the judges. In any exhibit, an outstanding quality that subtly communicates itself to the judges is the "feel" of the degree of individual research activity that has gone into the assemblage of the factual data for the exhibit.

CONCHOLOGICAL PHILATELY (PART I)

BY W. W. SUTOW, M.D.

CONCHOLOGICAL PHILATELY IS ON THE MOVE! THE RECENT YEARS HAVE SEEN THE ISSUANCE OF AN INCREASING NUMBER OF POSTAGE STAMPS ON WHICH THE MOLLUSK IS THE CENTRAL DESIGN. THE DEFINITIVE ISSUES OF NEW GUINEA AND PAPUA (1968 AND 1969) WILL ADD FIFTEEN NEW STAMPS TO THIS TOPICAL AREA. THE NEW GUINEA AND PAPUA STAMPS DEPICT THE FOLLOWING MOLLUSCAN SPECIES: CONUS MARMOREUS, TRIDACNA SQUAMOSA, LIOCONCHA CASTRENSIS, MUREX RAMOSUS, CHARONIA TRITONIS, STROMBUS SINUATUS, LAMBIS SCORPIUS, NAUTILUS POMPILIUS, VOLUTA RUCKERI, PAPUSTYLA PULCHERRIMA, OVULA OVUM, CONUS LITOGLYPHUS, MITRA MITRA, PHALIUM AREOLA, AND CONUS GLORIAMARIS. THE RYUKYA ISLANDS (WITH MUREX TRIREMIS, MITRA MITRA, EUPROTOMUS BULLA, LAMBIS CHIRAGRA, AND TURBO MARMORATUS) HAS RECENTLY CONTRIBUTED ITS SHARE OF COLORFUL SEASHELL STAMPS.

FOR THOSE INTERESTED IN CHASING DOWN STAMPS SHOWING SEASHELLS OR MOLLUSKS, A STANDARD PHILATELIC CATALOG, SUCH AS SCOTT'S STANDARD POSTAGE STAMP CATALOGUE (UPDATED ANNUALLY) IS HELPFUL. THE EFFORT REQUIRED, HOWEVER, TO THUMB THROUGH THESE ENCYCLOPEDIC TOMES IS EXHAUSTING - AND PERHAPS PROHIBITIVE FOR MOST. IN A PREVIOUS ARTICLE IN THIS PUBLICATION (VOLUME III, OCTOBER, 1966) REFERENCE WAS MADE TO SOME OF THE LITERATURE ON THE SUBJECT OF CONCHOLOGICAL PHILATELY. SINCE THEN, THE AMERICAN TOPICAL ASSOCIATION HAS RELEASED HANDBOOK NO. 62 ENTITLED "ANIMALS ON STAMPS" (BY H. STROM AND L. H. LEVY). THIS HANDBOOK IS AN ENGLISH TRANSLATION OF THE 4TH EDITION OF A GERMAN PUBLICATION. THE STAMPS (MANY ILLUSTRATED) ARE FIRST LISTED BY COUNTRIES. THEN, IN THE SECOND SECTION OF THE BOOK, THE SAME STAMPS ARE SUBDIVIDED UNDER HEADINGS THAT INCLUDE PHYLUM, CLASS, ORDER, SUBORDER, SUPERFAMILY, FAMILY, GENUS AND SPECIES. WHILE SERIOUS NOMENCLATURAL ERRORS ARE OCCASIONALLY SPOTTED, THE BOOK SERVES AS A FAIRLY USEFUL CHECKLIST FOR THE CONCHOLOGICAL PHILATELIST. (THE BOOK MAY BE PURCHASED FOR $6.00 FROM THE AMERICAN TOPICAL ASSOCIATION, 3306 NORTH 50TH STREET, MILWAUKEE, WISCONSIN, 53216.)

BASED ON THE MANNER IN WHICH THE MOLLUSCAN SUBJECT IS PRESENTED, THE MOLLUSKS-ON-STAMPS STAMPS CAN BE DIVIDED INTO SEVERAL CLASSES. FOR EXAMPLE, THERE ARE STAMPS ON WHICH THE MOLLUSK ITSELF IS THE CENTRAL FEATURE AND A PROPORTIONATELY LARGE AND TRUE REPRODUCTION OF THE MOLLUSKS IS SHOWN. THEN THERE ARE THE POSTAL ISSUES ON WHICH THE MOLLUSK IS INCORPORATED ONLY AS A MINOR FEATURE OF THE OVERALL DESIGN. OTHER CATEGORIES ARE MADE UP OF STAMPS ON WHICH (A) THE MOLLUSK IS PRESENTED IN STYLIZED FORM AS THE CENTRAL DESIGN, (B) THE MOLLUSK IS AN IMPLIED OR INCIDENTAL PART OF THE CENTRAL THEME, AND, (C) FOSSILS OF MOLLUSKS ARE SHOWN.

IT SEEMS DESIRABLE AT THIS TIME TO ATTEMPT A SYSTEMATIC TABULATION OF THE MOLLUSCAN STAMPS IN A CONCHOLOGICAL PUBLICATION. THE "SEASHELLS ON STAMPS" TOPICAL COULD BE OF MORE THAN PASSING INTEREST TO MANY CONCHOLOGISTS. IN THE LISTS PRESENTED BELOW THE KEY DATA INCLUDE THE NAME OF THE MOLLUSCAN SPECIES PICTURED, COUNTRY AND YEAR OF ISSUE, THE FACE VALUE OF THE STAMP AND THE SCOTT CATALOG NUMBER. THESE CHECKLISTS WILL REQUIRE UPDATING REGULARLY AND PERHAPS FREQUENTLY. MOLLUSCAN SUBJECTS HAVE APPEARED ON STAMPS OF CUBA AND NORTH KOREA BUT THESE (AT PRESENT) CONTRABAND ITEMS HAVE BEEN EXCLUDED FROM THE LISTS.

CHECKLIST OF MOLLUSK-ON-STAMPS

FIRST GROUP (MOLLUSK DEFINITIVELY PICTURED AS THE CENTRAL DESIGN)

	MOLLUSK	COUNTRY	YEAR	VALUE	SCOTT NO.
1.	CYPRAECASSIS RUFA	COMORO IS.	1962	50C	48
2.	HARPA CONOIDALIS	"	1962	1FR	49
3.	MUREX RAMOSUS	"	1962	2FR	50
4.	TURBO MARMORATUS	"	1962	5FR	51
5.	PTEROCERA SCORPIO	"	1962	20FR	52
6.	CHARONIA TRITONIS	"	1962	25FR	53
7.	CHARONIA TRITONIS	WALLIS ET FUTUNA	1962/1963	25C	159
8.	MITRA EPISCOPALIS	"	1963	1FR	160
9.	CYPRAECASSIS RUFA	"	1963	2FR	161
10.	MUREX TENUISPINA	"	1963	4FR	162
11.	OLIVA ERYTHROSTOMA	"	1963	10FR	163
12.	CYPRAEA TIGRIS	"	1963	20FR	164
13.	HARPA VENTRICOSA	"	1963	50FR	C18
14.	MUREX ANTILLARUM	JAMAICA	1964	4P	222
15.	STROMBUS TRICORNIS	FR. SOMALI COAST	1962	25FR	295
16.	TROCHUS DENTATUS	"	1962	30FR	296
17.	ROSTELLARIA MAGNA	"	1962	60FR	C28
18.	LAMBIS BRYONIA	"	1962	100FR	C29
19.	CONUS PAPILIONACEUS	TOGO	1964/1965	1FR	J56
20.	MARGINELLA FABA	"	1965	2FR	J57
21.	CYPRAEA STERCORARIA	"	1965	3FR	J58
22.	CANCELLARIA CANCELLATA	"	1965	10FR	J61
23.	CYMBIUM PEPO	"	1965	15FR	J62
24.	TYMPANOTOMUS RADULA	"	1965	20FR	J63
25.	LAMBIS LAMBIS	BR. SOLOMON IS.	1964	1 1/2D	130
26.	STROMBUS GIGAS	TURKS & CAICOS	1957	6D	128
27.	STROMBUS LATUS	TOGO	1965	4FR	J59
28.	STROMBUS GIGAS	BRABADOS	1965	$1	279
29.	PTEROTROPHUS HIRASEI	JAPAN	1963	4Y	746
30.	STROMBUS GIGAS	BAHAMAS	1965	10S0D	217
31.	FASCIOLARIA TRAPEZIUM	MONACO	1964	0.12FR.	583
32.	PHALIUM BANDATUM	RYUKYU	1959	5Y	60
33.	PHALIUM BANDATUM (REISSUE)	"	1960/1961	5Y	78
34.	CHARONIA NODIFERA	MOROCCO	1965	25FR.	125
35.	CYMBIUM NEPTUNI	"	1965	25FR.	124

(TO BE CONTINUED)

TIMES AND HEIGHTS OF HIGH AND LOW WATER
GALVESTON CHANNEL

JANUARY 1969

DAY	HIGH A.M.	FT.	HIGH P.M.	FT.	LOW A.M.	FT.	LOW P.M.	FT.
24 FR	10.30	0.6	8.06	0.7	3.12	-0.1	2.48	0.5
25 SA	12.54P	0.8	7.48	0.7	4.06	-0.2	4.30	0.7
26 SU			2.24	0.9	5.06	-0.3		
27 MO			3.18	1.0	6.06	-0.4		
28 TU			3.54	1.0	6.54	-0.5		
29 WE			4.30	1.1	7.42	-0.6		
30 TH			5.00	1.1	8.24	-0.6	10.18	0.8
31 FR	00.00	0.8	5.24	1.1	9.06	-0.7	10.24	0.8

FEBRUARY 1969

1 SA	1.18	0.8	5.54	1.0	9.42	-0.7	10.36	0.8
2 SU	2.06	0.9	6.12	1.0	10.12	-0.6	10.54	0.7
3 MO	2.54	0.9	6.18	0.9	10.42	-0.6	11.18	0.6
4 TU	3.54	0.9	6.36	0.9	11.12	-0.4	11.48	0.4
5 WE	4.54	0.8	6.42	0.8	11.48	-0.2		
6 TH	6.06	0.8	6.48	0.8	12.18	0.2	12.30	0.0
7 FR	7.30	0.8	6.48	0.8	1.06	0.0	1.12	0.3
8 SA	9.18	0.8	6.48	0.8	1.48	-0.2	2.06	0.6
9 SU	11.42	0.9	6.24	0.9	2.48	-0.4	3.30	0.8
10 MO			1.42	1.1	4.00	-0.5		
11 TU			2.48	1.3	5.12	-0.7		
12 WE			3.36	1.3	6.24	-0.8		
13 TH			4.18	1.4	7.30	-0.9		
14 FR			4.48	1.3	8.24	-0.9	9.54	0.9
15 SA	1.06	1.0	5.12	1.2	9.18	-0.9	10.18	0.8
16 SU	2.24	1.0	5.36	1.1	10.06	-0.7	10.42	0.6
17 MO	3.36	1.0	5.54	1.0	10.48	-0.5	11.18	0.4
18 TU	4.42	1.0	6.12	0.9	11.30	-0.2		
19 WE	5.54	0.9	6.18	0.9	00.00	0.2	12.12	0.1
20 TH	7.06	0.9	6.18	0.8	12.30	0.0	12.54	0.4
21 FR	8.30	0.9	6.18	0.8	1.18	-0.1	1.30	0.6
22 SA	10.24	0.9	5.54	0.9	2.00	-0.2	2.18	0.8
23 SU			12.48	1.0	2.54	-0.2		
24 MO			2.18	1.0	4.00	-0.2		
25 TU			3.00	1.1	5.12	-0.2		
26 WE			3.36	1.1	6.24	-0.3		
27 TH			4.00	1.2	7.18	-0.3		
28 FR			4.18	1.4	8.06	-0.4		

TIME CORRECTIONS FOR: SOUTH JETTY - HIGH: -.39 LOW: -1.05
SAN LUIS PASS - HIGH: -.09 LOW: - .09

Texas CONCHOLOGIST

UME V, No. 6 FEBRUARY 1969

NOTES & NEWS

NEXT MEETING

OUR NEXT MEETING WILL BE HELD ON WEDNESDAY, FEBRUARY 26, 7:30 P.M. AT THE SERVICE CENTER, 4503 BEECHNUT STREET. DR. HOWARD O. WRIGHT OF THE UNIVERSITY OF HOUSTON WILL SPEAK ON "CRABS".

REPORT JANUARY MEETING

OUR LAST MEETING WAS WELL ATTENDED. REPORTS ON THE LIBRARY AND THE MATAGORDA FIELD TRIPS WERE PRESENTED. DOOR PRIZES WERE FURNISHED BY CARLOS CARDEZA, ALL COLLECTED AT SANIBEL. LARRY HORNER EXHIBITED SOME VERY FINE SHELLS OBTAINED IN OFFSHORE TEXAS WATERS, INCLUDING SEVERAL AMAEA MITCHELLI, CONUS SP., (SEE FOR FIGURE: TEXAS CONCHOLOGIST, VOL. 2(5), SCONSIA STRIATA, AND TEREBRA FLAMMEA. MRS. L. A. BARNETTE SHOWED A VERY FINE OIL PAINTING OF SHELLS WHICH SHE DID HERSELF. DURING THE MEETING SEVERAL MOST IMPORTANT DECISIONS WERE MADE BY THE MEMBERSHIP. FOR THESE WE REFER TO THE REPORT BY OUR PRESIDENT, MR. L. DEXTER, WHICH IS PRINTED ELSEWHERE IN THIS ISSUE. DR. H. ODÉ SPOKE ON THE SUBJECT OF "SCIENTIFIC NAMES".

REPORT MATAGORDA FIELD TRIP

ONLY A FEW CARS MADE IT THROUGH THE DENSE FOG IN THE HOUSTON AREA TO A CLEAR BEACH AT MATAGORDA ON JANUARY 18TH. FEW SHELLS OF INTEREST WERE FOUND: A DEAD VALVE EACH OF MACROCALLISTA NIMBOSA AND TRACHYCARDIUM ISOCARDIA MAY BE MENTIONED; THE LATTER SPECIES HAS AT OTHER OCCASIONS BEEN FOUND AT MATAGORDA, BUT IS RARE. ON THE WAY BACK TO HOUSTON, SARGENT BEACH WAS VISITED; HERE A SPECIMEN OF AMAEA MITCHELLI WAS FOUND.

AUDUBON SOCIETY

A LOCAL CHAPTER OF THE NATIONAL AUDUBON SOCIETY WAS FORMED IN HOUSTON, NAMED HOUSTON AUDUBON SOCIETY, WHICH HELD ITS ORGANIZATIONAL MEETING ON FEBRUARY 5TH. WE WISH THIS NEW ORGANIZATION MUCH SUCCESS.

JANTHINAS

IN A LETTER PUBLISHED IN "BETWEEN THE TIDES", THE PUBLICATION OF OUR SISTER CLUB IN BEAUMONT, DR. BAYER ASKS FOR LIVE MATERIAL OF JANTHINA. WE URGE OUR MEMBERS TO COLLECT THIS MATERIAL, WHEN, HOPEFULLY, THE JANTHINAS START TO COME IN SHORTLY. FOR FURTHER PARTICULARS CONSULT "IN BETWEEN THE TIDES", FEBRUARY, 1969.

NEW TEXAS SPECIES

DR. HAROLD HARRY HAS GIVEN THE DESCRIPTION OF A NEW MARINE BIVALVE, ALIGENA TEXASIANA, IN THE VELIGER, VOL. II(3), P. 168-171. THIS SPECIES IS NOT UNCOMMON IN VEACH DRIFT ALONG THE ENTIRE TEXAS COAST. WE HOPE TO PUBLISH IN THE NEAR FUTURE A SHORT ARTICLE TOGETHER WITH SOME FIGURES OF THIS INTERESTING SPECIES.

PUBLISHED BY THE HOUSTON CONCHOLOGY SOCIETY
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

FAMILY FISSURELLIDAE

THE SOCALLED "KEYHOLE LIMPETS" FORM A LARGE AND VARIED FAMILY MAINLY IN TROPICAL SEAS. BECAUSE MANY OF ITS MEMBERS LIVE EITHER IN DEEP WATER OF ON ROCKY SHORES, THE FAMILY IS ON TEXAS BEACHES REPRESENTED BY ONLY TWO SPECIES.

DIODORA CAYENENSIS LAMARCK, 1822. THIS FAIRLY COMMON SHELL IS FOUND IN BEACHDRIFT ALONG THE ENTIRE TEXAS COAST. IT LIVES ON JETTIES AND ALSO IN THE INLETS WHERE IT IS FOUND ON OYSTER-CLUMPS, ROCKS, ETC. THE FRESH WATER, POURING INTO THE BAYS AND INLETS SINCE HURRICANE BEULAH, HAS APPARENTLY WIPED OUT MOST INLET SPECIMENS IN THE CORPUS CHRISTI AND PORT ISABEL AREAS. LIVE SPECIMENS ARE KNOWN FROM GALVESTON WEST BAY.

FIGURED IN 1,3,4,5,6,21

PREVIOUS REFERENCES: 11,12,14,15,18, 19

LOCALITIES: DEAD SHELLS IN DRIFT ALONG THE ENTIRE TEXAS COAST. ALIVE AT GALVESTON, PORT ARANSAS AND PORT ISABEL, OFFSHORE.

LUCAPINELLA LIMATULA REEVE, 1850. IN TEXAS THIS IS A BAY AND INLET DWELLER. FOUND ALIVE IN ARANSAS BAY AND AROUND PORT ISABEL. IT LIVES ON ROCKS, OLD SHELLS AND OYSTER-CLUMPS. DEAD SPECIMENS CAN BE COLLECTED FROM DRIFT AT THESE LOCATIONS.

FIGURED IN: 1,3,4,5,6,21

PREVIOUS REFERENCES: 19.

LOCALITIES PORT ARANSAS AND PORT ISABEL.

FAMILY AKERIDAE.

A FAMILY OF THINSHELLED OPISTHOBRANCHS ("GLASS BUBBLES"). THE THREE TEXAS SPECIES ALL OCCUR IN THE BAYS.

HAMINOEA ANTILLARUM ORBIGNY 1841. THE MOST COMMON OF THE THREE TEXAS SPECIES. OCCASIONALLY QUITE COMMON IN THE GRASSFLATS IN INLET INFLU-

enced bay areas around Port Aransas and Port Isabel. Live specimens have been observed to secrete a purplish liquid (observ. Boone). This species is more globose and spherical than the other two.
Figured in: 14
Previous references: 19,20
Localities: Galveston, Freeport, Port Aransas, Port Isabel.

Haminoea elegans Gray 1825. The only Texas species which is spirally striate. It has been collected dead only at South Padre Island (col. Speers, Odé). Rare.
Figured in: 3
Previous references: 11,13,14,20
Localities: South Padre Island.

Haminoea succinea Conrad 1846. The smallest and most cylindrical of the three. Live specimens are rare at Galveston (coll. Glass), but are apparently more common near Port Aransas (coll. Speers) and Port Isabel, where it has been collected alive both from algae covered rocks and from grassflats.
Figured in: 3
Previous references: 17,18
Localities: Galveston, Port Aransas, Port Isabel.

Family Atyidae.
A family of opisthobranch mollusks which is widespread in the Caribbean faunal province. In Texas only a single species.

Atys riiseana Morch 1875. This for Texas rare shell has been collected one (dead) on the beach at San Luis Pass (coll. Odé) and a few dead specimens were taken on Mustang Island from beachdrift a few months after Hurricane Carla. (coll. Speers)
Figured in: 1,3
Previous references: none
Localities:San Luis Pass, Mustang Island.

Family Sepiidae.
Members of this family of Cephalopods have so far not been caught alive in the Gulf of Mexico. Sepia has a chalky plate as a shell, which is sold in variety stores for canaries to chip at. Some of these shields may have accidentally reached our beaches.

Sepia officinalis Linne 1758. Sepia shields have been rarely collected on the beaches in Texas, f.i. High Island, Freeport and Padre Island, especially around Big Shell. It is unlikely that all of these findings are caused by accidentally introduced material and it is more probable that the shields reach the Texas coast floating with the currents. Whether Sepia occasionally ventures into the Gulf of Mexico or whether the shields are transported from areas far out in the Atlantic can only be decided by further investigation.
Figured in: Not available in cited works.
Previous references: none
Localities: High Island, Freeport, Padre Island.

