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WELCOME TO THE SHELL CLUB'S 40TH YEAR. It's SHOW TIME!

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MEETING DATES: November 15-16, 1996 {Shell show is 15th - 17th}

LOCATION: Wilmington, NC

MEETING PLACE: Cape Fear Museum [814 Market Street]

SCHEDULE: Friday, November 15 [814 Market Street]

7:00 pm: Registration

8:00 pm: Mostly for Beginners...The topic will be Japanese Glass Floats. By...Everett Long

8:15 pm: There have been some last minute changes. Speaker will decided too late for publication.

Saturday November 16 BANQUET at Forresters

Please note the new Banquet Place, Due to Hurricane Fran. **Forresters, 7 Wayne Drive.** (Next to Market & 30th...Across from the Roadway Inn & behind Federal Beds.

The speaker at the Banquet will be Dr. Harry Lee. His talk is titled *Bali & Lumbok Expedition, December 1995.*

6:00- 7:00 pm: CASH BAR

7:00 Buffet Dinner $18.00 per person....*Reservations required.*
Menu: Pepper Steak, Forresters Specialty Chicken, Pasta Dish, 2 Vegetables, salad and cake

Saturday, November 16

THE DAY WILL BE LEFT OPEN FOR A TRIP TO THE CAPE FEAR MUSEUM, NORTH CAROLINA SHELL SHOW. We hope to see many of you there. If you live near by, bring the family, let them all share in learning more about the wonderful world of shells.

Show Hours: Friday....9:00am - 5:00pm
Saturday..9:00am - 5:00pm
Sunday....2:00pm - 5:00pm

Those who have exhibits, will need to pick them up after five on Sunday.

PLACES TO STAY: The headquarters motel is:

Comfort Inn
151 S. College Rd.
Wilmington, NC 28403
1-910-791-4841

We have a special rate of $51.00, plus tax, for 1 or 2 persons. This includes a continental breakfast. You must call before midnight, November 1, say you are with the North Carolina Shell Club, and give our confirmation number of **G00431**, for that rate.

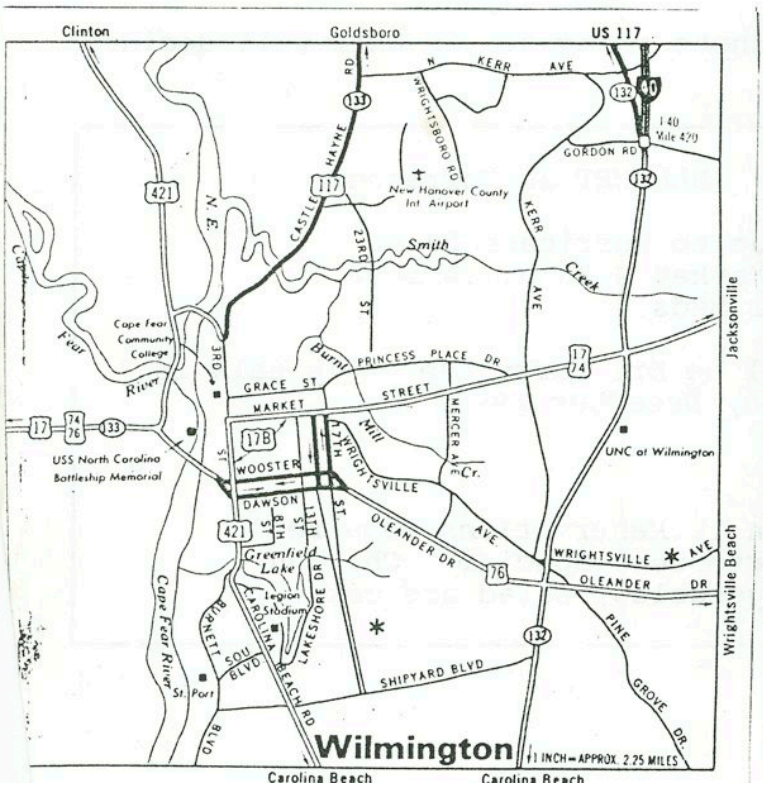
Some other motels are:

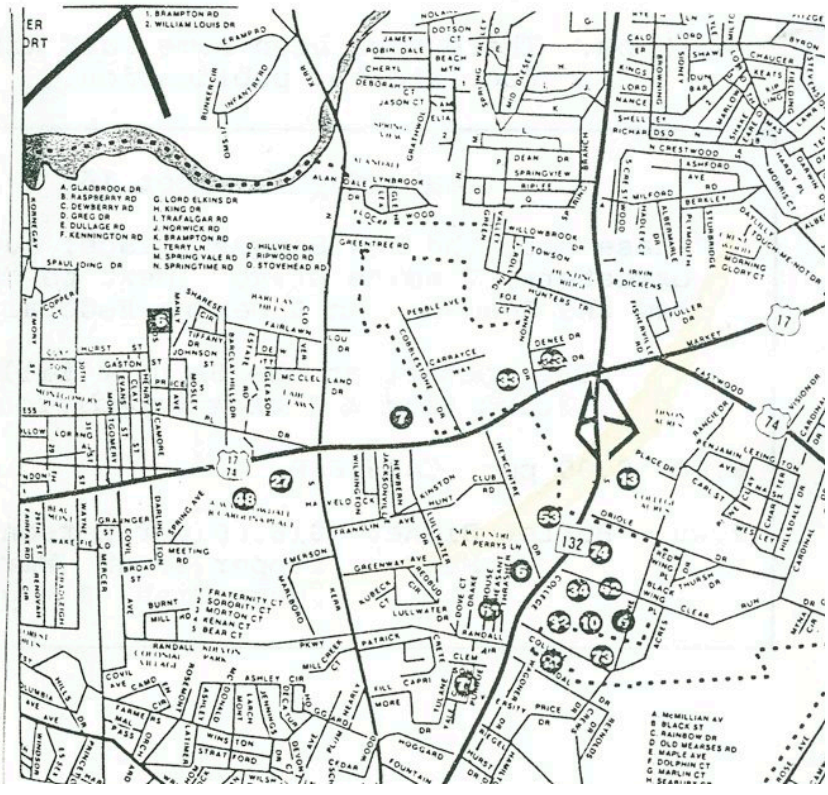
Days Inn 1-910-799-6300
5040 Market Street
Wilmington, NC 28405

$54.88 Plus tax (1 or 2 persons)

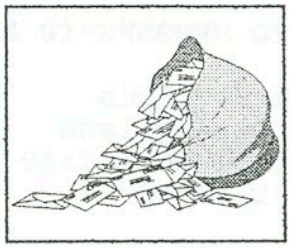
Hampton Inn 1-910-395-5045
5107 Market Street
Wilmington, NC 28405

$49.00 plus tax (1 or 2 Persons)





PRESIDENT'S MESSAGE



It's been my pleasure to have been president of the North Carolina Shell Club for the past two years. It has been lots of fun and very little work, since all of you have pitched in and helped so graciously! I just want to thank all of you for the help and support you've given me...just a sincere "thank You" to all!!

The weather was very cooperative for our meeting at Emerald Isle. The trip to Shackleford Banks was fun, but no great or unusual shells.

I hope many of you get the opportunity to attend the meeting and shell show in Wilmington. The meeting Friday, will be at the Cape Fear Museum, there's ample parking.

Again I want to express my appreciation for all the cooperation these past two years.

Happy Shelling,

Betty

Betty Muirhead

MEMBERSHIP NEWS:

We regret to inform you that member, Dr. John Howard Ferguson passed away September 16, 1996. Also Peggy Wilkerson's husband Bill passed on in July. Our thoughts go out to their families.