HOUSTON CONCHOLOGY SOCIETY

BY

LAURENCE DEXTER

AT THE JANUARY MEETING OF THE CONCHOLOGY GROUP OF THE OUTDOOR NATURE CLUB OF HOUSTON, THE VOTING MEMBERS OF THE GROUP ELECTED TO WITHDRAW FROM THE PARENT CLUB AND BECOME A WHOLLY INDEPENDENT ORGANIZATION. THIS ACTION WAS DEEMED NECESSARY FOR CONTINUED GROWTH IN NUMBERS AND PRESTIGE. THE FOLLOWING IS A BRIEF SUMMARY OF THE SEQUENCE OF EVENTS THAT LED UP TO THIS ACTION.

THE CONCHOLOGY GROUP WAS ORGANIZED IN 1958 AS A STUDY GROUP OF THE OUTDOOR NATURE CLUB WITH AN INITIAL MEMBERSHIP OF 16. FIVE YEARS LATER IT STILL NUMBERED ONLY ABOUT 20 MEMBERS AND FUNCTIONED CHIEFLY AS A CONGENIAL HOBBY GROUP. IN 1963 IT ACQUIRED SEVERAL NEW MEMBERS WHO WERE INTERESTED IN A MORE SCIENTIFIC APPROACH TO THE STUDY OF SHELLS AND THIS LED TO THE LAUNCHING OF THE GROUP'S PUBLICATION, THE "TEXAS CONCHOLOGIST." THIS PUBLICATION AND THE GROUP'S ANNUAL SHELL SHOW ATTRACTED AN EVER-INCREASING NUMBER OF SHELL ENTHUSIASTS TO OUR MEETINGS AND AMONG THEM THERE WERE SOME WHO, FOR ONE REASON OR ANOTHER, DID NOT WISH TO BECOMW MEMBERS OF THE OUTDOOR NATURE CLUB. THEY WERE LISTED AS "SUBSCRIBERS" AND HAD NO VOTING PRIVILEGES BECAUSE THE OUTDOOR NATURE CLUB REQUIRES THAT ALL VOTING MEMBERS AND ALL OFFICERS OF ITS STUDY GROUPS BE DUES-PAYING MEMBERS OF THE PARENT CLUB. RECENTLY A COUNT REVEALED THAT THERE WERE SOME 70 MEMBERS AND "SUBSCRIBERS" IN THE HOUSTON AREA AND THAT ABOUT HALF OF THOSE WHO ATTENDED REGULARLY AND PARTICIPATED IN OTHER GROUP ACTIVITIES WERE NOT ACCORDED A FULL SHARE OF RESPONSIBILITY IN GROUP AFFAIRS EVEN THOUGH MANY OF THEI HAD BECOME INDISPENSIBLE TO THE GROWTH OF THE ORGANIZATION.

AT THE REQUEST OF THE OFFICERS OF THE GROUP, ITS CHAIRMAN, LAURENCE DEXTER, WROTE A LETTER TO THE BOARD OF DIRECTORS OF THE OUTDOOR NATURE CLUB TO EXPLORE THE POSSIBILITY OF RELAXING THE CLUB'S CONSTITUTIONAL PROVISION THAT ALL VOTING MEMBERS OF ITS STUDY GROUPS MUST BE PAID-UP MEMBERS OF THE PARENT CLUB. THIS LETTER WAS DULY ANSWERED FOR THE BOARD BY ITS CHAIRMAN, WILLIAM L. MCCLURE, WHO STATED THAT A RELAXATION OF EXISTING VOTING REQUIREMENTS WOULD CALL FOR A CONSTITUTIONAL AMENDMENT AND THAT SUCH AN AMENDMENT WOULD HAVE LITTLE CHANCE OF BEING ADOPTED BY THE BOARD.

GROUP MEMBER HAROLD GEIS EXPLAINED THE SITUATION AT THE JANUARY MEETING AND PRESENTED A RESOLUTION FOR WITHDRAWAL, WHICH WAS ACCEPTED BY SIGNED BALLOT WITH ONLY THOSE WHO WERE MEMBERS OF BOTH THE CONCHOLOGY GROUP AND THE OUTDOOR NATURE CLUB PARTICIPATING. THE VOTE WAS 16 TO 1. A MOTION THAT THE ORGANIZATION INCORPORATE AND APPLY FOR TAX-EXEMPT STATUS WAS ALSO ADOPTED. THE PAPERS CONTAINING THE ARTICLES OF INCORPORATION OF THE HOUSTON CONCHOLOGY SOCIETY HAVE BEEN SUBMITTED TO THE PROPER AUTHORITIES IN AUSTIN AND A DRAFT OF THE BY-LAWS IS IN PREPARATION. ALL WHO HAVE BEEN LISTED AS "SUBSCRIBERS" AND WHO LIVE WITHIN COMMUTING DISTANCE OF HOUSTON WILL BECOME FULL MEMBERS.

WE TAKE THIS OPPORTUNITY TO EXPRESS OUR GRATITUDE TO THE BOARD AND MEMBERSHIP OF THE OUTDOOR NATURE CLUB FOR THEIR PAST SUPPORT AND FOR THE MANY COURTESIES THEY HAVE EXTENDED TO US. ALTHOUGH WE FIND IT NECESSARY TO GO OUR SEPARATE WAYS, WE HOPE THAT IN THE FUTURE BOTH ORGANIZATIONS WILL BENEFIT FROM A CLOSE RELATIONSHIP BASED ON MUTUAL INTERESTS AND UNDERSTANDING. AS INDIVIDUALS WE WHO ARE MEMBERS OF BOTH ORGANIZATIONS ARE NOT WITHDRAWING FROM THE OUTDOOR NATURE CLUB AND WILL CONTINUE TO WORK FOR ITS BEST INTERESTS.

MOLLUSCANA

BY W. W. SUTOW, M.D.

In 1953, I visited a small fishing village near the city of Kochi which borders on Tosa Bay on the Island of Shikoku in Japan. This was the region from which such exquisite conchological rarities as Thatcheria mirabilis, the Pleurotomariids and the Latiaxis species originated. My guide was the late Shimma Nakayama, school principal and shell-collector. His "A CATALOGUE OF THE SHELL BEARING MOLLUSCA OF TOSA PROVINCE (KOCHI PREFECTURE)" serves as a useful checklist for shells from this conchologically rich hunting ground. We visited the homes of the fishermen and listened to some fascinating tales. These hardy fishermen eked out a precarious living dragging nets across the sea bottom for fish and "precious coral". The fortuitous by-products of their endeavors were the fabulous molluscan beauties that were in great demand by shell collectors of the world.

That this source of famous Japanese shells may have suffered a blow was suggested by Dr. Sadao Kosuge of the National Science Museum in Tokyo. In his talk before the New York Shell Club last year, Dr. Kosuge indicated that recently the netting techniques of the fishermen have changed. Previously, the nets were dragged along the sea bottom, thus catching seashells along with the fish. Now, in order to avoid excessive loss of equipment, the net is suspended some distance above the sea bottom. The fish are caught as they leap forward off the bottom. Dr. Kosuge wryly summarized the end results: "Better fishing but bad for the shell collector - shells don't leap".

* * * * * *

Recently, I acquired a shell book written in Spanish. It was titled "FONDO MARINO (THE SEA BOTTOM)". This was a small book of 157 pages. Most of it was composed of color photographs of shells, 208 species. I purchased the book because I wanted an illustrated reference for shells from the European region. I did not get that. Instead, the book showed species from all over the world. Being published in Spain, I presumed that the species selected represented those that seemed most striking or most interesting to the Spanish collector. It was impressive to note that most of the species shown were identical to those pictured in Japanese and American books illustrating world shells.

When one tabulated the geographic areas from which these shells came, the Indo-Pacific province contributed by far the greatest number - 63 species. As a matter of fact, the Japanese and Philippine shells, as well as much of the Australian species could have been included with the Indo-Pacific group. There were 29 shells from the Philippine Islands, 28 from the Mediterranean Sea, 25 from Japan and 22 from Australia. Of the Western Hemisphere fauna, 7 were pictured from Mexico, 7 from Panama, 5 from Florida, 4 from the Caribbean, 2 from California, 2 from the Atlantic Ocean, and one each from Brazil, Nicaragua, Uruguay and Gulf of Mexico. The Florida, Caribbean Sea and Gulf of Mexico species included: Strombus pugilis, Strombus gigas, Strombus costatus, Spondylus americanus, Pitar dione, Dolium perdix, Crepidula fornicata, Busycon contrarium, Murex florifer, and Semicassis testiculus.

COCHLIOLEPIS STIATA DALL 1889

IT HAS NOW BEEN ESTABLISHED THAT THE MOLLUSK FAUNA OF THE NORTHWESTERN GULF OF MEXICO CONTAINS MANY VITRINELLIDS. IN TEXAS ONE OF THE LARGEST OF THESE IS COCHLIOLEPIS STRIATA, A SPECIES, WHICH CAN BE FOUND UNCOMMONLY IN BEACHDRIFT. IN THE PHOTOGRAPH A RATHER LARGE BUT BEACHWORN SPECIMEN (7 MM. DIAMETER) IS SHOWN, COLLECTED FROM BEACHDRIFT ON THE WEST BEACH OF GALVESTON ISLAND. THE ANIMAL OF THIS SPECIES IS NOT WELL KNOWN.- DR. DONALD MOORE OF MIAMI TOLD ME THAT THERE EXISTS EVIDENCE THAT C. STRIATA LIVES, AS DOES C. PARASITICA, TOGETHER WITH A WORM. IN TEXAS C. STRIATA IS IN ALL LIKELIHOOD WIDELY DISTRIBUTED AND SPECIMENS ARE KNOWN FROM GALVESTON, FREEPORT, PORT ARANSAS AND PORT ISABEL.

AT FIRST GLANCE, WHEN SEEN FROM ABOVE, THE SHELL OF C. STRIATA RESEMBLES TO A STRIKING DEGREE A SMALL SINUM, BUT THE WIDE UMBILICUS IS AN IMMEDIATE AND UNMISTAKABLE CHARACTERISTIC FEATURE OF THE SHELL OF C. STRIATA.

THE SYNONYMY IS AS FOLLOWS:

1889 COCHLIOLEPIS STRIATA DALL, BULL. MUS. COMP. ZOOL. VOL. 18, P. 360.

1892 COCHLIOLEPIS STRIATA DALL, TRANS. WAGNER FREE INST. SCI., VOL. 3, P. 419, PL. 23, FIGS. 16,17.

1953 COCHLIOLEPIS STRIATA DALL, OLSSON AND HARBISON, MONOGR. 8, ACAD. NAT. SCI., PHILA., P. 432, PL. 52, FIG. 2.

1955 COCHLIOLEPIS STRIATA (STIMPSON) DALL, PERRY AND SCHWENGEL, MARINE SHELLS OF THE WESTERN COAST OF FLORIDA, P. 111, PL. 22, FIG. 142C.

1964 COCHLIOLEPIS STRIATA DALL, D. M. MOORE, PH D THESIS, UNIV. OF MIAMI FLA.

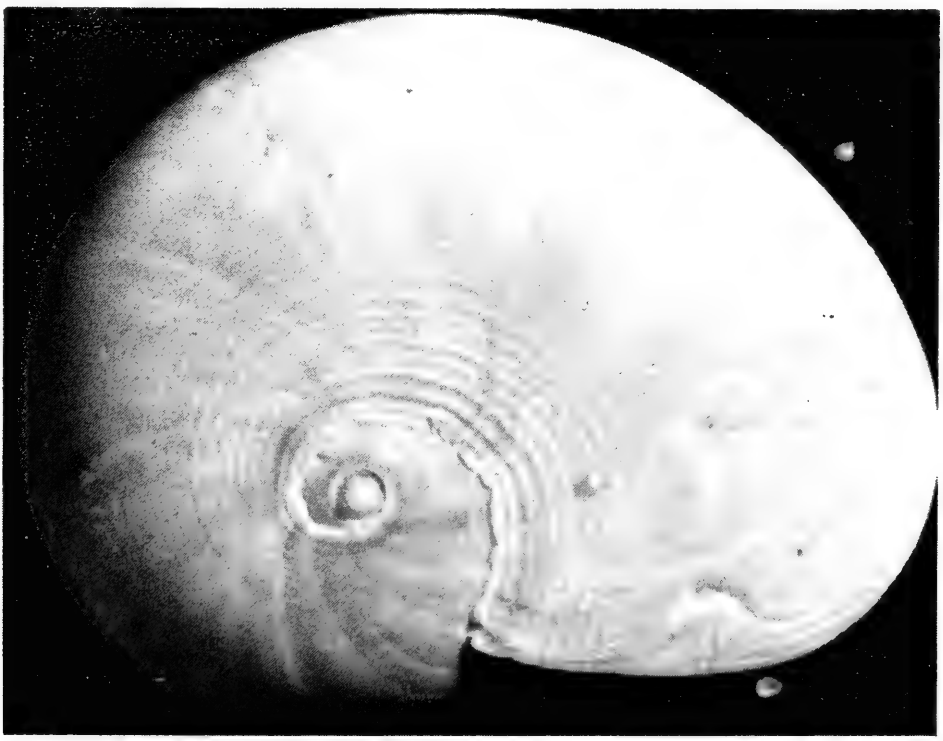
PREVIOUS REFERENCES FOR THE TEXAS COAST ARE FEW:

1964 D. M. MOORE (SEE SYNONYMY).

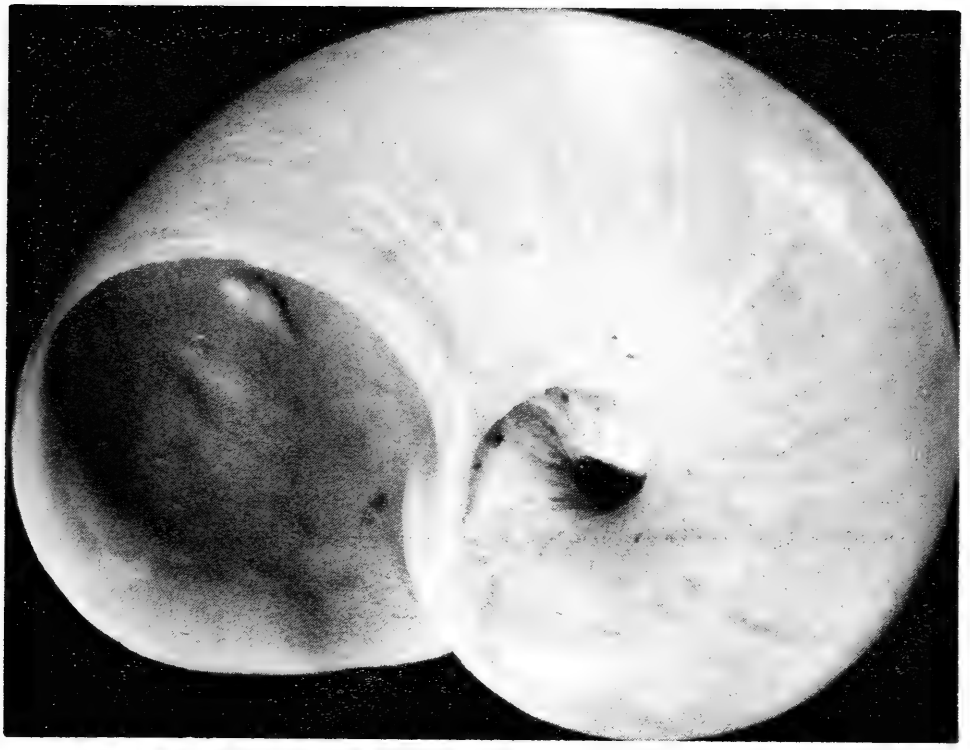
1967 H. ODÉ, TEX. CONCHOLOGIST, VOL. 3 (9)

1967 H. W. HARRY, TENTATIVE AND PRELIMINARY LIST OF MARINE MOLLUSCA OF GALVESTON, TEXAS.

NOT SO LONG AGO NO LESS THAN 15 SPECIMENS WERE COLLECTED AT ONE OCCASION ON GALVESTON BEACH, BUT IN GENERAL THE SPECIES IS UNCOMMON. IT IS ANOTHER OF THE "CAROLINIAN" SPECIES BECAUSE IT RANGES FROM THE CAROLINAS THROUGH FLORIDA TO TEXAS. IT IS ALSO KNOWN AS A PLIOCENE FOSSIL FROM ST. PETERSBURG, FLA.



CONTINUED NEXT PAGE.....



A COLLECTION OF MARINE MOLLUSCA FROM THE NORTHWESTERN PART OF THE GULF OF MEXICO

BY H. ODÉ

INTRODUCTION. THE MOLLUSCAN FAUNA OF THE NORTHWESTERN PART OF THE GULF OF MEXICO HAS NOT BEEN STUDIED WITH THE SAME DEGREE OF COMPLETENESS AS THE MOLLUSCAN FAUNAS OF FLORIDA AND THE ATLANTIC SEABOARD OF THE U.S.A. THIS IS IMMEDIATELY APPARENT FROM THE RATHER SMALL NUMBER OF ORIGINAL PUBLICATIONS DEALING WITH THE MOLLUSCAN FAUNAS IN THIS PART OF THE GULF OF MEXICO. CONSEQUENTLY RATHER FEW SPECIES HAVE THEIR TYPE LOCALITY HERE.

THE STUDY OF THE TEXAS MARINE MOLLUSCAN FAUNA STARTED WITH THE PUBLICATION OF ROEMER'S LIST OF BEACH SHELLS COLLECTED AT GALVESTON IN 1848. NO EARLIER PUBLICATIONS SEEM TO BE IN EXISTENCE AND SAY OR CONRAD NEVER WENT WEST OF THIS MISSISSIPPI IN THEIR INVESTIGATIONS OF RECENT AND FOSSIL FAUNAS. A SECOND PHASE IN THE STUDY WAS INAUGURATED WITH THE WORKS OF DALL, SINGLEY AND MITCHELL. UNTIL 20 YEARS AGO MANY, IF NOT MOST, OF THE REFERENCES FOR TEXAS, QUOTED IN VARIOUS SOURCES WERE BASED ON MATERIAL WHICH MITCHELL SENT TO DALL. IN THIS PHASE OF THE INVESTIGATION A SMALL NUMBER OF NEW SPECIES WAS ERECTED. DURING THESE YEARS THE MONUMENTAL ALBATROSS AND BLAKE REPORTS, AND THE MONOGRAPH IN THE TRANS. WAGNER FREE INST. SCIENCE, BY DALL APPEARED. THE HISTORY OF THESE AND OTHER INVESTIGATIONS MAY BE FOUND IN A PAPER BY GALTSOFF OF 1954. ONE OF THE OTHER RESEARCH VESSELS WHICH CONTRIBUTED TO THE BIOLOGICAL KNOWLEDGE OF THE NORTHWESTERN PART OF THE GULF OF MEXICO, THE "FISH HAWK" ENDED ITS CAREER WITH AN INVESTIGATION OF THE OYSTER GROUNDS IN MATAGORDA BAY IN 1907 AND 1913 RESULTING IN ONE OF THE EARLIER REPORTS ON THE COMMERCIAL OYSTER.

DURING THE NEXT 40 YEARS ONLY SLOW PROGRESS WAS MADE IN THE STUDY OF THE TEXAS MARINE MOLLUSCAN FAUNAS, BUT INVESTIGATIONS IN MANY OTHER FIELDS OF OCEANOGRAPHY WERE CONTINUED. BUT AFTER THE CONCLUSION OF THE 2ND WORLD WAR THE DORMANT MALACOLOGICAL INTEREST BEGAN TO AWAKEN. SEVERAL PUBLICATIONS BY DR. T. PULLEY ARE AMONG THE FIRST IN A LONG SERIES OF PUBLICATIONS DEALING WITH VARIOUS ASPECTS OF THE MOLLUSCAN FAUNA OF THE GULF OF MEXICO.

Much of the offshore investigations were motivated by the interest in the Biology of several commercially important shrimp species and also by the exploration for hydrocarbons under the continental shelf. Still other investigations were of a purely biological nature. Such investigations were conducted at the Institute of Marine Science at Port Aransas and several interesting theses appeared at T.C.S., while the work of Parker (the outcome of an A.P.I. grant) was published in the Bull. of the A.A.P.G. These and many other studies have increased our knowledge far beyond the stage of 1950, when Pulley's checklist of Texas shells appeared in the Texas Journal of Science. In total I have found well over 200 papers and publications dealing directly or indirectly with the Texas marine molluscan fauna. The combined number of species mentioned, so far discounting for synonyms, is about 900.

Composition of the Texas fauna.

The Texas marine molluscan fauna may according to the simplest scheme be divided into three parts: 1) The bay faunas; 2) The inlet and surfzone faunas; 3) The offshore faunas. Much of the earlier information was based on shells collected on the beaches. These shells derive practically all from the first two named sources. But even here many bay forms living high up in the bays are not always present in drift (f.i. Modiolus demissus) so that beach collecting at best gives a reasonable idea of the inlet and surfzone fauna, an incomplete one of the bays and hardly any concerning close in offshore faunas. Still one should not dispense with it in a faunistic investigation because investigation of drift often provides important clues. Especially during the las 10 years after attention became focused on smaller species, many bay forms have been discovered first in drift where at times they may be quite numerous and only later were found in their natural habitat. Even today new elements of the surf fauna are being added to our lists.

An attempt to classify the bay faunas were made by Parker and some time later repeated in essentially the same form by Silas. This classification is largely based on a statistical distribution of species dredged from various environments in the bay systems, mainly along the southern part of the Texas Coast. Whether such a fine division is indeed feasible I will not discuss here, but for the sake of simplicity will rather follow Hedgpeth in speaking only simply of the bay faunas (except the very brackish ones) which Hedgpeth calls oyster bottom communities.

There are indications that Dall must have had access to material from the Texas offshore. Otherwise many of his correct references in the Blake Report and elsewhere are hard to explain. The first published offshore investigations are those of Hildebrandt and Hedgpeth. Two faunal communities were recognised by Hedgpeth, that of the brown shrimp and that of the white shrimp, characterised resp. by Pitar cordata and Callocardia texasiana. Beyond this division no further suggestions on biological grounds concerning offshore communities seem to have been made. At about the same time a study of Hulings (T.C.U.) appeared, followed by a similar one of Kennedy. This work tried to give a quantitative and statistical description of the species distribution in samples obtained off the East Texas Coast. It is probable that the small size and treatment of the samples invalidates some of their conclusions. Newmann (Texas A & M) treated the fauna, containing

pleistocene elements, of Stetson Bank and Parker finally published a study extending to very deep water including the continental slope. All these studies confirmed that a rich fauna of mollusks is present on the continental shelf off Texas. It is however apparent that in many of the above reports the smaller species were not treated with the same amount of completeness as the larger ones.

During the same period descriptions of new species of both bay forms and offshore species were given by a number of workers and an extension of the range of many others discovered. Microscope work of practically any beach sample on the beaches discloses a wealth of small forms not mentioned in the earlier faunal lists. The difficulty in compiling a more complete checklist is mainly that many of the lesser known genera of smaller forms are badly in need of complete revision. Such a revision has recently been given for the Vitrinellids by Moore and the genus Volvulella by Harry.

Probably the most up-to-date complete checklist of Texas marine shells (excluding most of the offshore species) is one published by Mrs. W. Rice of Rockport, who provided most of the Texas material for Moore's study of the Vitrinellids of the Gulf of Mexico. Another, also dealing exclusively with beach shells is being published regularly in installments by Mrs. Anne Speers and myself in the Texas Conchologist. The latter list is based on material of the Speers and my own collection, and already this list is in need of revision. One of the finest collections of offshore material is owned by Mrs. Mildred Tate of Lake Jackson who has brought together a scientifically valuable collection of dredged material obtained off Freeport. I am indebted to her for much information concerning the Texas fauna.

Collection for Houston Museum of Natural Science

About 5 years ago I was fortunate to make the acquaintance of Dr. Harold Geis. He had become very interested in the study of Marine faunas and in consequence had taken up scuba diving. After having been down a few times off Galveston and Freeport Dr. Geis had succeeded in bringing together a collection of shells which would not only be the envy of most collectors but also had a high intrinsic scientific value. Harold recognised that a more ambitious undertaking in gathering shells at this stage would be highly desirable. Past experience in bay and beach collecting together with the diving had shown that a rich harvest of surprises were awaiting those eager enough to reap them. If a systematic way of collecting on the Texas offshore could be devised, many data of scientific interest would follow. Encouraged by his diving success and spurred by my optimistic predictions Dr. Geis got together with Dr. T. Pulley of the Museum of Natural Science and representatives of the Bureau of Commercial Fisheries in Galveston. An agreement was entered upon according to which the Bureau would furnish samples of bottom fauna (grab, orange peel, dredge, etc.) which would be processed under our supervision by members of the Houston Shell Club. Several collecting trips were made and many samples were obtained, on board of the Gus III, of the Bureau of Comm. Fish. at Galveston, some at the cost of miserable hours of seasickness. The procedure in processing this material was as follows: Each sample was washed and cleaned in fresh water removing clay and sand and sieved through various size sieves. All samples were picked in their entirety,

under the microscope, mostly by Dr. Geis and me. After careful sorting according to supposed species, any shells of one species and certain location were given a lot number, which was recorded in a file. Another file was kept to record all lots of the same species. This work was done by many enthusiasts who spent many a Sunday afternoon and Tuesday evening doing the clerical work. The preliminary naming - - - mostly for the purpose of establishing a first approximate sorting - - - was done by myself. All material, except for that under processing, is now stored at the Museum of Natural Science at Houston. One remarkable fact should be mentioned here. In our samples we found that th richness of smaller species was much greater than is apparent from published literature. Perhaps this is due to the fact that all our samples were treated in their entirety and no part was considered as being characteristic of the whole. Or perhaps in the published literature difficult and doubtful forms are omitted. However, it is now possible that our collection is biased in favor of the smaller species (due to sampling technique).

At the onset it was clear that in so large an area as the Texas offshore many sample locations are required. Several years ago I estimated that the total number of species to and including the continental slope would surpass one thousand and now that about 10,000 lots have been catalogued I am inclined to increase this number to at least 1200. In order to obtain a representative number of so many species one needs a collection of about 30,000 lots. This we have taken as our aim.

Most of the offshore locations are off Galveston and Freeport and are in the range of 10-50 fathoms. A few are deeper and the deepest sample so far obtained comes from 500 fms. In total there are so far 150 locations, which however, are not distributed with equal density over the shelf. To obtain a more significant sampling over the area many more stations are required. We hope to achieve this by obtaining dredge material from as many cooperating agencies as possible. A number of samples was dredged by Mr. Allen Keith of Freeport. One of our last ventures, which yielded a large number of lots was in cooperation of the U.S. Navy. A group of about 30 divers was transported by the Destroyer "Hainsworth" to the Flower Gardens, where by means of diving, a large collection of shells was obtained from the Coral Reef, name Flower Gardens by fishermen. These reefs grow atop saltstructures and reach to a depth of 10 fathoms below the surface. The fauna of the reefs is quite different from the fauna of the muddy shelf which extends south of the coast for a width of over 100 miles. Many species of this coral fauna are purely caribbean and especially the smaller elements of it are of high interest since there appear to be several undescribed species and many for which these reefs mean a very significant extension of their domain. It is of course, necessary to sample more similar locations before a realistic interpretation of the molluscan fauna can be made. Especially the more southwestern part of the Texas Shelf area is in need of sample locations.

We have begun to add bay material to our collection. All this material has been collected alive at the location. It is our feeling that material to be placed in the collection should be obtained with some degree of probability at the location where it lived. For this reason most beach material should be excluded, because in general it may derive from sources far from the beach.

Preliminary Results

I may briefly mention some of the more interesting facts which have come to light or are being confirmed so far in our investigation.

(1) A study of the material obtained in shallow dredgings (10 fms), which is relatively close to shore discloses that many common beach shells are rare or absent in them, indicating that many of the small beach species about which little biological information is available are surfzone inhabitants. (For instance our most common gastropod Cyclostremella humilis).

(2) The fauna of the immediate offshore (10-50 fms) is in composition quite comparable to that found on the beach. It is true that many species occur in this material which are rarely or never found on the beach, but they belong to families which have closely related forms in shallower water.

(3) A rich but totally different fauna emerges in water between 100-150 fms. Its composition is quite different from that known to a beachcomber. Unfortunately too little is available to draw specific conclusions.

(4) Many elements of this fauna appear to belong to the Carolinian faunal province.

(5) Below 150-fms. the richness of the samples quickly decreases and the shells present appear typical for very deep water.

(6) A truly Caribbean fauna exists on the offshore coral reefs. It is not unlikely that elements of this fauna can under adequate conditions of temperature, salinity and sediment load of the water, establish themselves much closer to shore than in their typical coral community. In this way one might explain the occasional presence of some Caribbean elements close to shore (Bursa, Cymatium, Umbraculum, Mitra).

It is here not the place to go into details of the precise composition of the faunas encountered and I will only list a few of the highlights of our discoveries.

(1) We encountered in many samples a small bivalve of the genus Spheniopsis. This genus was described by Dall in the Trans. Wagner Free Inst. of Science and was reported as far as I know only as a fossil from the Miocene of Europe and Alabama.

(2) The occurence of many unsuspected species within 50 miles of the East Texas Coast. Here lives a rich fauna containing many Pyramidellids, many leptonids, and Vitrinellids. Most of the typical Padre Island beach shells are also obtained in this area.

(3) A rich Caribbean fauna is living on the coral reefs fringing the continental shelf. Too many forms to be enumerated live here: Spirolaxis, Malleus, Astraea, Bursa, Condylocardia, etc., many never reported from this region.

(4) Two specimens of Haliotis pourtalesi (one fragmentary, one colorful and fresh) were obtained from inside a sponge at 24 fms. depth.

(5) Strombus gigas was found alive (2" specimen) on East Flower Garden.

(6) Probably most of the known palagic forms occur in bottom samples except for Janthina none of which was ever found.

Conclusion.

In closing I want to digress a moment on the purpose of this collection. It was brought together with two aims in mind: 1) to provide a better insight into the fauna of a hitherto dimly known corner of the Atlantic system; 2) to collect a wealth of material over a rather extended area having many

different ecologies, so that the material gathered will reflect the differences in ecologies to such a degree that comparative studies become possible. Only by such studies it will become feasible to form better concepts concerning different species in various groups, and in this manner the study and revision of whole families and genera can be aided and progress in a regular fashion. It is our earnest hope that all workers in the field of malacological taxonomy will avail themselves of this collection, which as I stated before, is housed in the Museum of Natural Science in Houston. If this comes to pass all who have labored so strenuously in putting it together will feel richly repaid.

oooOooo

CONCHOLOGICAL PHILATELY (Part II)

by W. W. SUTOW, M.D.

Tabulation of mollusk-on-stamp stamps is continued. Occasionally, the Scott catalog numbers for some of the stamps may be changed from one edition of the catalog to the next edition. Most of the information given here were derived from the 1968 catalog. Sufficient data are given on this list, however, to permit proper identification in almost every case.

CHECKLIST OF MOLLUSK-ON-STAMP STAMPS (continued)

FIRST GROUP (Mollusk definitively pictured as the central design)

Mollusk	Country	Year	Value	Scott No.
36. Conus aulicus and Distorsio reticulata	Maldive Is.	1966	2L,10L, 30L,1R	172,176, 179,181
37. Conus litteratus and Cymatium maldiviensis	"	1966	5L,10R	174,186
38. Cowries: money, tiger, mole	Seychelles	1967	15c	237
39. Cones: textile betulinus, virgin	"	1967	40c	238
40. Arthritic spider conch	"	1967	R1	239
41. Subulate auger, triton	"	1967	2.25R	240
42. Murex triremis	Ryukyu Is.	1967/	3¢	157
43. Mitra mitra	"	1968	3¢	158
44. Lambis chiragra	"	"	3¢	159
45. Turbo marmoratus	"	"	3¢	160
46. Euprotomus bulla	"	"	3¢	161
47. Campylaea trizona	Romania	1966	40B	1882
48. Helix lucorum	"	"	55B	1883
49. Lymnaea stagnalis	"	"	1.75L	1885
50. Turbo cornutus	Japan	1968	15Y	-
51. Golden cowry	Fiji	1968	3sh	252
52. Conus marmoreus	Papua and	"	5c	-
53. Murex ramosus	New Guinea	"	30c	-
54. Charonia tritonis	"	"	60c	-
55. Strombus sinuatus	"	"	3c	-
56. Voluta ruckeri	"	"	10c	-
57. Lambis scorpius	"	"	15c	-
58. Papustyla pulcherrima	"	"	$1	-

(to be continued)

Texas CONCHOLOGIST

UME V, No. 7 MARCH 1969

NOTES & NEWS

Next Meeting

Our next meeting will be held on Wednesday, March 26 at the Service Center, 4503 Beechnut Street. Mr. Richard T. Simmons, teacher in Oceanography at Westbury High School, will discuss the marine biology curriculum in the Houston School District. We start at 7:30 p.m.

Report February Meeting

After reading of the minutes various matters were discussed. Our annual Shell Show will be held on May 9 and 10 at the Sharpstown Shopping Center. Moreover plans are made for members of the Houston Conchology Society to exhibit shells at Joske's store on Westheimer. Further details will be known at our next meeting. Door prizes were donated by Leola Glass with specimen shells from the Texas coast and Florida, and by Larry Horner of shells from Florida. Copies of the new bylaws were passed out. These were carefully but somewhat hastily prepared in order for the Society to apply for tax exempt status as quickly as possible. They will be considered for possible changes at the next meeting. Dr. Harold O. Wright presented a most entertaining account of his studies on the behaviour of crabs in the Canal Zone of Panama.

Mrs. Jean Dashiell asks all members to bring shells which can be sold during our next show to our next meeting, so that this material can be packaged in advance. PLEASE REMEMBER.

April Field Trip

Sunday, April 20 we assemble at 9:30 a.m. on the beach of Surfside near the high bridge. Leader is Mildred Tate assisted by Dorothy Kister. Purpose of the trip is to collect live Janthinas and shells for our May Shell Show. All are invited after the trip to visit the museum in Lake Jackson, where Mildred hopes to have a Conus gloriamaris on display.

South Padre Island Shell Fair

The Philadelphia Academy of Natural Sciences Award was won by Antonio Andretta of the South Padre Island Shell Club at the Shell Fair sponsored by that club in the newly-rebuilt park exhibit and meeting center on February 23. His display was on fossils in the educational group. Other major awards included the Gulf of Mexico Shell of the Show to Mrs. Betty Allen of Port Isabel, the Shell of the Show from any other area to Mrs. Hollis Q. Boone of Houston (for fresh water Unionidae), the Gary Award to Mary Foote and Marion Scruggs of South Padre Island (a new award for land snails of Texas), Hughes Memorial Award to Mrs. H. M. Holmes of Harlingen, and the Sweep-

continued on page 73.....

PUBLISHED BY THE HOUSTON CONCHOLOGY SOCIETY
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

FAMILY HIATELLIDAE

IN TEXAS TWO GENERA, HIATELLA AND PANOPE, BELONG TO THIS FAMILY OF BORERS AND DIGGERS.

PANOPE BITRUNCATA CONRAD. THIS BIVALVE IS EXCEPT FOR BOTH ATRINA SPECIES THE LARGEST BIVALVE IN TEXAS. HUGE VALVES CAN BE FOUND ON PADRE ISLAND, THE ONLY PLACE WHERE BEACH SHELLS HAVE BEEN FOUND. A LIVE SPECIMEN WAS DUG (COLL. YOUNG) NEAR THE PORT ARANSAS CAUSEWAY ON THE MUDFLATS. UNTIL RECENTLY IT WAS SURMISED THAT THE SPECIES WAS EXTINCT, BUT SEVERAL LIVE SPECIMENS ARE NOW KNOWN FROM FLORIDA AND TEXAS. THE REASON FOR ITS RARITY IS ITS HABIT TO BURROW VERY DEEP IN THE MUD. AT SOME OFFSHORE LOCATIONS OFF GALVESTON DEAD SHELLS ARE COMMON. OCCASIONAL IMPERFECT PAIRS HAVE BEEN COLLECTED 60 TO 80 MILES SOUTH OF THE RIO GRANDE ON THE MEXICAN GULF BEACH. SOME OLDER REFERENCES TO MYA ARENARIA, A SPECIES WHICH DOES NOT OCCUR IN THE GULF OF MEXICO, PROBABLY PERTAIN TO PANOPE.
FIGURED IN: 5, 6
PREVIOUS REFERENCES: SEE NAUTILIS, VOL. 76 (3).
LOCALITIES: PORT ARANSAS, PADRE ISLAND

HIATELLA ARCTICA LINNE 1767. A RARE BEACHSHELL, KNOWN FROM GALVESTON (ALIVE IN NYLON ROPE, COLL. BOONE), AND DEAD FROM PORT ARANSAS AND SOUTH PADRE ISLAND (BOTH COLL. SPEERS). A DEAD JUV. PAIR WAS TAKEN FROM A LARGE FRAGMENT OF M. FULVESCENS AT PORT ISABEL. (COLL. ODÉ) LIVE SHELLS WERE COLLECTED FROM A SPONGE WASHED ASHORE NEAR BIG SHELL PADRE ISLAND. (COLL. SPEERS).
FIGURED IN: 1,5,6
PREVIOUS REFERENCES: 14,18
LOCALITIES: GALVESTON, PORT ARANSAS, PORT ISABEL
REMARKS: FOR BIBLIOGRAPHY OF PANOPE SEE NAUTILUS VOL. 76 (3), P. 75-82

FAMILY CRASSATELLIDAE

ON THE BEACH ONLY ONE SPECIES BELONGING TO THE GENUS CRASSINELLA IS FOUND; OFFSHORE AT LEAST TWO MORE MEMBERS OF THE FAMILY ARE FAIRLY COMMON, BUT NO CERTAIN BEACH RECORDS ARE AVAILABLE.

Crassinella lunulata Conrad 1834. Recently the genus Crassinella was reviewed by Harry. He reached the conclusion that lunulata, galvestonensis and mactracea are the same species. Crassinella lunulata is a small bivalve, which is occasionally fairly common in beachdrift at Galveston and Freeport, but is always quite common at Sargent, Indianola and along the Port Aransas causeway. Live specimens have been taken in Galveston Bay (coll. Harry and Geis) and in Aransas Bay, Corpus Christi Bay, Lower Laguna Madre and Port Isabel Bay (all coll. Speers).

Figured in: 1,2,3

Previous references: 11,12,14,15,17,19

Localities: along the entire Texas coast.

Remarks: For bibliography on Crassinella lunulata see: Harry, H. 1966 Publ. Inst. Mar. Sci., Tex., Vol. 11, p. 65-83.

From the offshore two other species are known:

Eucrassatella speciosa Adams (ref. 17, 29)

Crassinella martinicensis Orbigny 1842 (ref. 19,20, 51, 18)

Family Conidae

This well known tropical family of gastropods has several species in offshore Texas waters, but beach shells are rare. So far only a single species has been collected.

Conus austini Abbott and Rehder. A few beach worn shells have been taken on Padre Island and Mustang Island (coll. Speers and others); all look old. We have seen a specimen reported to come from Freeport, Bryan Beach. This probably is a shell lost by a shrimper.

Figured in: 21

Previous references: 21,26,29

Localities: Mustand and Padre Islands.

Remarks: Many other species have been reported in our offshore waters. At a later date we hope to give a more complete review than is at present possible.

Family Magilidae.

Members of this family are highly unusual on Texas beaches because the animals live on coral reefs. So far only a few shells have been found.

Coralliophila aberrans C. B. Adams 1850. A single live specimen was collected from the inlet area at South Padre Island on rocks in shallow water (see Texas Conchol. Vol. 2, No. 1). Later a small number of dead shells have been collected in the same area (coll. Speers and others).

Figured in: 3

Previous references: None

Localities: South Padre Island.

* * * * * * *

Most of our readers will by now have noticed or been told about the interesting article: The Magic Lure of Sea Shells, which appeared in the March 1969 issue of the National Geographic. Many pages of illustrations of worldwide shells are displayed in the high quality photographs for which this journal is justly famous.

MOLLUSCANA

BY W. W. SUTOW, M.D.

Did you know that the world famous trademark of the Shell Companies was officially adopted in May 1904? Prior to that time, a "shell" of indeterminate appearance had been used as the symbol of the Shell Transport and Trading Company, Limited. The scallop shell pattern for the current emblem is Pecten maximus Linne. The bibliophiles in the club would be wise to obtain while they can a copy of "THE SCALLOP: STUDIES OF A SHELL AND ITS INFLUENCE ON HUMANKIND". This was printed (1957) in a limited edition to celebrate the centennial anniversary of the parent company of the huge Shell business complex. The book is an excellent reference for background (and historical) material on the pecten.