If you have any news about our members, please notify:

Ruth Dixon
711 Parker Street
Durham, NC 27701
1-919-682-1501

- or -

Marguerite Thomas
P.O. Box 721
Swansboro, NC 28584
1-910-326-4497

A new slate of officers will be elected and installed at the Friday meeting. They will be serving during our 40th year as The NORTH CAROLINA SHELL CLUB. I think it is time to visit the past, bring out the old memories, and celebrate the achievements of the membership. So go through the old photo's, think about the days gone by, and share some memories of some memorable shell stories with the newer club members. We will all be enriched by sharing. I'll try to put together a walk down memory lane if we can gather enough information.

Virginia Loester, Editor

ADD TO MEMBERSHIP LIST

Virginia Titus
1817 Spring lane
Sanford, NC 27330
919-708-7003

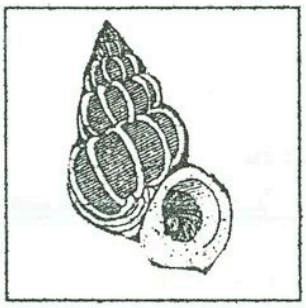
Shirley Cooper
800 Egret Circle #58
Little River, S 23566

NEW ADDRESS

Mark Johnson
206 Parliament Dr.
Wilmington, Nc 28405

CHANGE ZIPCODE

Karlynn Morgan
Naples, Fl 34101-7606



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From Ocala, Fl

Dr. John Ferguson, was 94 when he passed on. He was a long time resident of Chapel Hill, moving to Ocala, Florida, in 1994.

Dr. Ferguson, Professor Emeritus of Physiology at the University of North Carolina School of Medicine at Chapel Hill, was born in Edinburgh, Scotland and moved with his family at an early age to Capetown, South Africa.

He earned a B.A Degree and was awarded an Honorary Doctor of Science Degree by the University of Capetown. He earned a second B.A. and a M.A Degree from Oxford University, where he was a Rhodes Scholar, and his M.D. Degree (cum laude) at Harvard University.

Following faculty appointments at the University of Capetown, Harvard University, Yale University, the University of Alabama and the University of Michigan, Dr Ferguson came to the UNC School of Medicine in 1943 as Professor and Chairman of the Department of Physiology, a position he held until his retirement.

Dr. Ferguson's contributions to the growth of the UNC School of Medicine as a teacher ad his achievements in research were recognized with distinguished Service Award by the faculty and alumni of UNC in arch 1980. He was widely recognized for his research in the fields of blood coagulation, thrombotic and hemorrhagic diseases and radiation sickness. He was author of more than 160 scientific papers and 2 monographs. At the time of his death he was completing editing of his book, "Cape of Storms", recollections of his life in South Africa. Dr. Ferguson's avocational interests included traveling extensively, he was an avid fisherman and his interest in nature led him during his retirement into the hobby of collecting Seashells. His renown seashell collection was widely displayed and now is on permanent exhibit at Eckerd College, St. Petersburg, Florida.

Dr. Ferguson is survived by 6 children, 13 grandchildren and 8 great-grandchildren.

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John Ferguson was one of the few persons to become a Life Member of the North Carolina Shell Club, an honor bestowed on people who have contributed very much to our shell club. It was said that he was like a guiding light since the early days of the Shell Club, willingly sharing his knowledge and time with his programs on various shell families.

Killer snails, Healer snails

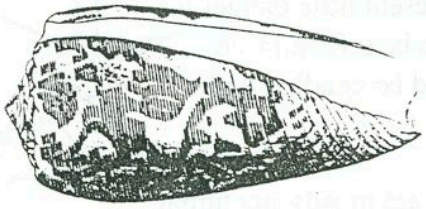
Reprinted from Discover Magazine, May 1994

Cone snails have long been prized by collectors for their beautiful shells; in 1796 one shell fetched a higher price than a Vermeer painting at the same public auction. Biologist Baldomero Olivera of the University of Utah prizes the marine gastropods for their venom. Cone snails are killers: they fire poison darts at their prey from a long, worm like proboscis that extends from underneath their shell. Some species can instantly paralyze a fish and even kill a human. In this fearsome toxicity Olivera sees medicinal potential. He has even isolated a toxin from the venom of the cone snail *Conus magus* that is now being tested as a possible treatment for the damage caused by a stroke.