* * * * * * *

Common or regional names of seashells are usually picturesque and probably are more easily remembered than their scientific identities. But there are times when nomenclatorial precision is important. This thought trend started while I was thumbing through a book called "MARINE SHELLS OF SOUTHERN AFRICA" by D. H. Kennelly. In this book are listed many common names for shells found in South Africa. For example, here are ten such colloquial names: Angel wings; Baby toes; Boxing gloves; Football; Pencil bait; Queen; Rosebud; Sand mussel; Tassels; and, Coral. Can you make educated guesses as to what seashell species each of these terms may be applied? Hang on to your hats! The ten names listed above have reference (in order) to the following: Tellina madagascarensis; Trivia sp.; Tonna variegata; Nassa abbreviatus; Solen capensis; Nassa pyramidalis; Nassa retusa; Donax serra; all Conus species; Latiaxis rosaceus.

* * * * * * *

In 1953, Maxwell Smith published a book called "World Wide Sea Shells". In this book, Joshua L. Baily has written two interesting chapters. One discusses the "origin of scientific names". Some informative historical background for selected names is given. The second chapter is a short one which touches on the "Pronunciation of Scientific Names." It is brought out that the pronunciation of scientific names probably will remain controversial since Latin names are pronounced (in the United States) by three different methods: the Roman, the Continental, and the English.

* * * * * * *

Mary and George Major of Little Rock, Arkansas, are well-known subscriber members of our club. Recently, they have built a two-floor addition to their home primarily to house their growing world-wide shell collection. In planning the display arrangements, George wanted concise check-lists of molluscan families. The two-volume set by Thiele (HANDBUCH DER SYSTEMATISCHEN WEICHTIERKUNDE) seemed too elaborate to reproduce conveniently and send to George. Consequently, I xeroxed the tables from "An outline of gastropod classification" by D. W. Taylor and N. F. Sohl. (MALACOLOGIA 1 (1):7-32, 1962). This took care of the gastropods. For the bivalves, I reproduced the contents pages from the book entitled "GENERA OF THE BIVALVIA: A SYSTEMATIC AND BIBLIOGRAPHIC CATALOGUE" by H. E. Vokes published as Vol. 51, No. 232, of the Bulletin of American Paleontology, 1967. The above two references are recorded here for those who may want information of this type.

Cochliolepis parasitica Stimpson

by H. Odé

In the previous issue we discussed another species of this interesting genus. Rarer than *C. striata*, *Cochliolepis parasitica* can be found occasionally on the beach. So far only dead specimens have been taken from beachdrift. Dall believed that *C. parasitica*, originally described from live specimens found under the scales of an annelid worm in the harbor of Charleston, S. C., was identical with *C. nautiliformis* Holmes 1860, described from the Post Pliocene of the Wando River S. C. In his treatment of Vitrinellids in 1953 Pilsbry was of the opinion that both species are different but recently Moore (1964) has come back to the position of Dall and believes both species to be identical. We figure here a somewhat worn beach specimen from Galveston West Beach, which shows only a single of the quite characteristic interruptions in shell growth. Specimens have also been found at Freeport, Port Aransas and South Padre Island. We have not seen enough material to form a well founded opinion concerning the identity of this species figured, but I will follow Moore in assigning it to *C. parasitica*.

The synonymy is as follows:

1858 *Cochliolepis parasitica* Stimpson, Proc. Bost. Soc. Nat. Hist. 6:308, 3 text-figs.

1860 *Adeorbis nautiliformis* Holmes, Post-Pliocene fossils of South-Carolina, p. 93, pl. 14, figs. 8, 8a, 8b.

1892 *Cochliolepis nautiliformis* Holmes, Dall, Trans. Wagner Free Inst. Sci. 3, p. 419.

1948 *Cochliolepis parasitica* Gardner, U. S. Geol. Surv. Prof. Paper 199-B, p. 194, pl. 25, fig. 1.

1953 *Cochliolepis nautiliformis* (Holmes), Pilsbry, Monograph 8, Acad. Anat. Sci., p. 432, pl. 52, fig. 3-3e.

1964 *Cochliolepis parasitica* Stimpson, D. M. Moore, Ph.D. Thesis, Univ. Miami Fla., p. 171, fig. 29.

The only reference of this species for the Texas fauna is in Moore's thesis (Mustang Island and spoilbanks S. E. of Rockport and Mud Island)

photos on opposite page

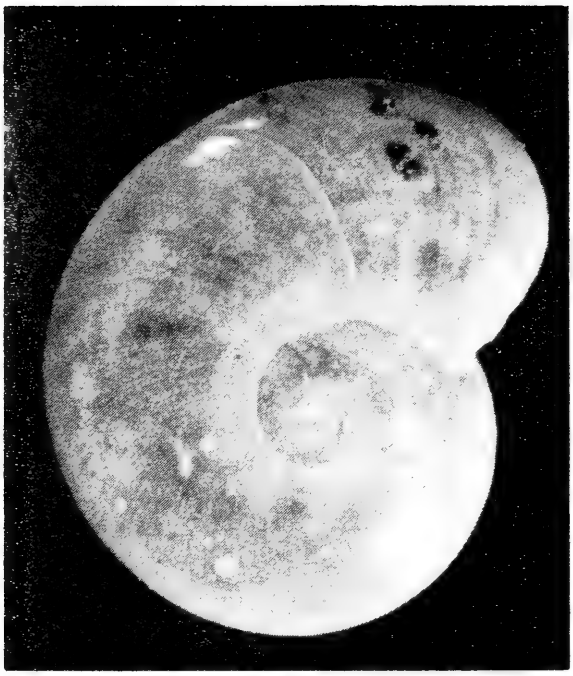
* * * * * * *

Notes and News (continued)

stakes Ribbon for the most blue ribbons to Wayne and Audrey Holiman of Edinburg. Mrs. Allen won the Hall of Fame silver trophy for her former blue-ribbon exhibit, Mrs. Nawona Gary of San Marcos received the division trophy for her 64 foot display of "Pecten Fever" in the advanced exhibits. The division trophy in the self-collected Texas shells was awarded to Mrs. Boone.

Judges this year were Dr. Joe Rosewater of the Smithsonian Division of Mollusks, Dr. Helmer Odé, and Mr. Howard Lee of the Texas Parks and Wildlife Department.

* * * * * * *



* * * * * * *

BOOK REVIEW BY H. ODÉ

A NEW FULL-COLOR FIELD GUIDE TO NORTH AMERICAN SEASHELLS HAS RECENTLY BEEN PUBLISHED BY GOLDEN PRESS, NEW YORK. IT IS AVAILABLE IN A PLASTIC COATED PAPERBACK EDITION FOR $3.95 AND IN A JACKETED CLOTHBOUND EDITION FOR $5.95. THE NAME OF THE AUTHOR R. TUCKER ABBOTT IS A GUARANTEE OF SCIENTIFIC ACCURATENESS AND INSURES UP-TO-DATE INFORMATION CONCERNING SHELLS BOTH OF THE ATLANTIC AND PACIFIC COASTS OF THE U.S.A. ALL ILLUSTRATIONS ARE IN COLOR WHICH ARE, CONSIDERING THE LOW PRICE OF THE BOOKLET, MOSTLY SURPRISINGLY GOOD, PERHAPS OCCASIONALLY SOMEWHAT OVEREMPHASIZED. THE GUIDE CONTAINS SOME NEW INFORMATION FOR THE TEXAS COLLECTOR, WHICH CANNOT BE FOUND IN ABBOTTS MORE EXTENSIVE BOOK. RECLUZIA ROLLANDIANA IS FIGURED AND DISCUSSED AND THE USUAL STATEMENT THAT LITTORINA ZICZAC OCCURS IN TEXAS IS CORRECTED BY FIGURING AND CITING LITTORINA LINEOLATA AND LITTORINA FLOCCOSA FOR TEXAS. IN A BOOK OF THIS SIZE IT CAN OF COURSE NOT BE EXPECTED THAT THE MAJORITY OF TEXAS BEACH SHELLS IS FIGURED, BUT STILL A LARGE NUMBER CONSTITUTING A WELL CHOSEN CROSS-SECTION, IS TREATED. OF THE FEW SPECIES PROBABLY ERRONEOUSLY CITED FOR TEXAS IN ABBOTTS LARGER BOOK LUCINA NASSULA AND LEUCOZNIA NASSA ARE STILL MENTIONED FOR TEXAS. THIS GUIDE IS WELL WORTH THE SMALL EXPENSE FOR BOTH BEGINNING AND MORE EXPERIENCED BEACHCOMBER.

* * * * * * *

CONCHOLOGICAL PHILATELY (PART II)

BY W. W. SUTOW, M.D.

TABULATION OF MOLLUSK-ON-STAMPS IS CONTINUED. OCCASIONALLY, THE SCOTT CATALOG NUMBERS FOR SOME OF THE STAMPS MAY BE CHANGED FROM ONE EDITION OF THE CATALOG TO THE NEXT EDITION. MOST OF THE INFORMATION GIVEN HERE WERE DERIVED FROM THE 1968 CATALOG. SUFFICIENT DATA ARE GIVEN ON THIS LIST, TO PERMIT IDENTIFICATION IN ALMOST ALL CASES.

CHECKLIST OF MOLLUSK-ON-STAMPS STAMPS (CONTINUED)

FIRST GROUP (MOLLUSK DEFINITIVELY PICTURED AS THE CENTRAL DESIGN)

MOLLUSK	COUNTRY	YEAR	VALUE	SCOTT NO.
59. OVULA OVUM	"	1969	1C	-
60. CONUS LITOGLYPHUS	"	"	4C	-
61. MITRA MITRA	"	"	7C	-
62. CASSIS AREOLA	"	"	12C	-
63. CONUS GLORIAMARIS	"	"	$2	-
64. NASSA RETICULATA	ROMANIA	1966	10B	1880
65. VIVIPARA FASCIATA	DUBAI	1963	3NP,25NP	3,9
66. TRIDACNA GIGAS	COMORO IS.	1962	100FR, 500FR	C5,C6
67. CARDIUM EDULA	DUBAI	1963	1NP,4NP, 15NP	J1, J4, J7
68. MYTILUS PERNA	"	"	2NP,5NP, 25NP	J2,J5, J8
69. OSTREA SPP.	DUBAI	1963	3NP,10NP 35NP	J3,J6, J9
70. MYTILUS GALLOPROVINCIALIS	ROMANIA	1966	1.35L	1884
71. ANODONTA	"	"	3.25L	1886
72. PTERIA MARGARITIFERA	SOMALI COAST	1962	8FR	293
73. TRIDACNA SQUAMOSA	"	"	10FR	294
74. CARDIUM COSTATUM	TOGO	1964	5FR	J60
75. PITARIA CHIONE	MOROCCO	1965	25FR	123
76. TRIDACNA SQUAMOSA	PAPUA AND NEW GUINEA	1968	20C	-
77. LIOCONCHA CASTRENSIS	"	"	25C	-
78. LIMA HIANS	BARBADOS	1965	8C	273
79. NAUTILUS POMPILIUS	FIJI	1968	2P	242
80. " "	PAPUA AND NEW GUINEA	1968	40C	-
81. " "	NEW HEBRIDES	1963/1965	30C	101 (BR) 117(FR)
82. NAUTILUS MACROMPHALUS	NEW CALEDONIA	1962	20FR	C30
83. ARGONAUTA ARGO	JUGOSLAVIA	1956	15D	453
84. LYCOTEUTHIS DIADEMA	MIDDLE CONGO	1964	2FR	119
85. SEPIA OFFICINALIS	DUBAI	1963	2NP,20NP	2, 8
86. OMMASTREPHES PACIFICUS	JAPAN	1967	15Y	-
87. OCTOPUS VULGARIS	TOGO	1964	20FR	467
88. SEPIA OFFICINALIS, ARCHITEUTHIS LONGIMANUS	MONACO	1960	0.25FR	452

(TO BE CONTINUED)

EPITOMIZING ON EPITONIUMS

BY CONSTANCE BOONE

THE EPITONIUMS WASHING IN ON WORM TUBES ON OUR LOCAL BEACHES HAVE COMMANDED MY CONSTANT ATTENTION SINCE I FIRST COLLECTED THEM IN MASS LAST MAY 30 AT ST. LUIS PASS, GALVESTON. THAT DAY I CRAWLED WITH MY FACE GLUED TO THE TANGLES OF WORM TUBES LINED ALL ALONG FROM THE LITTLE POINT WEST OF THE BRIDGE TO THE BRIDGE. IT WAS A HOLIDAY FOR SOME, AND THERE WERE A NUMBER OF PEOPLE FISHING AND SWIMMING IN THE AREA. I'M SURE I WAS CONSIDERED A NUT - - AND, INDEED I WAS, AN EPITONIUM NUT! LUCKILY FOR ME, I DID TAKE SMALL AND LARGE EPITONIUMS TO EXAMINE UNDER A MICROSCOPE AT HOME. THEY WERE ALL LIVING, HAVING JUST ROLLED IN WITH WORM TUBES AND THREADY ALGAE. MANY WERE DIGGING IN THE WET SAND. OTHERS CLUNG TO THE TUBES.

IN JANUARY, 1968, I HAD COLLECTED TWO ADULT E. ALBIDUM D'ORBIGNY IN THE SAND UNDER THE BRIDGE, SO I KNEW TO EXPECT THESE. I HAVE MANY TIMES COLLECTED THE VARIABLE E. ANGULATUM SAY HERE, AND ON THE FLATS BY THE POINT, TOWARD THE BAY, I HAVE TAKEN E. HUMPHREYSI KIENER, SO I EXPECTED BOTH OF THESE IN THIS LOT. IN JANUARY, 1967, I HAD HIT ENORMOUS AMOUNTS OF DEAD EPITONIUMS IN A DRIFT LINE AT GALVESTON WEST BEACH AT THE ROCKS AND KNEW FROM THESE THAT WE SEEMED TO HAVE OTHER SPECIES LIVING SOMEWHERE NEAR, BUT ONE IS CAUTIOUS WITH DEAD, WORN, UNCERTAIN MATERIAL. YOU CAN DECIDE YOU SEE ALMOST ANY SPECIES IF YOU AREN'T CAREFUL!

HOWEVER, I HAD COLLECTED TWO LIVE E. APICULATUM DALL UNDER A ROCK IN THE CHANNEL AT SOUTH PADRE ISLAND IN FEBRUARY, 1967, SO I KNEW A LITTLE OF WHAT THIS SHELL LOOKED LIKE.

TO DATE, I HAVE ENCOUNTERED NUMBERS OF LIVING EPITONIUMS COMING IN WITH THE WORM TUBES. IN LATE SEPTEMBER, LEOLA GLASS AND I STOOD IN THE SURF NEAR THE BRIDGE AND PICKED THEM OFF THE WORM TUBES AND ALGAE THREADS AS THEY ROLLED IN ON THE BUNDLES. MILDRED TATE AND I SAT NEAR THE EDGE OF THE WATER AT SURFSIDE IN OCTOBER AND CAREFULLY PICKED TINY EPITONIUMS FROM THE WORM MASSES LEFT AT LOW TIDE. AND ON DECEMBER 1 I GOT SOME FROM BRYAN BEACH NEAR FREEPORT WHERE SOME OF OUR SAN ANTONIO SHELLING FRIENDS HIT A BONANZA OF THEM OF THE WORM TUBES. A FEW DAYS BEFORE THAT I HAD BEEN WITH THEM AT SURFSIDE AND SHOWN THEM EPITONIUM UNDER THE WORM TUBES AT DRIFT LINE. THE DEC. 1 WORM TUBES AT BRYAN WERE COVERED OVER AND SMELLY. HOWEVER, MILDRED AND I NOTICED THAT SOME OF THE WORMS WERE LIVING AND PROTRUDING IN THE SAND AT LOW TIDE. I DECIDED TO DIG UP AROUND THE AREA TO SEE IF EPITONIUMS LIVED THERE. THE GOOK WAS EXTREMELY SPOILED AND MESSY. IT MEANT THAT MOST OF THE WORMS HAD DIED WHEN WASHED IN; ONLY A FEW HAD "ROOTED" IN. THERE WERE EPITONIUMS BUT MOST WERE DYING OR ALREADY DECAYING. ABOUT THREE DOZEN WERE LIVING IN THIS SMELLY HEAP.

WALKING THE BEACH, WE NOTICED THAT THE CLAY LUMPS THAT ROLL IN HERE HAD SMALL SHELLS ATTACHED. WE COLLECTED SOME EPITONIUMS ON THEM, BUT MOST OF THEM WERE DEAD OR DYING.

ON DECEMBER 7 MILDRED AND I WENT BACK TO BRYAN BEACH AND EXAMINED THE WORM HULLS WASHING IN WITH THE GREAT BUNCHES OF WOOD CHIPS.

The water was rough and pounding, but we stood in the surf and watched each wave recede from the washed up chips and debris and could spot the white Epitoniums and catch them if we were fast enough. Then we sat down, got down on elbows and minutely examined the higher line of drift and worm tubes. Here we found many more live Epitoniums. The next day when some of us dashed to Bryan on the field trip, thinking we'd get to this mass again, all the good material was swept from the beach. The only lucky one that day was a new member of ours, Hazel McKee, who bent down to pick up a Tellin (the deep pink tayloriana) and came up with a very good Amaea mitchelli.

I have also taken small Epitoniums recently on the green algae of the jetty rocks at Freeport, and I have found them in the straw-type growth on the Galveston jetties. These Epitoniums have mostly been young E. albidum. However, there are also other young Epitoniums here that appear to be E. apiculatum. Examination of these various lots reveals that E. apiculatum is fairly common. This shell when alive is somewhat yellowish because the animal seems to be this color. I am not sure this shell has the dye gland, as the dye does not seem to flood the aperture, even when dropped in alcohol. The distinctive characteristics of this species seems to be the two sets of costae - - - the low, more numerous ones on the top three post-nuclear whorls and the fewer blade-like ones on the lower ones, plus tiny axial cords on the top whorls. This shell never seems to get very big and is rather light-weight.

A real puzzle to me has been the appearance of somewhat larger shells that possess the characteristic of more numerous costae on the top post-nuclear whorls, with less costae on the larger more globuse lower whorls, but with no spiral threads at all. They seem to be more like Epitonium occidentale Nyst than anything else. They get larger than E. apiculatum. However, I have never been able to find out more about E. apiculatum than Johnsonia Vol. II reviewed. E. occidentale, typically should have fine pointed shoulder angles on the costae, and our species does not have anything exaggerated enough to be call pointed angles. I have seen samples of this species from the Caribbean. These shells, too, do not flood with dye, though they may have the dye gland. There is a blackish area visible within the shell with the animal preserved therein. Some of the tall, thin, shiny little Epitoniums I judge to be E. tollini Bartsch. They are sometimes pinkish looking when the animal is alive.

There have been no live E. rupicola Kurtz in these worm tube lots, although we have this species, and I have collected them at Bolivar in the grasses. There have been some good dead specimens of E. multistriatum Say tangled in the worms, but none of mine have been alive.

There are two sets of live Epitoniums that still are question marks to me. However, after looking, studying and relooking, I have tentatively assigned one of the sets to E. albidum and the other to E. tollini, judging that there are slight variations.

I would like to know more about these Epitoniums, as Texas beaches seem to have many more live ones than Johnsonia reported. A number of mine are being kept in alcohol for any study.

Scientific Names of Mollusca
by Helmer Odé

Part I: Linguistic Rules

Very few books for shell collectors devote space to an explanation of the construction of scientific names. Some explanation is given in Perry and Schwengel's book on Florida Shells, but a general account of the subject is not easily accessible to the interested shell collector. In the following I hope to provide some useful information on this subject, so that the common complaint about the apparent inconsistency of scientific names need not be heard so often. Why is it that one should write Epitonium rupicola (rupicolum is in error) and as one would expect Epitonium angulatum, but also encounters the pair Haminoea antillarum and Haminoea succinea? An explanation of these different endings and the meanings of the words will make most of our scientific names better understood and their use better appreciated. The writer does not claim to be an authority in the field of classical languages nor to be an expert in the procedures of taxonomy. For the latter subject my guide was the book: Procedure in Taxonomy by E. T. Schenk and J. M. McMasters, Stanford University Press, 1948.

While writing these notes it became apparent from the many unclear and peculiar constructions encountered that the latin or greek used in these cases is somewhat comparable to the french on the menus of certain restaurants. The meaning may be clear to the gastronomically trained diner, but is unintelligible to the average frenchman. Similarly scientific names can often be understood best with only a smattering of the knowledge of the latin language but a lot of common sense. One should always keep in mind that scientific names are given for the purpose of establishing a unique, unambiguous and logically consistant nomenclature and are not intended as an exercise in latin grammar nor as an example of correct transcription from the greek. Nor are they applied for the appropriateness of terminology. However, a complete disregard of certain rules is inadmissible and a little care will avoid some commonly perpetrated errors. We are here not concerned with the priority rule, but only will discuss some linguistically important aspects which are incorporated into the rules.

The rules for giving scientific names to animals are codified in the International Code of Zoological Nomenclature. It is not necessary to repeat this code here in extenso. It suffices only to mention a few rules. Article 3 states: "The scientific names of animals must be words which are either latin or latinized, or considered and treated as such in case they are not of classic origin." Article 4 states that the name of a family is formed by adding -idae, the name of a subfamily by adding -inae, to the stem of the name of its type genus. Article 8 states that a generic name must consist of a single word, simple or compound, written with a capital letter and employed as a substantive in the nominative singular. It is seen that these articles are based on some linguistic concepts such as "latin" or "latinized", the "stem" of a word, and "nominative singular". Whereas "latin" and "latinized" are and should be given as much latitude as is possible, such concepts as "stems" and "nominative singular" are very specific and lead to difficulties as I, to my dismay, have discovered.

For those completely unfamiliar with scientific names we remark that the code states that a specific name shall consist of two parts, the generic name and the trivial name. For instance Ostrea, generic name, and edulis, trivial name, constitute together Ostrea edulis (specific name). The authors name should follow the specific without interposition of any punctuation. The year of publication can then follow separated from the authors name by a comma or placed in parenthesis: Ostrea edulis Linne, 1758. Sometimes a third or subspecific name is given. In that case the authors name is that of the author who proposed the subspecies. In what follows the explanation of the scientific name will be placed in brackets behind it. The abbreviations lat. and gr. stand for latin or greek respectively.

Three main principles underlie the formation of latin scientific names. The first is that in the latin (and greek) language substantives are of three genders, called masculine, feminine and neuter. Since any generic name is considered to be a noun, it has a gender assigned to it. The second principle is: if the trivial name is to be considered as an adjective it must have the proper ending of the nominative singular according with the gender of the generic name. The third is: trivial names can be either: 1) adjectives, conforming with the gender of the generic name, or 2) nouns, which cannot be made to conform to the generic name, or 3) the genitive singular or plural of nouns and 4) patronymics. Let us discuss these three principles in more detail. In the recommendation of article 8 of the code the following words are listed which may be taken as generic names:

1) Greek substantives, for which the rules of transcription should be followed: Aplysia (gr. ὁ ἀπλυσίας = Sponge of dirty gray color), Physa (gr. ἡ φῦσα =bubble), Cyclichna (gr. κύλιξ = beaker, τὸ ἴχνος = foot, footprint). Here we note that incorrect latinization may change the original gender.
2) Compound greek words, in which the attributive should precede the principal word. Calliostoma (gr. καλός, comparative, καλλιων, more beautiful, στόμα mouth), Brachycythara (gr. βραχύς = short, rough, κίθαρα zither). Here we note that in compound constructions the gender is that of the principal word.
3) Latin substantives: Helix (snail's spiral), Cassis (metal helmet), Malleus (hammer), Ancilla (maid), Pecten (comb), Arca (chest), Bulla (bubble), Ensis (sword), Ficus (fig), Tonna (from medieval latin Tunna, french tonne (large cask).
4) Compound latin words: Stilifer (stilus- pen, ferre - to carry), Cassispira (crassus - thick, spira - spiral).
5) Greek or latin derivatives expressing diminution, comparison, resemblance, or possession: Turritella (from turris - tower), Lolliguncula (from Loligo - inkfish).
6) Mythological or heroic names: Astarte (Phoenician goddess of love), Thais (famous courtisan who accompanied Alexander the Great to Persia).
7) Proper names used by the ancients.
8) Modern patronymics (a term used in a much wider sense than in classical greek), to which is added an ending to denote dedication: Rissoa (Risso), Rehderia (Rehder), Gouldia (Gould), Kurtziella (Kurtz), Sayella (Say).
9) Names of ships, which should be treated the same as mythological names or as modern patronymics.
10) Words of non-classic origin: Vanikoro, Codakia, Pitar.
11) Words formed by an arbitrary combination of letters: Elmerlina
12) Names formed by anagram: Eontia - Etonia, Arca - Acar.

These examples show clearly how much freedom an author is allowed in formi "latin" names. Almost the only requirement is that the name has an euphoniou sound. In whatever manner the generic name is constructed, it always has a definite gender. In case of the first seven categories the gender usually is clear, (not always!), but in others it can be obscure, and must be considered a large extent arbitrary. such as Pitar, which is now accepted as feminine. generic names acquire their gender by analogy with latin words whose gender well known. That this is not always clear shows the case of Petricola (gr. rock, lt. colere - to dwell_ which is considered feminine. Its construction similar to that of the latin words agricola (farmer) and amnicola (lat. amnis river, used for willow trees), which in classical latin can be either masculin or feminine depending on the context.

The majority of trivial names are those which are considered to be adjectives pressing some quality pertaining to the shell or animal; f.i. magnus - large, albus - white, angulatus - angled, with an angle. Such names must in general change their ending when they are combined with a generic name of different gender. For instance when Scala angulata (Scala - wentletrap) became transferred to Epitonium (gr. ἐπιτόνιον screw, to tighten strings on musical instruments), the trivial name angulata had to be changed to angulatum to accor with the neuter gender of ἐπιτόνιον. Unfortunately the failure to rec nize the specific name as a noun has caused many errors. In Johnsonia three specific names of Epitoniums were mistakenly considered as adjectives and give the incorrect ending -um. Echinaticosta, foliaceicosta (not echinaticostata e in which case they would have been adjectives) and rupicola (rupis - cliff, roc colere - to dwell) are three nouns and cannot be changed when transferred fro Scala or Scalaria to Epitonium.

The second most common type of trivial name is a noun. There are countless examples: Murex pomum (murex - shell from which the ancients obtained purpl pomum - apple), Tellina iris (gr. ἡ τελλίς - a kind of bivalve; lat. Iris - th rainbow), Thais haemostoma (gr. τὸ αἷμα = blood in liquid state). Some times it is not clear whether a trivial name should be considered a noun or an adjective, f.i. castanea (class. lat.: chestnut tree, or chestnut, the fruit) not an adjective, but a noun. However in later latin it may have acquired the meaning brown and probably was used as an adjective. Diminutive construction latin nouns are still to be considered as nouns. This explains names such as Phacoides (gr. φακός = lentil) nassula (nassa = fishtrap) and P. crenella (cr = notch). This is in contrast to diminutives derived from adjectives which stil should be treated as adjectives, as for instance splendidulus and gratulus. T first is derived from splendidus (magnificent) and the second from gratus (love One notes here the common error Glyphostoma gratula, which should be G. gra tulum.

(to be continued)

* * * * * * *

In a previous issue of the Texas Conchologist (Vol. 5, p.52) a review was given of the beautiful book, The Shell. For those who are interested in the art of shell photography and the difficulties encountered in obtaining the superb results displayed in this book we recommend reading the article on pages 44 to 48 in Photographic Business and Product News Vol. 4, No. 12, December 1968.

Texas CONCHOLOGIST

LUME V, No. 8 APRIL 1969

NOTES & NEWS

DUE TO CAUSES OUTSIDE OUR CONTROL, THIS ISSUE WILL APPEAR TWO WEEKS LATE. WE TENDER OUR APOLOGIES TO OUR READERS.

NEXT MEETING

OUR NEXT MEETING WILL BE HELD ON WEDNESDAY, APRIL 23, 7:30 P.M. AT THE SERVICE CENTER, 4503 BEECHNUT STREET. A SHELL AUCTION WILL BE HELD. MRS. CLAIRIE VAN ERP WILL BE AUCTIONEER AND DR. W. SUTOW WILL GIVE PARTICULARS ABOUT THE SHELLS TO BE SOLD.

REPORT MARCH MEETING

JEAN DASHIELL INTRODUCED OUR SPEAKER RICHARD SIMMONS, TEACHER OF OCEANOGRAPHY AT WESTBURY HIGH SCHOOL. MR. SIMMONS DISCUSSED THE OCEANOGRAPHY CURRICULUM NOW BEING TAUGHT AT 7 HOUSTON HIGH SCHOOLS, AS A ONE SEMESTER COURSE AT THE 11TH OR 12TH GRADE LEVEL.

DOOR PRIZES WERE DONATED BY LARRY HORNER AND CONNIE BOONE. A REPORT ON THE UPCOMING JOSKE'S SHOW WAS GIVEN BY LLOYD MEISTER AND JOHN EDSTROM STATED THAT OUR YEARLY SHELL FAIR WILL BE HELD IN THE SHARPSTOWN MALL IN FRONT OF MONTGOMERY WARD ON MAY 9 AND 10. JEAN DASHIELL WITH JEAN RIDDLE WILL BE IN CHARGE OF THE SHELL SHOP AND SHELLSTO BE SOLD SHOULD BE GIVEN TO HER AS SOON AS POSSIBLE SO THAT THEY CAN BE PACKAGED. CONNIE BOONE REPORTED A REQUEST FOR A COMPLETE SERIES OF THE "TEXAS CONCHOLOGIST" FROM TULANE UNIVERSITY AND A LETTER OF APPRECIATION FOR THE CONCHOLOGIST FROM DR. MYRA KEENE FROM STANFORD. A MOTION BY CONNIE BOONE THAT BECAUSE OF THE COST OF PUBLICATION AND MAILING OF THE CONCHOLOGIST THE DUES OF THE HOUSTON CONCHOLOGY SOCIETY BE AS FOLLOWS $4.00-LOCAL MEMBERSHIP; $5.00-FAMILY MEMBERSHIP; $2.00-SUBSCRIBER; $2.00 JUNIOR MEMBERSHIP; WAS ADOPTED.

OPEN HOUSE LAKE JACKSON MUSEUM

IF YOU MISSED THE FIELD TRIP TO FREEPORT, YOU MAY WISH TO TAKE THE OPPORTUNITY TO VISIT THE BRAZOSPORT MUSEUM OF NATURAL SCIENCE, 101 THIS WAY, LAKE JACKSON, TEXAS, ON SUNDAY, APRIL 28, FOR THE SECOND ANNUAL OPEN HOUSE TO BE HELD FROM 1 TO 6 P.M. THERE ARE OVER 2,000 IDENTIFIED SHELLS ON EXHIBIT AT THIS MUSEUM, AS WELL AS DISPLAYS ON SHELL STRUCTURE, EGG CASES, GROWTH STAGES, OTHER SEA LIFE, FOSSILS, ETC. OF ESPECIAL INTEREST WILL BE THE EXHIBIT ON RARE SHELLS, INCLUDING THE FAMED *CONUS GLORIA-MARIS* CHEMNITZ, 1777, THE "GLORY-OF-THE-SEAS CONE." THIS CONE IS ON LOAN FROM DR. AND MRS. TUCKER ABBOTT. MRS. MILDRED TATE, VOLUNTEER CURATOR OF THE MUSEUM, WILL DISPLAY HER BEAUTIFUL *CYPRAEA AURANTIUM* GMELIN, 1791, THE MUCH-SOUGHT-FOR GOLDEN COWRIE.

ANNUAL MEETING A.M.U., 1969

THE THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN MALACOLOGICAL UNION, INC., WILL BE HELD THIS YEAR AT MARINETTE, WISCONSIN, FROM JULY 21-25. HOUSING WILL BE PROVIDED BY THE SILVER DOME MOTEL, A MODERN RESORT THAT OCCUPIES

CONTINUED ON PAGE 85

PUBLISHED BY THE HOUSTON CONCHOLOGY SOCIETY
HOUSTON, TEXAS

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30¢ per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

FAMILY SPIRULIDAE

A PRIMITIVE FAMILY OF CEPHALOPODS, WHICH LIVE IN DEEP WATER. THE CURVED SHELLS OF THE ONLY TEXAS SPECIES FLOAT TO THE SURFACE OF THE SEA AFTER THE ANIMALS DIE AND SOMETIMES WASH ASHORE IN QUANTITY. IN TEXAS USUALLY TOGETHER WITH GREAT QUANTITIES OF SARGASSUM WEED.

SPIRULA SPIRULA LINNE 1758. DEAD SHELLS OFTEN COME IN WITH JANTHINAS AND SARGASSUM WEED. MOST COMMON AFTER HIGH SPRING WINDS, BUT OCCASIONAL THROUGHOUT THE YEAR.
FIGURED IN: 1
PREVIOUS REFERENCES: 11, 15, 17, 19.
LOCALITIES: OCCASIONALLY COMMON ALONG THE ENTIRE TEXAS COAST.

FAMILY TRUNCATELLIDAE.

OFTEN UNITED WITH THE HYDROBIIDAE. IN TEXAS ONLY ONE SPECIES WHICH LIVES AT THE TIDELINE.

TRUNCATELLA PULCHELLA PFEIFFER 1830. DEAD SHELLS HAVE BEEN FOUND IN BEACH DRIFT AT GALVESTON AND FREEPORT. THE SPECIES UNDOUBTEDLY LIVES IN THE BAYS NEAR SAN LUIS PASS, BUT LIVE MATERIAL HAS NOT YET BEEN COLLECTED AT THAT LOCATION. LIVE POPULATIONS HAVE BEEN FOUND IN THE PORT ARANSAS AREA AND SOUTHWARD. THE ANIMALS SOMETIMES LIVE NEAR DECOMPOSING SARGASSUM WEED ON THE BEACHES IN THE BAYS. MATURE SPECIMENS LOSE THEIR INITIAL WHORLS. DEAD SHELLS ARE COMMON IN BAYDRIFT IN THE CORPUS CHRISTI AND PORT ISABEL AREAS. WE SUSPECT THAT A FEW REFERENCES TO OTHER SPECIES ARE BASED ON ERRONEOUS IDENTIFICATIONS.
FIGURED IN: 3, 4, 21
PREVIOUS REFERENCES: 11, 14, 15, 19, 21
LOCALITIES: GALVESTON, FREEPORT, PORT ARANSAS, SOUTH PADRE ISL.

FAMILY ATLANTIDAE.

A FAMILY OF SMALL PELAGIC MOLLUSKS, WHICH ARE RARELY FOUND IN BEACHDRIFT BUT WHICH ARE FAIRLY COMMON IN DEEPER OFFSHORE DREDGINGS. THE SHELLS ARE PLANORBOID IN SHAPE, USUALLY WITH A KEEL.

Atlanta c.f. gaudichaudi Souleyet 1852. Only two small shells are in the collection Odé and a few in the collection Speers. They resemble most of the indicated species, but also could be A. peroni Lesueur 1817. The shells were collected from beach drift at Matagorda, Port Aransas and South Padre Island.
Figured in: J. J. Tesch, Dana Report 34, Heteropoda, p. 17.
Previous references: 17, 19, 22 (all as A. peroni).
Localities: Matagorda, Port Aransas, South Padre Island.

Family Calyptraeidae.
In Texas three genera: Crucibulum, Calyptraea, and Crepidula. Only the genus Crepidula has several common representatives on the Texas beach.

Crucibulum auricula Gmelin 17. So far only a single specimen of this offshore rather common species has been collected on the beach at Galveston. The secimen was badly worn.
Figured in: 1, 3, 6
Previous references: Tex. Conchol. Vol. 5, p. 21; 11, 17, 26
Localities: Galveston

Calyptraea centralis Conrad 1841. Although dead shells are wide spread in dredge material, beach shells have only been rarely found at South Padre Island (coll. Odé and coll. Speers). These little shells resemble a miniature chinese hat. No live beach material so far.
Figured in: 1, 3, 4, 6
Previous references: 12, 17, 18
Localities: South Padre Island Gulf Beach.

Crepidula fornicata Linne 17. This is a common beach shell often found alive clinging to the outside of larger gastropods. The animals have the habit of piling on top of one another in a kind of curved arc. In some areas the animal is considered to be an oyster pest -- it does not bore, but competes for food and crowds the oysters -- but in Texas its influence on the oysters is not considered to be bad. Because of the economic importance of the oysterculture, the biology of C. fornicata has been extensively studied. The species has been introduced into western Europe.
Figured in: 1, 4, 5, 6,
Previous references: 11, 12, 13, 14, 16, 19, 20, 22, 24, 26, 51.
Localities: commonly alive along the entire Texas coast.

Crepidula plana Say 1822. The white slipper shell is quite common on Texas beaches. It is often found alive in the inside of larger gastropod shells inhabited by hermit crabs. This habitat gives these shells a peculiar curvature. On some specimens vestiges of a rayed color pattern can be seen. The species is of wide distribution in many types of bay environments, and has been particularly mentioned for the oyster reefs.
Figured in: 3, 4, 5, 6
Previous references: 11, 12, 14, 15, 17, 18, 20, 26, 51
Localities: commonly alive along the entire Texas coast.

to be continued. . . .

WHAT ARE SOME OF THE FAMOUS SHELLS OF THE WORLD?

PETER DANCE, IN HIS BOOK, "SHELL COLLECTING - AN ILLUSTRATED HISTORY", DEVOTED A CHAPTER TO WHAT HE CALLED "FOUR FAMOUS RARITIES". THESE ARE THE SHELLS THAT, OVER THE YEARS, HAVE ACQUIRED FAME AS BEING AMONG THOSE MOST COVETED BY SHELL COLLECTORS. THE FIRST IS EPITONIUM SCALARE LINNE, THE PRECIOUS WENTLETRAP. AT ONE TIME THIS WAS MOST DIFFICULT TO OBTAIN AND COMMANDED STARTLING PRICES. LAST YEAR, I SAW ONE DEALER'S LIST OFFERING THIS SPECIES FOR ABOUT 60¢ EACH. THE SECOND SHELL NAMED BY DANCE IS "CONUS CEDONULLI", THE MATCHLESS CONE. THIS WAS A MUCH DESIRED SHELL DURING THE 18TH AND 19TH CENTURIES. IT IS SUGGESTED THAT THIS CONE ACTUALLY REPRESENTED VARIANT FORMS OF SEVERAL SPECIES, SUCH AS CONUS AMMIRALIS LINNE, CONUS REGIUS GMELIN AND CONUS DOMINICANUS HWASS. DANCE STATES THAT THE NAME "CONUS CEDONULLI" CANNOT BE APPLIED TO ANY SPECIES WITH CERTAINTY. THE THIRD FAMOUS SHELL IS THE GLASSY NAUTILUS - CARINARIA CRISTATA LINNE, A HETEROPOD MOLLUSK. FINALLY IS MENTIONED A SHELL THAT IS STILL ONE OF THE HIGHEST VALUED - CONUS GLORIAMARIS CHEMNITZ, THE "GLORY OF THE SEA". THE FASCINATING HISTORY OF EACH OF THESE FAMOUS SHELLS IS RECOUNTED IN DANCE'S BOOK.

* * * * * * * *

WHAT ARE THE MOST VALUABLE SHELLS IN THE WORLD?

VAN NOSTRAND'S STANDARD CATALOG OF SHELLS PROVIDES AN AVAILABLE DATA SOURCE FOR THIS KIND OF SPECULATION. TO BE SURE, THE CURRENT EDITION COVERS ONLY A LIMITED NUMBER OF FAMILIES. BUT COMPARISONS CAN BE MADE AMONG THOSE THAT ARE LISTED. CONUS GLORIAMARIS CHEMNITZ IS GIVEN A CATALOG VALUE OF $650. SHELLS LISTED AT STILL HIGHER CATALOG VALUES INCLUDE: CYPRAEA LEUCODON BRODERIP ($2,000.); CYPRAEA VALENTIA PERRY ($1,600.); SCAPHELLA JUNONIA SHAW, SINISTRAL FORM ($1,600.); CONUS MILNE-EDWARDSI JOUSSEAUME ($1,300.); AND CYPRAEA BARCLAYI REEVE ($1,000.) OTHER SHELLS THAT HAVE BEEN CATALOG-VALUED AT $500 OR HIGHER INCLUDE: VOLUTA ALABASTRINA WATSON ($500); CYPREA PORTERI C. CATE ($600); PLEUROTOMARIA RUMPHII SCHEPMAN ($600); PLEUROTOMARIA TERAMACHII KURODA ($500); TIBIA SERRATA PERRY ($500); XANCUS PYRUM LINNE, SINISTRAL FORM ($600). AS A GROUP, THE OOCORYTHINAE, LIKE THE PLEUROTOMARIIDAE, MUST BE SOMETHING. OF THE 16 SPECIES LISTED, TWO ARE LISTED AT $75 EACH. ALL THE REST RANGE FROM $150 TO $200 IN CATALOG VALUE.