Called omega-conotoxin, the molecule blocks a particular type of channel in the membrane of a nerve cell: the channels that allow calcium ions to flow in and out of the cell near its junction with a neighboring nerve or muscle cell. The influx of calcium ions, in response to an electric signal traveling down the nerve fiber, is what prompts the cell to release chemical messengers that transmit the signal to its neighbor. By blocking the calcium channels, omega-conotoxin blocks the transmission of the signal. In conjunction with the other toxins in *Conus magus* venom, it can paralyze a fish in a flash.

Human stroke victims face a problem that is in a way the opposite of the paralyzed fish: too much signal transmission rather than too little. A stroke cuts off the blood and thus the oxygen supply to a region of the brain. The oxygen-deprived cells in that region no longer have the energy to close their calcium channels, as they are supposed to once a nerve signal has been transmitted. Too much calcium floods into the cells, prompting their neighbors to keep their calcium channels open, too. The result is an expanding region of dead brain cells.

That's where omega-conotoxin might help administered after a stroke, it could temporarily block calcium channels and prevent the damage from spreading. Neuroscientist Karen Valentino and her colleagues at Neurex Corporation, a small pharmaceutical company in Menlo Park, California recently confirmed that the idea has potential by testing it in rats. When rats whose entire forebrains had been deprived of 15 minutes worth of oxygen (causing damage far worse than what a stroke would do) were given a synthesized version of omega-conotoxin, the death of neurons in the brain was slowed down or even halted.



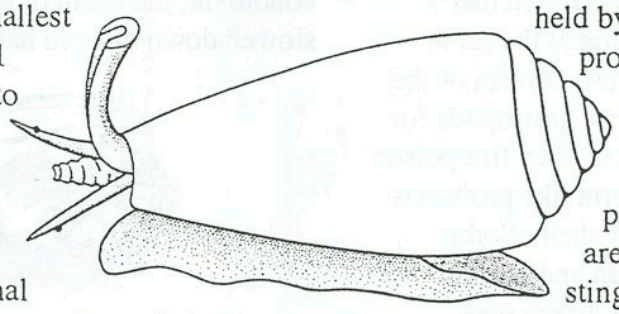
Some additional information on Cones:

Human history is filled with stories of toxic plants and animals. Over the centuries, magicians and physicians used the knowledge of these toxins to kill and to heal. Because of ignorance regarding the chemistry behind these toxins, the poisonous properties of animal and plant toxins have always been surrounded by an aura of mystery, superstition, and religion.

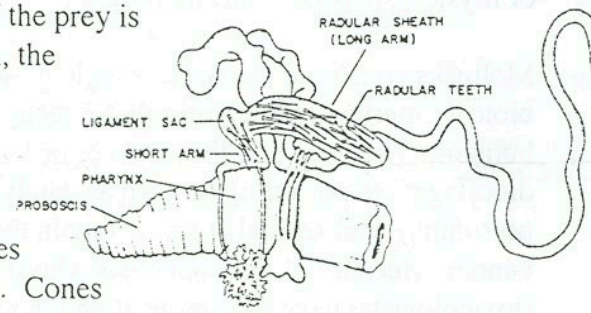
Mollusks constitute the largest single group of biotoxic marine invertebrates that directly effect humans. They serve as the transvector for dinoflagellate poisoning (known as paralytic shellfish poisoning), and several species contain their own venom. Because of this, scientists who study poisons (toxicologists) have paid more attention to mollusks than any other invertebrate group. Species in the three families Conidae, Turridae and Terebridae have venom glands, but only species in the family Conidae have demonstrated an ability to harm humans. Fifteen species of cones have been documented to have caused a toxic reaction in humans, but many other species are considered to be potentially dangerous to humans, because of their size and the nature of their venom apparatus.