* * * * * * * *

WHAT ARE THE REPRESENTATIVE SPECIES FROM EACH OF THE MOLLUSCAN FAUNAL PROVINCES OF THE WORLD SEAS?

THIS IS ANOTHER PROVOCATIVE QUESTION AND IT MAY EVEN GENERATE AN IDEA OR TWO FOR SHELL DISPLAYS. FOR EXAMPLE, ABBOTT'S POPULAR SMALL BOOK, "SEASHELLS OF THE WORLD" PICTURES THE FOLLOWING SHELLS FOR THE SEAS AND SHORES CLOSEST TO US HERE IN TEXAS:

CARIBBEAN PROVINCE - TELLINA RADIATA; NERITA PELORONTA; STROMBUS GIGAS; PURPURA PATULA.

CAROLINIAN PROVINCE - LITTORINA IRRORATA; MERCENARIA MERCENARIA; POLINICES DUPLICATUS; NEPTUNEA DECEMCOSTATA; EUPLEURA CAUDATA.

102. Shells	Girl playing with shells	French Polynesia; 10Fr; 1958; #189
103. Shells	(same)	French Polynesia; 20Fr; 1958; #190
104. Snail shell	Hermit crab in shell	Dubai; 1np & 15np; 1963; #1 & #7
105. Strombus gigas	Conch industry	Turks & Caicos Is.; 4p; 1967; #162
106. Gold lip shell	Diver diving for shell	Br. Solomon Is.; 6c; 1968; #184
107. Nautilus pompilius	Nautilus and goldsmith art	Germany; 6pf+4pf & 12pf+88pf; 1944; #B284 & B285

FOURTH GROUP (stylized mollusk as the central design)

108. Mussel	Mussel	Netherlands; 20c+10; 1967; B421
109. Whelk	Egg case	Netherlands; 12c+8; 1967; B419
110. Whelk	Whelk	Netherlands; 15c+10; 1967; B420
111. Xancus pyrum	Left-handed shell	Travancore (India); many values
112. Xancus pyrum	Left-handed shell	Travencore-Cochin (India) many values
113. "Snail"	Snail and money bag	Korea; 20h; 1960; #303
114. "Snail"	Snail and money bag	Korea; 2w; 1964; #380

MISCELLANEOUS GROUP

115. Strombus gigas	Small symbolic design	Cayman Is.; many issues 1935-1943
116. Lambis sp. Pecten sp. Strombus sp.	3 shells shown on small stamp	Ryukyu Is; 1950; 5y; #13
117. Pectens	Border design	Portugal; 1e; 1961; #873
118. Pectens	Border design	Portugal; 4.30e; 1961; #874
119. Pecten	Small design	Somali Coast; many; 1915-1943
120. Polymita picta		Cuba; 8c; 1958; #C182
121. Pecten	Amphitrite astride shell	Australia; 2p & 3p; 1935; #157 & #158
122. Strombus gigas	Small symbolic design	Bahamas; many issues; (1859 to 1959). First mollusks-on-stamp stamp.
123. Xancus pyrum	Stylized on state seal	Cochin (India); many; e.g. 1892, #1

Continued on page 92

A minority of constructions employs the genitive of nouns, expressing in latin form the property of "belonging to" or "being related to". Examples: Epitonium novangliae (of New England), Conus sennottorum (Conus - cone, sennottorum - named after the brothers Sennott), Cerithium muscarum (gr. κερας-cow horn, musca - fly), Solecurtus sanctaemarthae (lat. solea - sole, sandal, and curtus short). The trivial part in these names cannot be changed and Haminoea antillae (sic!) as I have seen in print, is in error, because antillarum is a genitive plural meaning "of the Antilles". The name Epitonium novangliae brings up a point concerning the validity of scientific names. If the name has been given in full compliance with the rules set forth by the International Code, the name is valid and never can be rejected because of inappropriateness, even by the original author. E. novangliae does not live in New England, but was named in the mistaken belief that it did. The name however stands. Also fixed are constructions made up by combining two nouns by means of a genitive; these constructions are considered as a single noun. Examples: aporrhais pespelicani (gr. ἀποῤῥαίω -to tear off pespelicani - pelican's foot), Cypraea caputserpentis (Cypraea ? caput - head, serpens gen, serpentis - snake). In the same vein are combinations of adjectives and nouns such as Bornia longipes (Bornia - in honor of Born, longus - long, pes foot), Anachis (gr. ἀνα χέω - to pour, crassilabris (fat lip).

The last and unfortunately rapidly growing group of trivial names is the group of patronymics. These are unchangeable. They are formed by adding - i to the persons name if a man, and -ae if a woman.

Adams - adamsi	Carol - carolae
Morton - mortoni	Mildred - Mildredae
Chesnel - chesneli	Palmer - palmerae

Modern usage employs only one i, whereas in older names one often sees a double i, which should be retained. It is also to be noted that the trivial name is not capitalized. The wide spread use of patronymics is caused by the necessity of creating truly unique specific names. By using patronymics the chance is reduced that the same trivial name has already been used before. In my opinion, this variety is their only virtue, because patronymics have no descriptive value whatsoever.

In part II we shall have a closer look at the structure of nouns and their stems.

Part II. Nouns and their stems.

In latin there are five classes of nouns each of which has its own peculiar way of declension, i.e. certain suffices are added to the stem of the word to form genitive, dative, etc., and the plural. These suffices are added to the stem of the word in a manner one has to memorize. Nouns of the first declension in latin all end on -a, and their stem is obtained by leaving off the -a, for instance Tellina, stem Tellin-. They are, with a few exceptions, of feminine gender. Probably the majority of molluscan generic names and certainly of these ending on -a (but not all of those!) belong to this group. Examples: Nuculana (lat. Nucula, diminutive of nux - nut, hence "nut like"), Ostrea (oyster), Lucina (lat. goddess of birth), Cardita (gr. καρδία = heart, lat.

BRING 'EM BACK ALIVE

By Constance Boone

Cyclostremella humilis Bush 1897, has been collected alive and observed now, for the first time. Nine specimens were retrieved from "worm gook" brought in from Bryan Beach, Freeport, Texas, March 4, 1969. This mass of worms has been the home for the many Epitoniums I have been finding, so I have been in the habit of filling a plastic sack with it when I find it fresh and promising looking. This day the piles of this material was just at waters edge and up to high tide line at low tide time, so the worms were still living, as well as the other animals. However, I did not discover the living Cyclostremella humilis until the next night when I was running some of the material through under the microscope. It has become my habit not to wash this kind of material, but to simpley run small trays of it under the scope to see what I can find. This way I can spot tiny mollusks alive and moving in normals ways. I have been looking for Cyclostremella humilis Bush alive for some time, because I knew the soft parts were unknown and desired for study by the professionals. Specimens preserved in alcohol have been sent to the proper authorities.

The animal is what I call "ghost-like" as it glides along in a saucer of sea water, much like a tiny translucent land snail. It is not completely clear as I thought it would be, as there seems to be a kind of pale tan periostracum covering the shell when it is alive. If it is fresh dead, the shell is transparent; if it is dead, it becomes chalky white. (See Texas Conchologist of November, 1968, for a review of this species and for the photograph). The only color in the exposed animal is in the two black eyes at the bottom of the two waving tenacles. Inside the living shell, one observes a black beat of what I say is "heart". (I'm no biologist!) The very end of the animal in the internal coil consists of zigzag thready black spirals.

The interesting thing about the discovery of this mollusk is the apparently long-life or endurance it must possess. Six days after my first discovery of the living animal in the gallon sample of the "worm gook", I took up some of the still-wet material to scan for other mollusks. It had been rainy week; the material had been on my back porch in a plastic sack. It still had the salt water clinging to the sand and worms. So it seems that conditions were right to permit some of the mollusks to continue to live. I was able to collect more of the Cyclostremella humilis alive and share the sight of the animal with the workers at Harold Geis' one evening.

So far, other living mollusks of interest from that sample include juvenile Epitonium multistriatum Say, one juvenile Epitonium rupicola Kurtz, specimens that certainly seem to be juvenile Epitonium candeanum d'Orbigny, one Vitrinella floridana, one Turbonilla elegans.

****

continued from page 81

an isolated area at water's edge of Green Bay on Lake Michigan on the southeast corner of Marinette. Lectures will be held in the ultra-modern Science Hall of the University of Wisconsin-Green Bay whose campus adjoins the motel grounds. Literature received by the library committee (see C. Boone) indicates that motel reservations cannot be guaranteed after May 30, so make your plans early.

Aligena texasiana Harry 1969.

Recently Dr. H. Harry has described a new bivalve from Galveston Bay under the name Aligena texasiana. Several collectors were aware of an unidentified species in beachdrift but no exhaustive studies were made to identify it. We owe a debt of gratitude to Dr. Harry for painstakingly tracking down this and other species. Not so long ago another of the shells Dr. Harry described (Volvulella texasiana, Veliger, Vol. 10, pg. 141) was found in beachdrift at south Padre Island. (Tex. Conch. Vol. 5, p. 37). Aligena texasiana is a rather globose bivalve, somewhat squarish in outline, belonging to the difficult and somewhat amorphous superfamily Leptonacea, in which the genus Aligena is usually assigned to the family Montacutidae. The species texasiana is the Gulf of Mexico equivalent to the more northern Atlantic A. elevata Stimpson 1851, but can be differentiated from the latter by having a slight sulcus or depression in the shell, by being more quadrate in outline and its smaller size. A. texasiana is apparently widespread throughout the Texas coastal bays, because it is not uncommonly found in beachdrift all along the Texas coast. In my collection are many lots of dead valves, collected during the last 10 years from Sabine Pass to Port Isabel. Dr. Harry obtained live material in the east end of Galveston West Bay on mud bottom living in possible association with worms. The species is clearly confined to the shallow bays because very few specimens have so far been obtained offshore. The photographs taken by Mr. C. Dexter show a number of specimens obtained by me from beachdrift on Galveston Island, whose size is about 4.5 mm (length).

It is likely that A. texasiana occurs in all coastal bays from Louisiana to well into Mexico. The first reference to it as Aligena sp. by Harry dates from 1942. It was figured, but misidentified as Mysella planulata by R. H. Parker in 1959 from the Rockport-Aransas Pass region. From this species A. texasiana is easily separated by its quite different shape and hinge structure. Mysella planulata is a rather flat, pointed bivalve, rounder in outline and with a prominent umbo. We hope to figure it at a future date.

Previous references are:

1942, Harry, H., List of mollusca from Grand Island, Louis iana, recorded from the Louisiana State University Marine Laboratory, 1929-1941. Occ. Pap. Mar. Lab., L.S.U., Vol. 1, p. 1-15 (Barataria Bay, La.)

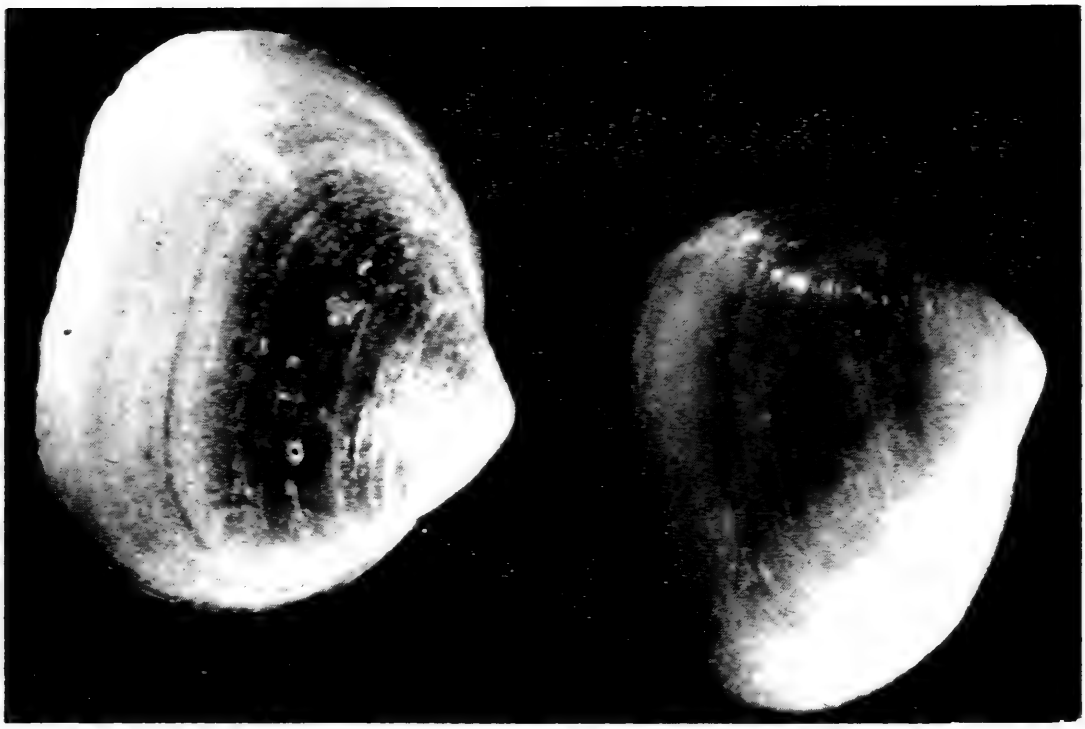
1959, Parker, R. H., Macro-invertebrata assemblages of Central Texas coastal bays and Laguna Madre. Bull. Amer. Ass. Petrol. Geol., Vol. 43, p. 2100-2166. (as Mysella planulata, Plate 2, fig. 21a,b)

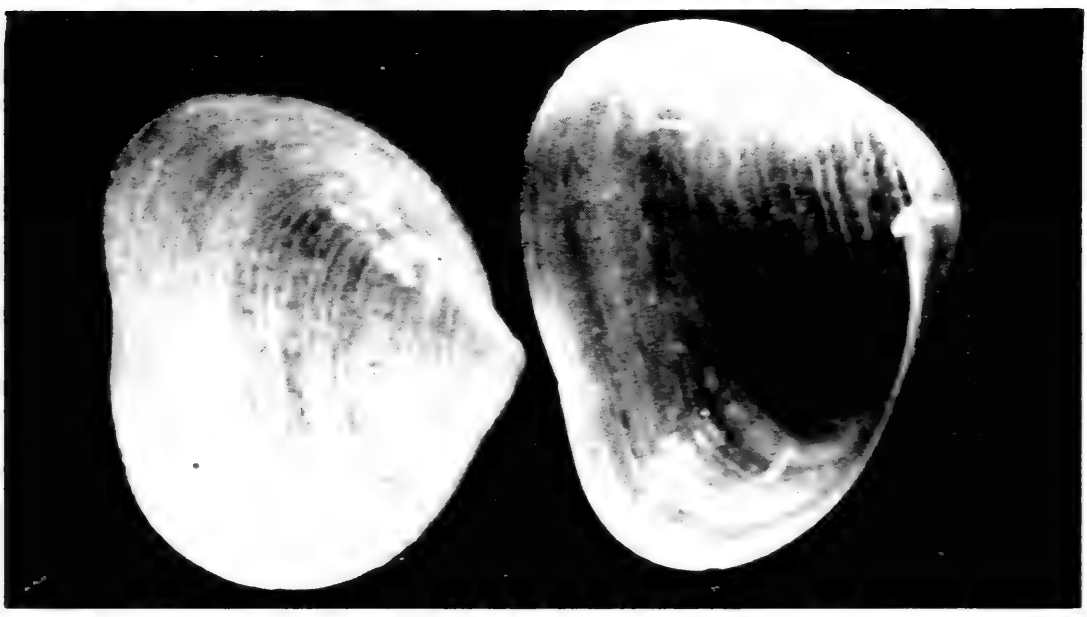
1969, Harry, H., A review of the living Leptonacean bivalves of the genus Aligena. Veliger, Vol. 11, p. 164-181. Fig. 10-14.

******** PHOTOS OPPOSITE PAGE

Dues New Fiscal Year 1969-1970.
Dues are payable to; Houston Conchology Society, % Mrs. George D. Van Erp, 11306 Surrey Oaks Lane, Houston, Texas 77024. Please list name, address, phone number and type of membership.

$4.00: Active, local
$5.00: Family membership
$2.00: Subscriber, Texas Conchologist
$2.00: Junior membership





****

Beaumont Shell Show

The Seventh Annual Gulf Coast Shell Show sponsored by the Gulf Coast Shell Club of Beaumont will be held this year on June 14 and 15 at the Royal Coach Inn on IH 10, Beaumont. Houston shellers are invited to attend and/or exhibit. Rules of the competetive classes are in our library materials. You may obtain your own by writing to Mrs. J. B. Bishop, Jr., 1760 Wexford Drive, Vidor, Texas, 77662.

Our many new members who have not seen a shell show would enjoy seeing this show close to Houston. The Beaumont members are enthusiasts of several families of mollusks which they collect worldwide. Some very fine shells are usually shown. Six trophies will be awarded, in addition to the class ribbons and division rosettes. The Beaumont show is judged on the basis of standards rather than points.

CONCHOLOGICAL PHILATELY

BY W. W. SUTOW, M. D.

CONCLUSION PART II, PART III.

TABULATION OF MOLLUSK-ON-STAMP STAMPS IS CONTINUED. OCCASIONALLY, THE SCOTT CATALOG NUMBERS FOR SOME OF THE STAMPS MAY BE CHANGED FROM ONE EDITION OF THE CATALOG TO THE NEXT EDITION. MOST OF THE INFORMATION GIVEN HERE WAS DERIVED FROM THE 1968 CATALOG. SUFFICIENT DATA ARE GIVEN ON THIS LIST, TO PERMIT PROPER IDENTIFICATION IN ALMOST EVERY CASE.

CHECKLIST OF MOLLUSK-ON-STAMP STAMPS (CONTINUED)

FIRST GROUP (MOLLUSK DEFINITIVELY PICTURED AS THE CENTRAL DESIGN.)

MOLLUSK	COUNTRY	YEAR	VALUE	SCOTT NO.
89. WATASENIA SCINTILLANS	JAPAN	1966	35Y	883
90. GLAUCUS SPP.	NEW CALEDONIA	1959	10FR	309
91. PHYLLOBRANCHUS SPP.	NEW CALEDONIA	1964	37FR	C37
92. LAND SNAILS	JAMAICA	1964	2 1/2P	220
93. COWRY SHELLS	MALDIVE IS.	1960	5L	60

PART III WILL CONCLUDE THE TABULATION OF MOLLUSK-ON-STAMP STAMPS. INCLUDED IN THIS SECTION WILL BE LARGELY THOSE STAMPS ON WHICH (A) FOSSILS ARE SHOWN, (B) THE SHELL DESIGN HAS BEEN STYLIZED, (C) THE SEASHELL FORMS ONLY A PART OF THE CENTRAL DESIGN, AND, (D) THE MOLLUSK IS A MINOR (OFTEN MERELY DECORATIVE) FEATURE OF THE STAMP DESIGN. A MISCELLANEOUS CATEGORY WILL LIST, AMONG OTHERS, THE STAMPS THAT MAY HAVE BEEN OMITTED IN THE PREVIOUS TABULATIONS. IT IS TO BE NOTED THAT SCOTT NUMBERS COULD NOT BE OBTAINED FOR SOME OF THE RECENTLY ISSUED STAMPS. THIS INFORMATION, AS WELL AS CORRECTIONS AND ADDITIONS, WILL BE GIVEN WHEN THESE TABULATIONS ARE UPDATED.

SECOND GROUP (FOSSILS)

94. GRYPHAEA ARCUATA	SWITZERLAND	1960	20+10C	B294
95. GRAMMOCERAS SPP	"	1958	20+10C	B274
96. BERBERICERAS SEKIKENSIS	ALGERIA	1952	15FR	247
97. PERISPHINCTOS SPP	CUBA	1958	30C	C184
98. PLEUROCERAS SPHINCTUM	NETHERLANDS	1962	6+4C	B364

THIRD GROUP (MOLLUSK IS ONLY A PART OF THE CENTRAL DESIGN)

MOLLUSK	DESIGN	COUNTRY; VALUE; YEAR; SCOTT NO.
99. TROCHUS	SHELL DIVER DIVING FOR SHELL	WALLIS & FUTUNA IS.; 100FR; 1962; #C16
100. TONNA SPP	HERMIT CRAB IN SHELL	AUSTRALIA; 9C; 1966; #402
101. PECTEN SPP?	MOTHER OF PEARL ARTIST	FRENCH POLYNESIA; 13FR; 1958; #C24

diminutive Cardita), Rissoa, Natica (lat. diminuitive of natis, buttock), Chama (gr. ἡ χάμα - a bivalve with widely gaping valves).

To the second declension belong the majority of nouns ending on -us, which are masculine except tree and plant names (Ficus - fig is feminine), and those ending on -um and a few others, which are neuter. Stems are formed by leaving off -us and -um; for instance Nassarius, (masc. stem Nassari-), and Vasum (lat. vase), stem vas-. Further examples are:

Mytilus (lat. mitilus, a kind of mollusk, probably a limpet used for its laxative qualities. (Horace).
Strombus (gr. στρόμβος - snails house)
Tagelus (derivation unknown to me)
Capulus (lat. coffin, Handle, related to capere - to catch)
Cantharus (gr. κάνθαρος - beaker, beetle, curved thing)
Sinum (lat. sinum - earthen bowl, not from sinus as given by Perry and Schwengel).
Dentalium (free derivation from lat. dens - tooth)

One notes that the generic names in zoology may duplicate those of botany (Ficus, Oliva). Such duplication is definitely not recommended in new names.

Most of the remaining generic names belong to the third declension. Off hand I cannot list any shell names which belong to the fourth or fifth declension, although there probably are a few. Nouns of the third declension can be either masculine, feminine or neuter. Their endings are quite varied and the stems differ in many instances from the nominative singular. Several types are listed below, some of greek rather than latin extraction.

---

1). Endings on -is (these are mostly feminine).
Cerithiopsis (gr. ἡ ὄψις -eyesight, vision; "cerithium like". Stem Cerithiops-; I would infer from this derivation that its gender is feminine but Abbott and Warmke state that its gender should be taken to be neuter. (p. 75).
Cassis (lat. helmet, stem cassid-. fem.)
Ensis (lat. a straight sword, stem Ens-, masc.
Aclis (lat. aclys-idis, boomerang, stem Aclid, fem.)
Cochliolepis (gr. κόχλος -shell, ἡ λεπίς -scale, stem Cochiolepid-, fem.)
Doris (gr. ἡ δόρις -sacrificial knife, δέρειν - to skin, fleece, so that the name Doris probably refers to the absence of a shell.)
Strombiformis (lat. forma - form; "shaped like a strombus", fem.)
Glycymeris (gr. ἡ γλυκύς - sweet, ἡ μοῖρα - part, heritage), fem. stem Glycymerid-.

2). Endings on -us.
Venus (lat. goddess of beauty), stem Vener-, fem.
litus (lat. Beach), stem litor-, neuter.)
palus (lat. swamp) stem palud-, fem.
Also the word genus, stem gener-, plural genera, neuter, belongs here.
Litus and palus are used in countless combinations such as Littorina, littorea, lituspalmarum, palustris, Paludestrina, etc. One might

NOTE HERE THAT COMPOSITE WORDS SHOULD PREFERABLY BE FORMED FROM THE STEM, NOT FROM THE SOMETIMES CONTRACTED NOMINATIVE.

3). ENDINGS ON -EN.

PECTEN (LAT. COMB) STEM PECTIN-, MASC.

SOLEN (GR. σωλήν - CANAL, PIPE, KIND OF BYVALVE) STEM SOLEN, MASC. ONE OF THE FEW ORIGINAL CLASSICAL NAMES APPLIED TO THE CORRECT MOLLUSK!

4). ENDINGS ON -ES, -AS, -OS.

PHOLAS (GR. φωλεύω - TO LIE IN A BURROW, φώλας - HIBERNATION?) FEM. STEM PHOLAD-.

PHENACOLEPAS (GR. φενακ- -CHEATER, IMPOSTER, λεπας ,PROBABLY A GOOSENECK BARNACLE FOR WHICH THE NAME IS NOW USED. STEM PHENACOLEPAD-, FEM.

PHOS (PROBABLY DERIVED FROM THE GREEK φως, FEM. - BUBBLE, BLISTER, STEM PHOD-, FEM. ALSO IS POSSIBLE TO ΤΟ φως-ωτος, NEUTER, - CLEARNESS, LIGHT, STEM PHOT-, OR φώς. MAN MORTAL, MASC.)

BRACHIDONTES (GR. βραχύς - SHORT, ὀδούς - TOOTH), STEM BRACHIDONT-, MASC.

SERRIPES (LAT. SERRARE - TO SAW, PES - FOOT) MASC.

TAPES (GR. ἔταπης - CARPET) MASC., STEM TAPET-.

TO BE NOTED IS THAT WORDS ENDING ON -CERAS (GR. κέρας - HORN), ARE NEUTER. MEIOCERAS (GR. μικρος- SMALL, κείων - SMALLER) STEM MEIOCERAT-.

TO BE CONTINUED.....

****

CONTINUED FROM PAGE 89

124. PECTEN (?)	CHARIOT ON BADGE OF COLONY	BARBADOS; MANY; E.G. 1897, #81
125. PECTEN SP.	SYMBOL USED BY PILGRIM	SPAIN; 1P & 2P; 1965; #1310 & #1311
126. OCTOPUS	OCTOPUS	SAN MARINO; 5L; 1966; #648
127. SEASHELLS	LINE DRAWINGS ON TABS	ISRAEL; 1962 FISH SERIES;#231-234
128. LOLIGO VULGARIS		ALBANIA; 1968; 15Q; #1170
129. BUCCINUM UNDATUM		ALBANIA; 25Q; 1969; #1172
130. AMMONITE	FOSSIL	CZECHOSLOVAKIA; 30H; 1968; #1559
131. PELECYPODA	FOSSILS	CZECHOSLOVAKIA; 1K; 1968; #1562
132. CONUS GEOGRAPHUS		NEW CALEDONIA; 10F; 1968
133. CONUS LIENARDI		NEW CALEDONIA; 30F; 1968
134. CONUS CABRITI		NEW CALEDONIA; 40F; 1968
135. CONUS COCCINEUS		NEW CALEDONIA; 70F; 1969

Texas CONCHOLOGIST

LUME V, NUMBER 9 MAY 1969

NOTES & NEWS

NEXT MEETING

OUR NEXT MEETING WILL BE HELD ON MAY 28, 1969, 7:30 P.M. IN THE SERVICE CENTER, 4503 BEECHNUT STREET. HAROLD GEIS WILL REPORT ON THE PROGRESS MADE IN THE NORTHWEST GULF OF MEXICO MOLLUSK POPULATION SURVEY AND DISCUSS OUR WORK METHODS.

REPORT APRIL MEETING.

A HIGHLY SUCCESSFUL AUCTION WAS HELD WHICH PROVIDED ENTERTAINMENT AND SHELLS FOR EVERYBODY. CLAIRIE VANERP WAS AUCTIONEER OF THE SHELLS APTLY DESCRIBED AND DISCUSSED BY WAT SUTOW. THE CROWD WAS SO LARGE THAT SEVERAL OF US HAD TO STAND, BUT DURING THE FAST AND FURIOUS BIDDING NOBODY CARED. IT WAS NOTED THAT ALL ORANGE COLORED SHELLS SOLD AT A PREMIUM!

THE BEACHTRIP TO FREEPORT WAS PLEASANT BUT THE BEACH DID NOT COLLABORATE SO EVERYBODY WENT SOON VISITING WITH MILDRED TATE IN THE MUSEUM AT LAKE JACKSON.

REPORT SHELL EXHIBIT AT JOSKE'S

FROM ALL THOSE WHO VISITED OUR EXHIBIT AT JOSKE'S ONLY COMPLIMENTS WERE HEARD. MANY THOUSANDS OF VISITORS SAW THE EXHIBIT ON THE 3RD FLOOR AND SEVERAL NEW MEMBERS WERE WELCOMED. THE EXHIBITS INCLUDED SEVERAL BEAUTIFUL SHELLCRAFT DISPLAYS, TEXAS SHELLS, WORLDWIDE DISPLAYS, PACIFIC SHELLS, ALBINOSHELLS, "SHELLS ON STAMPS", X-RAY PHOTOGRAPHS, BOOKS, AND A MICROSCOPE WITH SLIDES OF SOME SMALLER LOCAL SHELLS FROM GALVESTON. THE SOCIETY THANKS ALL WHO EXHIBITED THEIR SHELLS, GAVE THEIR TIME TO SUPERVISE, OR CONTRIBUTED IN ANY OTHER WAY TO THE SUCCESS OF THE SHOW. IN PARTICULAR LLOYD MEISTER AND DOUG REYNOLDS DESERVE RECOGNITION HERE FOR THE MANY HOURS - VACATION TIME! - THEY SPENT IN ORGANIZING AND SUPERVISING THE SHOW.

REPORT SHARPSTOWN CENTER SHELL SHOW.

A MOST SUCCESSFUL SHELL SHOW IN THE SHARPSTOWN MALL WAS THE HIGHPOINT IN A MEMORABLE YEAR FOR THE HOUSTON CONCHOLOGICAL SOCIETY. THANKS TO THE TREMENDOUS EFFORTS OF CLAIRIE VANERP IN ORGANIZING THE SHOW AND OF JEAN DASHIELL, WHO WAS IN CHARGE OF THE SHELL SHOP, ASSISTED BY JEAN RIDDLE, THE SOCIETY IS ON A SOUND FINANCIAL BASIS AND CAN LOOK FORWARD WITH CONFIDENCE TO FUTURE GROWTH. THE SUCCESS OF THE SHOW IS IN NO SMALL MEASURE DUE TO THE MANY HOURS OF HARD WORK IN PACKAGING SHELLS FOR THE SHOP AND A SPECIAL THANK YOU IS DUE TO JEAN DASHIELL AND HER ENTHUSIASTIC CREW. THE PUBLIC WAS ENTHRALLED BY THE AQUARIA SET UP BY LEROY HARDY, MRS. HARRIS AND PAUL MCGEE OF THE OCEANOGRAPHIC LABORATORY OF THE HOUSTON INDEPENDENT SCHOOL DISTRICT, AND HAROLD GEIS' EXHIBIT OF LIVE CLAMS FROM THE GALVESTON AREA. SELDOM HAVE ALL OUR EXHIBI-

CONTINUED ON PAGE 95

PUBLISHED BY THE HOUSTON CONCHOLOGY SOCIETY
HOUSTON, TEXAS

EDITOR
Helmer Odé - MO 4-9942
4811 Braeburn Drive
Bellaire, Texas 77401

ASSOCIATE EDITOR
Lloyd F. Meister - WA 6-3812
6520 Avenue I
Houston, Texas 77011

REPORTER
Jeane Dashiell - SU 1-2728

REPORTING
and
CIRCULATING
Connie Boone - MO 8-8252

PROFESSIONAL CONSULTANT
Dr. T. E. Pulley

Subscription fee to the TEXAS CONCHOLOGIST is $2.00 per year for non-members. Any member or subscriber may have more than one copy of the publication sent regularly by remitting $2.00 per year for each extra set desired. Back issues may be purchased for 30c per copy at this time.

NOTES CONCERNING TEXAS BEACH SHELLS

Helmer Odé Mrs. Anne B. Speers

FAMILY CALYPTRAEIDAE (CONTINUED)

CREPIDULA CONVEXA SAY 1822. THIS SPECIES IS SMALLER THAN FORNICATA AND LIVES EXCLUSIVELY IN THE BAYS. IT IS MORE COMMON AROUND PORT ARANSAS AND SOUTH PADRE ISLAND THAN AT GALVESTON AND FREEPORT. BUT ALSO HERE LIVE SHELLS HAVE BEEN COLLECTED. THE SPECIES DIFFERS FROM C. FORNICATA BY ITS SIZE, SHAPE, FORMATION OF THE DECK AND PLACEMENT OF THE MUSCLE SCARS.

FIGURED IN: 3,4,5,6

PREVIOUS REFERENCES: 11,14,15,19,51

LOCALITIES: GALVESTON, FREEPORT, PORT ARANSAS, SOUTH PADRE ISLAND.

REMARKS: REPORTS ON THE OCCURRENCE OF CREPIDULA MACULOSA CONRAD 1846 HAVE SO FAR NOT BEEN CONFIRMED. A FEW SHELLS IN THE COLLECTION OF MRS. M. TATE MAY BELONG TO THIS SPECIES. CREPIDULA ACULEATA GMELIN 1791 OCCURS FAIRLY COMMON OFFSHORE.

FAMILY MURICIDAE.

A WELL KNOWN LARGE WORLDWIDE FAMILY OF GASTROPODS WITH SEVERAL COMMON MEMBERS ON THE TEXAS COAST. TO DATE ONLY THE GENERA THAIS, MUREX AND DRUPA ARE KNOWN FROM THE BEACH, BUT OFFSHORE MORE GENERA OCCUR.

MUREX POMUM GMELIN 1790. THE SO-CALLED APPLEMUREX IS A RATHER UNCOMMON SHELL ON THE TEXAS BEACH. FROM THE GALVESTON-FREEPORT AREA ONLY A FEW FRAGMENTS AND BEACHWORN SHELLS ARE KNOWN TO US (COLL. ODÉ), BUT SOUTH OF ST. JOSEPH ISLAND IT CAN BE COLLECTED MORE FREQUENTLY. PERFECT, BUT BLEACHED SUBFOSSIL SPECIMENS OCCUR IN THE SPOILBANKS NEAR PORT ARANSAS. ONE SPECIMEN WAS COLLECTED ALIVE NEAR THE PORT ARANSAS JETTY (COLL. TAYLOR) AND SEVERAL COLLECTORS HAVE COLLECTED LIVE SPECIMENS ON SOUTH PADRE ISLAND AFTER STORMS (COLL. SPEERS, OTHERS).

FIGURED IN: 1,3,4,5,6,

PREVIOUS REFERENCES: 11,12,17,19,20,21,22,26,29

LOCALITIES: GALVESTON, FREEPORT, ST. JOSEPH ISLAND, MUSTANG ISLAND, PADRE ISLAND

Murex fulvescens Sowerby 1834. This, the largest of the North American Muricids, is a common beach shell along the entire Texas coast. Usually beach material is immature, beachrolled and discolored. Often alive on sandbars. During some years live specimens are not uncommon in the tidal zone on Mustang and Padre Island.
Figured in: 1,5,6,
Previous references: 11,12,13,17,19,20,21,22,26,29
Localities: Not uncommon along the entire Texas coast.

Thais patula Linne 1758. It is remarkable that in some older references this species is mentioned for Texas. We have never found it, but recently a beachworn immature specimen was collected at Freeport (coll. Tate). Possibly it was introduced by a shrimper from Yucatan.
Figured in: 1,3,5,6
Previous references: 22
Localities: Freeport.

Thais haemostoma Linne 1767. For this species we will omit the allocation to different subspecies. So many forms and colorations are known, each merging into the others, that it is impossible to say at this moment what particular race should be mentioned. Bay material looks different from offshore populations and the jetties harbour still different forms. Especially on the East Texas beach the species is numerous (very heavy, thickshelled, strongly nodulose). In Galveston Bay a race occurs which is much more slender, has a lighter reddish orange color and lacks the nodules and spines. The jetties harbour a rather dark smaller race, also often without the nodules on the shoulder. The species is found abundantly alive along the entire Texas coast. South of Corpus Christi it is generally confined to jetties and seawalls.
Figured in: 1,3,4,5,6
Previous references: 11,12,13,14,15,16,17,19,20,21,22,24,26,30,51
Localities: Alive along entire Texas coast.

Drupa c.f. didyma Schwengel 1943. Although there is some doubt that this species is different from D. nodulosa, we report a few specimens of this small species under above name. They were found at South Padre Island (coll. Odé, Speers). One was alive in a large clump of whipcoral with bryozoa. The species occurs sparingly offshore along the entire Texas coast.
Figured in: 1,3,5,6 (D. nodulosa
Previous references: 12,18,23
Localities: South Padre Island, Port Aransas (ref. 23)

ooOoo

continued from page 93

tors talked so long and so often to answer all questions of an interested and curious public. The tables filled with shellcraft by Mr. and Mrs. Short attracted huge crowds. Exhibits were many. They ranged from those of our junior members Connie Bolinger and Mary Dryden, that of Pearly Laswell, a brandnew member who filled three tables, to those of several of our seasoned exhibitors. To all those and to John Ekstrom: Thank you!

Mysella planulata

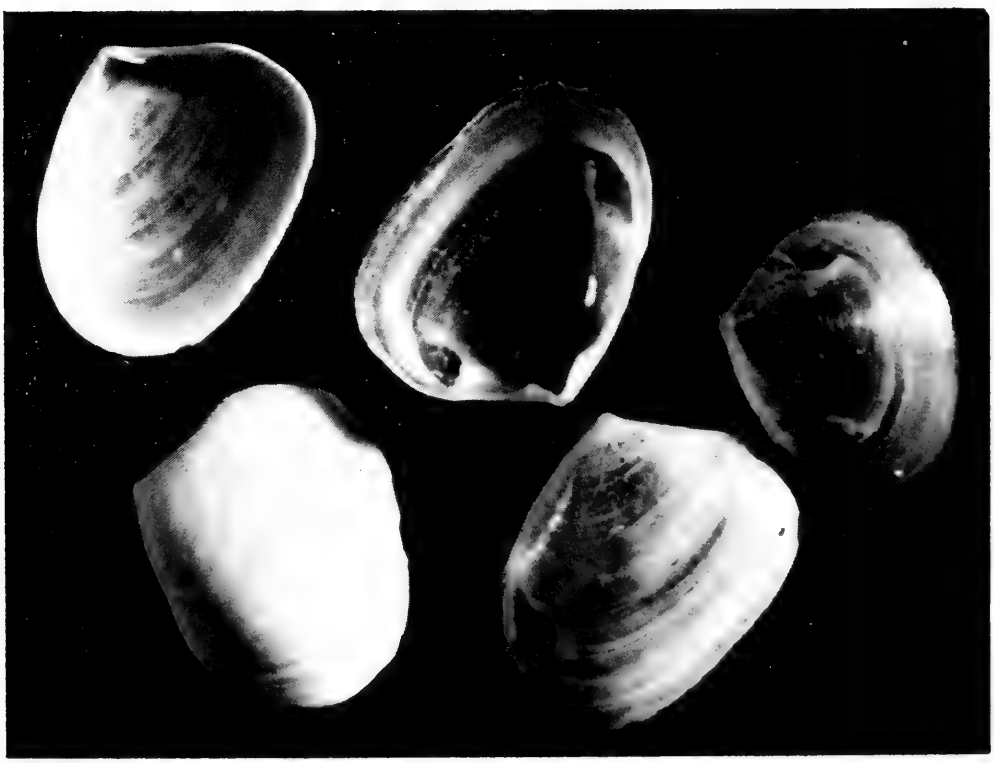
by H. Odé

A not uncommon little bivalve in beachdrift all along the Texas coast is Mysella planulata Stimpson 1857. Single valves and occasionally complete specimens have also been found in drift obtained from the Texas coastal bays. Already Dall was familiar with the occurrence of this species in the Northwest Gulf of Mexico. Although I have not seen live material it is highly plausible that the animal which lives attached by byssus to shells or pillings and other solid objects in the same manner as the North Atlantic Mysella bidentata, is widespread in shallow water along the entire Texas coast. Its vertical range may extend to water slightly deeper than the immediate shoreline. As stated in the previous issue this species has been confused with the slightly less common Aligena texasiana Harry. Not only is the shape of the valve quite different -- A. texasiana is squarish and globose, while M. planulata is oval and flat with a pointed umbo--, but the hinge structure of Mysella is quite characteristic. It is possible that another species of Mysella has been found in beachdrift at Galveston and Port Aransas. I have several valves, so far unidentified, which almost certainly belong to a different species. They are larger, have a less pointed umbo, but are quite rare in drift.

The synonymy of Mysella planulata is difficult to give with as little research as I am able to do at the moment, but I will mention a few sources:

1857 Kellia planulata Stimpson, Shells of New England, p. 17.
1873 id., Verrill, Inv. Anim. Vineyard Sound, p. 688, pl. 30, fig. 6.
1899 Mysella planulata Dall, Synopsis Lept. N. Am., U.S.N.M., Proc. Vol. 21, p. 890.

continued on page 100



MOLLUSCANA

BY W. W. SUTOW, M.D.

During my trip to the Marshall Islands this year, I obtained at Kwajalein (through the kind help of Mrs. Hepburn) a copy of a book that is already out of print.