Most cone species are found in tropical and subtropical areas, from shallow tidal waters to depths of several hundred feet. Individual species prefer distinct micro-habitats including coral rubble, sand, coral heads, and attached algae of coral reefs. The species that have proven to be the most dangerous to humans have been found in sand or coral rubble. Species of cones react differently to being handled; some are timid and remain withdrawn while others become quite active and readily sting. The Textile

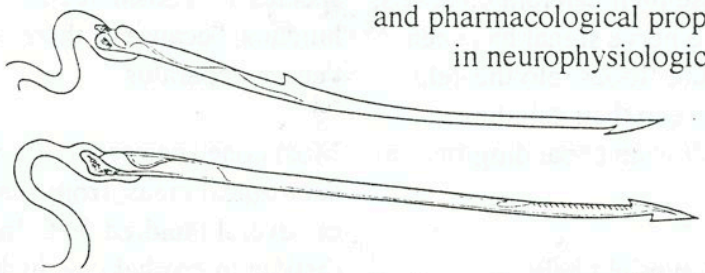
cone, *C. textile* Linné 1758, is known to be particularly aggressive. The size of the cone does not directly relate to the danger of being stung. Some of the largest species have the smallest venom darts (measuring only 1 mm) and present little danger to humans. To be safe, all live cones should be handled with care.



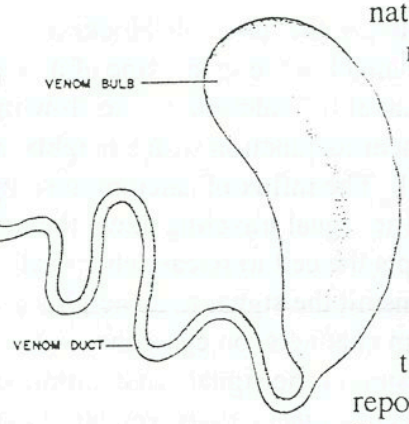
Cone shells are mostly nocturnal animals and burrow beneath the sand or rubble, or under coral or rocks during the day. All are predacious (hunters of other animals) and feed by injecting a venom into their prey by means of a dart-like radular tooth. When prey is detected the cone becomes active, extending its proboscis until it touches the prey. A singular radula tooth is injected upon contact. The effects of the venom within the tooth are immediate and the prey is soon paralyzed. If the prey is small enough, the cone simply engulfs it. Ingestion and digestion takes several hours. Cones tend to feed on one of three foods: worms, other gastropods or fish. These food preferences are reflected in the shape of their harpoon-like teeth and the toxic properties of their venom. Both *C. geographicus* Linné 1758 and *C. textile* are fish eaters.



The venom apparatus of the cone consists of a venom bulb, venom duct, radular sheath, and radular teeth. The bulb is where the venom is produced and stored. The venom duct leads from the venom bulb to the pharanx. The muscles of the bulb expel the venom through the venom duct into the pharanx. The radular sheath produces and stores the radular teeth. It connects to the pharanx just in front of the venom duct. The radular teeth are hollow and have barbed tips. Each one is charged with venom when it enters the pharanx, and then moved forward into the proboscis ready for use. The proboscis is a very muscular organ and rapidly ejects the tooth into the prey. In species that feed on fish, the tooth is actually held by muscles at the tip of the proboscis and serves as a harpoon to retrieve the impaled prey.



Cone stings cause localized paralysis and numbness in the area of the wound, and a sharp stinging or burning sensation. The area stung usually swells and the paralysis and numbness may rapidly spread out from the wound site to the entire body. In severe cases paralysis of the voluntary muscles occurs. Coma may ensue and death is usually caused by cardiac failure. The Dutch naturalist Rumphius recorded the first human fatality from a cone sting in 1705. The greatest number of deaths have occurred in the Indo-Pacific, and the most commonly reported shells are *C. textile* and *C. geographicus* . Recovery from a less serious sting can take from a few hours to several weeks.



Past research focused on the anatomy of the animals, the venom apparatus, and medical aspects of the venom. Current research is concerned with chemical and pharmacological properties of the venom for use in neurophysiological research. Conotoxins are specifically being used to study the calcium channels in our cells. Marine biotoxins have been the least studied toxins and as such offer researchers a wide array of new or little-known molecular structures that may be used to produce useful products.

References:

Halstead, B. 1965. Poisonous and Venomous Marine Animals of the World vol. 1: Invertebrates. US Goverment Printing Office.

Herman Lindsey sent this interesting information:

Last summer during one of my many exploits of the various islands an their waterways, I came across a Tulip paradise this summer. During my twenty years of collecting shells, I also became interested in what they feed upon, which led me to this particular area. The area was comprised of deep, very smelly black muck, but a great feeding ground for mollusk. There were Cluster Oysters and jack knife clams by the hundreds. As I walked through the entire area which covered about 75 yards, I counted over 150 large (3 1/2 in.) Tulips feeding. There were also many in the water.

To explore this area one needs to wear high top sneakers. After collecting a few of the full grown specimens, I noticed a live Apple Murex, of which I have never even seen a dead one on the beach. Also I found a 3 inch shell which I haven't been able to identify.

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Also, there is good news from the North Carolina Marine Fisheries Commission in regards to *live shell collecting*. You do not need a permit or permission to collect live mollusks so long as you don't collect more than 10 per person - per day - per boat. No limit on other mollusks, please use common sense and do not over collect.

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From a friend in California, The Bivalve, Pecten ziozac, Linne, 1758 from Bermuda is banned from collecting and Macracallista maculata, Linne, 1758 is now on the protected list.

"*Thanks for keeping us updated on these things Herman Lindsey.*"

NORTH CAROLINA SHELL SHOW BANQUET

REGISTRATION FORM

FOR RESERVATION: Please send in by November 12th.

NAME:_____ PHONE #_____

NUMBER IN PARTY_____

Payment enclosed...$18.00/person) x_____=_____

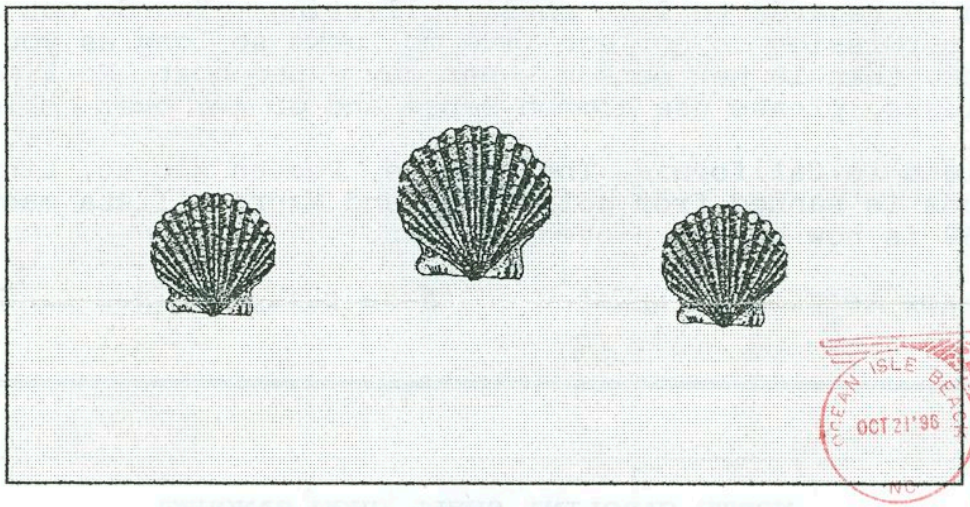
SEND CHECK PAYABLE TO: Mary Ann Adkins
Hearthside
3821 Scots Pl.
Wilmington, NC 28412

You may call her at 910-343-6575 (work)
but she prefers to be called at home 910-392-7357...after 9pm.

A MESSAGE FROM OUR TREASURER:

Thanks for keeping your dues paid up. 1997 Dues are due in April. Janet Durand, our treasurer, collects the dues. They help to insure that you continue to receive newsletters and to support our fine organization.

INDIVIDUAL DUES: $10.00 per year
FAMILY DUES: $12.00 per year



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