This was a book entitled A GUIDE TO SHELL COLLECTING IN THE KWAJALEIN ATOLL which was written by Fred Brost and Bob Coale. Printed by The Hourglass, Kwajalein, Marshall Islands, in 1968, the book is spirally bound. It has 156 pages and contains 33 full pages of photographs. The cost is $4.90.

The book is a fairly useful guide to shell collecting in the Kwajalein Atoll. To some extent, the book serves as a reference for shell collecting in the other atolls of the Marshall Islands. The relative rarity of each species is denoted (ranked from 1 through 6) but the assessment is based on the apparent abundance in the Kwajalein Atoll. Thus, among 28 species considered to be rarest in this specific region are included such species as Calpurnus verrucosus, Cypraea cicercula, Cypraea staphlaea, Cypraea argus, Conus nussatella, Vasum ceramicus, Harpa amouretta, Strombus sinuatus and so forth. Many of these species abound in other areas of the Indo-Pacific province and even in other atolls of the Marshall Islands.

The photographs are all in black and white and details on the smaller specimens are frequently difficult to make out for identification purposes. Among the bivalves only 16 species are shown. The book will not help those who may have a special interest in the Pelecypoda. Most of the popular, larger species as well as many commonly found smaller varieties of shells have been described. The book may be a very useful checklist for the beginning collector. To the advanced conchologist only the local collecting information will probably be of interest.

* * * * * * * *

Those readers who attended last year's AMU meeting at Corpus Christi will remember the outstanding chiton exhibit and slide show prepared and presented by Glenn and Laura Burghardt. On my way home from the Marshalls, I visited Glenn Burghardt at the California Academy of Sciences in the Golden Gate Park in San Francisco. I learned that the Burghardts are planning to issue this fall a concise, illustrated (in color) guidebook of the west coast of America.

According to these conchologists, there are some 112 valid species of chitons on the west coast. Of these the Burghardts have completed photographic work on 80. Many of the remaining 32 species are known only from single specimens. They are being tracked down and additional distribution data are being collected on the others.

Incidentally, the technique used by the Burghardts in preparing their beautiful chiton displays is described in the January, 1969 issue of THE TABULATA, 2:8-9.

5) ENDINGS ON -IX, -AX, -EX, AND INX.
HELIX (GR. ἡ ἕλιξ, CURVATURE, SPIRAL OF A SNAIL), STEM HELIC-, FEM.
LIMAX (GR. ὁ λῦμαξ- HUMID SPOT, SLUG), STEM LIMAC-, MASC.
MUREX, STEM MURIC-, MASC.
UROSALPINX (GR. ἡ οὐρά- TRUMPET AND οὖρος - WIND, NOT FROM οὐρά TAIL).
ANCYSTROSYRINX (GR. ἡ σῦριγξ FLUTE; ἀγκιστήρ- RELATED TO, STEM ANCYSTROSYRING-, FEM.
DONAX (GR. ὁ δόναξ OR δωνάξ, SOMETHING MADE OF A REED, IN PARTICULAR A FLUTE), MASC., STEM DONAC-.

6) ENDINGS ON -UR, -ER, AND -AR.
FULGUR, (LAT. LIGHTINING) STEM FULGUR-, NEUTER.
STILIFER, STEM STILIFER-, MASC.
PITAR, STEM PITAR, FEM.
BUT SCAPHANDER (GR. ἀνήρ - ἄνδρος -MAN; σκαφη - SHIP, BOAT), STEM SCAPHANDR-, MASC. THIS WORD PROBABLY COMES VIA THE FRENCH SCAPHANDRE - DIVER SUIT.

7) ENDINGS ON -O.
TURBO (LAT. TURBO-TURBINIS- TOP), STEM TURBIN-, MASC.
VERTIGO (LAT. ROTATING MOTION, DIZZYNESS), VERTIGIN-, FEM.
UNIO (LAT. UNIO - ONION, FEM., BUT HERE FROM A LATE LATIN WORD UNIO - LARGE PEARL, MASC.)
ERATO (GR. Ἐράτω - MUSE OF EROTIC POETRY) STEM ERATO-, FEM.
TEREDO (LAT.; SHIPWORM) STEM TEREDIN-, FEM.
LOLIGO (LAT.: INKFISH) STEM LOLIGIN-, FEM.

8) ENDINGS ON -ON.
ISOGNOMON (GR. ἴσος - EQUAL, γνώμων- VERTICAL PIN OF THE SUNDIAL WHICH CASTS THE SHADOW), STEM ISOGNOMON-, MASC.
GNATHODON (GR. γνάθος - JAW, ὀδούς - TOOTH) STEM GNATHODONT-, NEUTER.
TRITON (SEAGOD, SON OF NEPTUNE), STEM TRITON-, MASC.
CHITON (GR. χιτών-ωνος, SUIT OF ARMOUR, ATTIRE, DRESS, RELATED TO OUR WORD COTTON), STEM CHITON-, MASC.
LEPTON (GR. λεπτόν, THIN, FRAGILE, τὸ λεπτόν, A THIN COIN, A THIN THING) STEM LEPTON-, NEUTER.
GASTROPTERON (GR. ἡ γαστήρ BELLY, STOMACH, πτερόν, WING, FEATHER), NEUTER.

9) ENDINGS ON -E (MOSTLY MYTHOLOGICAL NAMES DERIVED FROM THE GREEK)
ASTARTE (PHOENICIAN GODDESS OF LOVE), SEMELE (MOTHER OF DIONYSUS),
CIRCE (ENCHANTRESS IN HOMERS ODYSSEY)
CHIONE (DEDALION'S DAUGHTER WHO HAD AN AFFAIR WITH APOLLO)

10) ENDINGS ON -YS.
CHLAMYS (GR. ὁ χλαμύς, PIECE OF CLOTHING) STEM CHLAMID-, FEM.
ATYS (SON OF HERCULES AND OMPHALE), MASC., STEM ATY-.
TETHYS (Τηθύς-ύος, WIFE OF OCEANUS) STEM TETHY-, FEM.

11) ENDINGS ON -A, WHICH ARE NEUTER AND WHOSE STEMS ARE FORMED BY ADDING -AT TO THE WORD. THESE ARE DERIVED FROM GREEK NOUNS.
CYCLOSTREMA (GR. κύκλος, CIRCLE AND τρημα, OPENING, BORED HOLE). IT MAY BE NOTED THAT THE S IN THIS NOUN IS UNFORTUNATE; CYCLOTREMA WOULD HAVE BEEN PREFERABLE. FURTHER EXAMPLES ARE:
CALLIOSTOMA, CERASTODERMA (GR. κέρας ;HORN AND δέρμα, SKIN),

Periploma (formed in analogy with δίπλωμα - a letter, i.e. a doubly folded piece of paper)

Cyphoma (gr. ? κύφος - curved or κυφών - curved piece of wood, which was used to lock up criminals in a bent position),

but Pleurotoma (gr. πλευρά side of human body, ἡ τομή cut off part) is feminine, and its stem Pleurotom-.

12) Other endings.

Glans (lat. acorn) stem gland-, fem. It is interesting to note that this word is related to the greek βαλανος, the noun now used for a genus of barnacles.

Quadrans (lat. a fourth part), stem quadrant-, masc. Why the combination is Quadrans lintea (linteus, adj., linen) and not Q. linteus is not clear.

We may conclude this part with a few remarks. Constructions as Cassididae, Periplomatidae, Atyidae are now clear. We note a common error: Glycymeridae instead of Glycymeridididae. However, there may sometimes exist special circumstances which allow other constructions. Recently it was found that the word Cassididae was preoccupied (beetles). Under those circumstances it seems reasonable to allow a slight deviation from the correct linguistic procedure. After all one should strive for a unique nomenclature not in the first place a linguistically correct one.

When one considers Acteon (gr. Ἀκταίων, a greek hunter who surprised Diana while she took a bath and was turned into a stag and killed by his own dogs), one sees that Acteon is misspelled. For good reasons these mistakes cannot be changed, because confusion would arise. Another instance of such a "frozen" mistake is Mangelia, a name given in honor of the naturalist Mangili, with the result that one often sees the name misspelled as Magilia.

A somewhat disconcerting situation arises concerning the nouns ending in -desma, such as Amphidesma, Mesodesma etc. These constructions are derived from the greek ὁ δεσμός, band, which has the irregular plural τὸ δέσμα and τὰ δεσμάτα The family noun is written as Mesodesmatidae showing that nouns ending in -desma are not considered to be derived from another greek word ἡ δέσμη, bundle, fem. The problem now is as follows: if Mesodesmatidae is considered correct Mesodesma is not a nominative singular, but if Mesodesma is corbect the family name should be Mesodesmidae. It would be unwise however to make changes here because of the "rules", and it is better in this case to accept the names as used.

Part III: Adjectives

In this part we turn our attention to trivial names which are adjectives. Apart from patronymics, which threaten to become more numerous than any other group, adjectives are by far in the majority. Past participles are treated as adjectives and belong to the most numerous type of adjectives which end on -us. They follow the rules of the second declension, i.e. the proper ending in the nominative singular for the masculine is -us, for the feminine -a and for the neuter -um. Hence, Trachycardium magnum (τραχύς-rough, uneven), but Tellina magna (magnus-large). We note here

THAT COMPOSITE GENERIC NAMES AS TRACHYCARDIUM ASSUME THE GENDER OF THE MAIN PART OF THE NOUN.

A SECOND LARGE GROUP OF ADJECTIVES ENDS ON -IS. IN BOTH THE MASCULINE AND FEMININE THEIR ENDING IS -IS, BUT IN THE NEUTER IT IS -E. FOR INSTANCE CYCLINELLA (A FREE CONSTRUCTION FROM THE GREEK κυκλος -CIRCLE) TENUIS (LAT. THIN), BUT BUCCINUM (LAT. BUCINA - HORN IN THE SHAPE OF A GASTROPOD SHELL) TENUE AND TEINOSTOMA (GR. τεινειν - TO BIND TIGHTLY), BISCAYNENSE (NOT BISCAYNENSIS): AFTER BISCAYNE BAY.

THERE ARE SOME ADJECTIVES ENDING ON -ER. MOST FOLLOW THE SECOND DECLENSION BUT A FEW THE THIRD. THE FOLLOWING FOLLOW THE 2D DECLENSION:

PULCHER, PULCHRA, PLUCHRUM (BEAUTIFUL)
NIGER, NIGRA, NIGRUM (BLACK, SHINING BLACK)
TENER, TENERA, TENERUM (WEAK, SLENDER)
GLABER, GLABRA, GLABRUM (SMOOTH, BALD)
MACER, MACRA, MACRUM (MEAGER)
ASPER, ASPERA, ASPERUM (UNEVEN, BUMPY)
RUBER, RUBRA, RUBRUM (RED, GLOWING RED)
GIBBER, GIBBERA, GIBBERUM (HUNCH BACKED)

BUT, TO THE 3D DECLENSION BELONG:

EQUESTER, EQUESTRIS, EQUESTRE- PERTAINING TO A HORSE RIDER; ALWAYS USED FOR SHELLS WHICH CLING TO OTHER OBJECTS)
CELER, CELERIS, CELERE (QUICK, SPEEDY)
CELEBER, CELEBRIS, CELEBRE (LIVELY, WELLKNOWN)

THE NAME TELLINA GIBBER, AS RECENTLY PUBLISHED IN JOHNSONIA IS, ACCORDING TO T RULES OF LATIN GRAMMAR, INCORRECT AND SHOULD BE TELLINA GIBBERA. ON THE OTHE HAND ANGULUS GIBBER IS CORRECT IF THE SUBGENERIC NAME ANGULUS IS USED WITHOUT TELLINA.

THERE ARE A NUMBER OF ADJECTIVES WITH OTHER ENDINGS WHICH FORTUNATELY DO NOT CHANGE THEIR ENDINGS WITH GENDER. SOME OF THESE ARE:

VERSICOLOR (MULTICOLORED)
BICOLOR (OF TWO COLORS)
DISCORS (DIVIDED INTO TWO DIFFERENT PARTS)
PUGNAX (PUGNACIOUS)
SIMPLEX (SIMPLE; LINGUISTICALLY RELATED TO THE GREEK απλους, AND ITS DERIVATIVE HAPLOID USED IN GENETICS).
HEBES (BLUNT, SUPERFICIAL)
TERES (FINE, WITH GOOD TASTE)
ELEGANS (ELEGANT)

TO BE CONTINUED.....

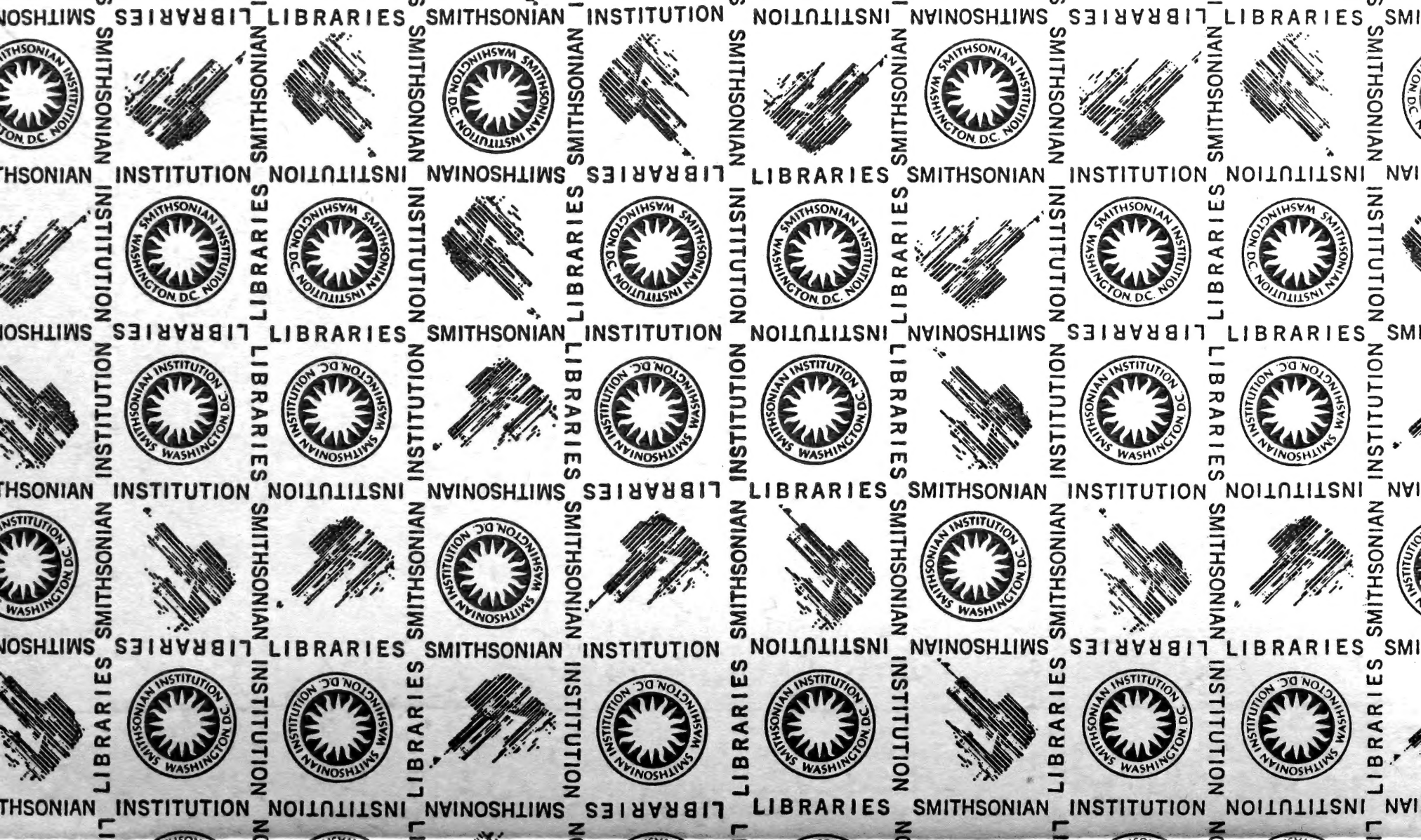
ooOoo

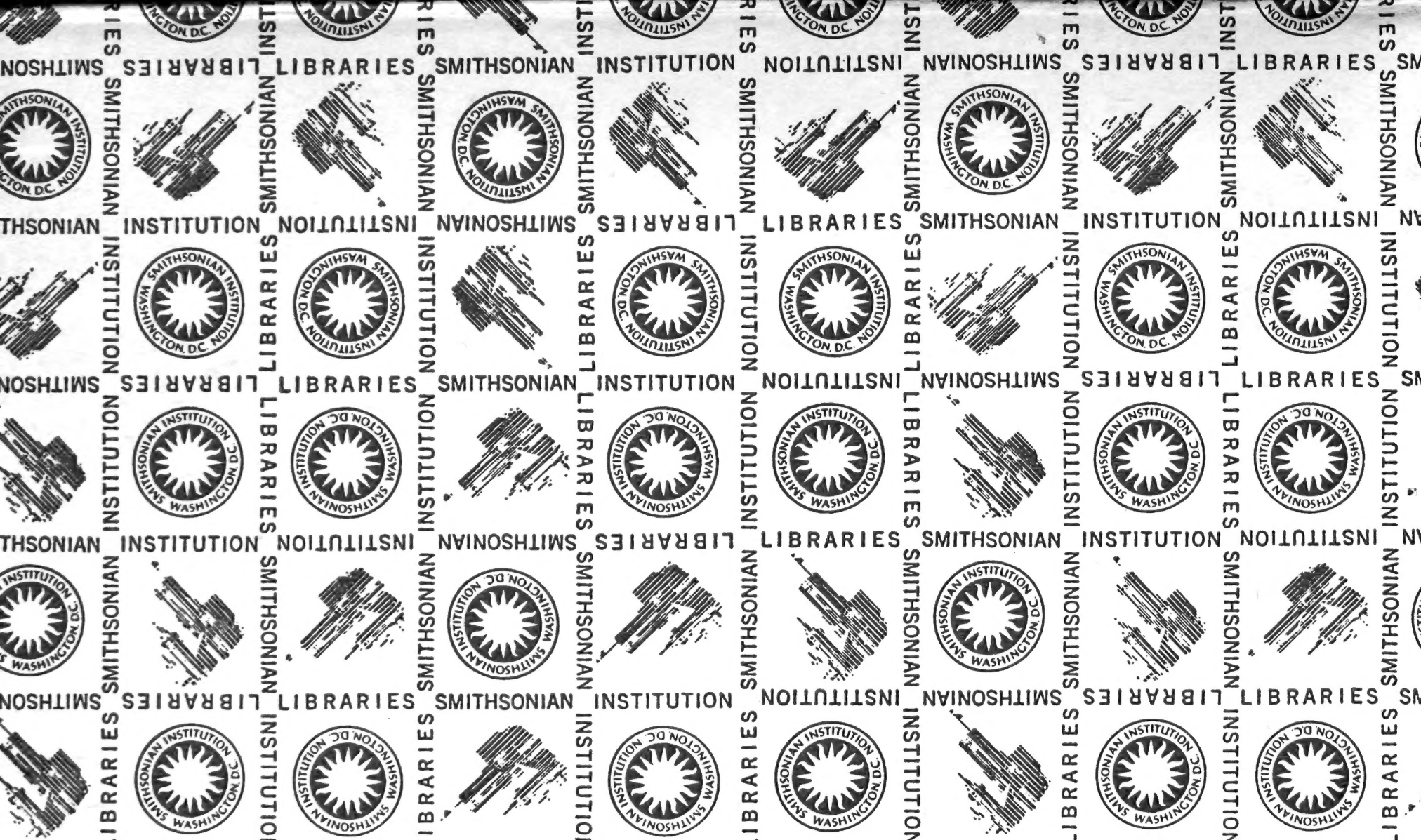
CONTINUED FROM PAGE 96

1900 ROCHEFORTIA PLANULATA DALL, TRANS. WAGNER FREE INST. SC., VOL. 3 PT. 5. P. 1161, PL. 45, FIG. 7.
1954 MYSELLA PLANULATA STIMPSON, ABBOTT, AM. SEASHELLS, P. 395.

PREVIOUS REFERENCES FOR TEXAS ARE:

1899 DALL, (SEE ABOVE).
1900 DALL, (SEE ABOVE).
1934 JOHNSON, C. W., PROC. BOST. SOC. NAT. HIST., VOL. 40 (1).


SMITHSONIAN INSTITUTION LIBRARIES
SMITHSONIAN INSTITUTION
LIBRARIES


SMITHSONIAN INSTITUTION LIBRARIES