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HOUSTON CONCHOLOGY SOCIETY

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The Texas Conchologist is the official publication of the Houston Conchology Society, Inc., and is published occasionally at Houston, Texas. It is distributed as part of the dues to all its members.

The Society holds regular meetings the fourth Wednesday in each of the following months: August, September, October, January, February, March, April, and May. In November, the meeting is held the third Wednesday. An annual auction is held in place of the March or April Meeting

Meetings are held at Southside Place Club House, 3743 Garnet, Houston, Texas. Meetings begin at 8:00 p. m.

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Dues extend from the beginning of the fiscal year of June 1 through May 31. However, the May issue of the Texas Conchologist each year is the second issue due on the regular dues year beginning June 1 of the previous year. Memberships will be accepted throughout the year but will receive issues of that fiscal year. Members receive meeting Newsletters and have all other privileges provided by the Society's by-laws.

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The Texas Conchologist accepts contributions for publication from amateurs, students, and professionals, subject to approval by the Editors. Manuscripts should be typed and double spaced, and should be in the hands of the Editors the first day of the month preceding publication dates. Photos accompanying articles are welcomed.

List of past volumes and issues of the Texas Conchologist:

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Limited copies of the Texas Conchologist are available at a nominal charge of $4.00/issue (including postage and handling), from the editors.

The Bay of Fundy-Nova Scotia: Species Check List
by Sandy Clark

The Bay of Fundy is bordered by the northeastern coasts of Maine and New Brunswick (Canada) and by the western coasts of Nova Scotia. The upper bay is divided by Cape Split into two sections: Chignecto Bay and Minas Basin. It is the Minas Basin, which at its narrowest point becomes Copequid Bay. This bay has the greatest tidal differences of any place in the world.

June, 1998: The first area of collecting was near Upper Economy, close to the head of Copequid bay. When the tide is at its highest, you observe the backward flow of the river. This is known as a tidal bore, and it extends up the Shubenacadie River. Burncoat Head boasts a maximum tide difference exceeding 16 meters (53 feet) with an average of about 12 meters (40+ feet).

The flats yielded only a few species. One of the most numerous was *Mya arenaria,* the soft-shell clam or steamer. *Macoma balthica and Macoma calcarea* were abundant though usually dead. Other bivalves included: *Astarte castenea, Astarte undata, Ensis directus and Spisula solidissima.*

The rocky areas of the mud flats yielded large numbers of gastropods, the most abundant being *Nucella lapillus.* This little dog winkle comes in a variety of colors, with or without stripes. Large numbers of these snails were laying eggs communally. Also found were *Littorina littorina, Littorina saxablis, Littorina obtusata, Nassarius trivittatus and Ilyanassa obsoleta.*

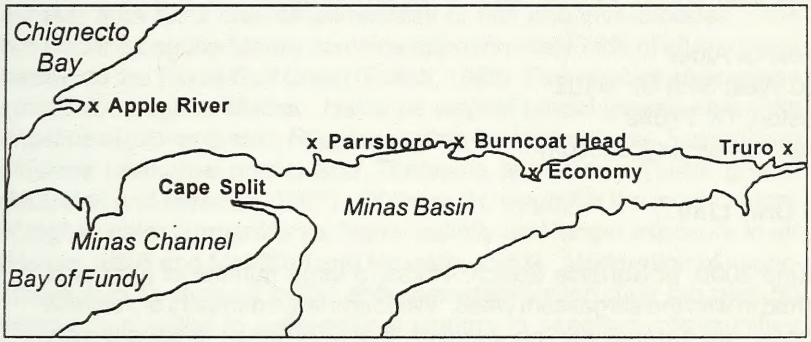
The tide pools yielded a few more species including: *Urosalpinx cinerea, Lunatia heros, Lunatia triseriata, Polinices immaculatus and Buccinum undatum* (on rocks). Living *Pandora gouldiana* was fairly common live offshore.

Traveling west along the northern shore of the Minas Basin, we headed towards the second collecting location--Parrsboro. In route we stopped at Five Islands which are accessible at low tide. Here we found the bivalve *Petticola pholadiformis* in abundance: These were mostly dead, buried upright, in pairs in the mud. Continuing past Two Islands we landed at First Beach, just south and east of Parrsboro. Fishing boats tied up to the pier were seen resting on the bottom of

the bay at low tide. The floor of the bay is covered with the mussel, *Mytulis edulis.* Further south is Partridge Island, that is accessible at low tide. Its beach is famous for gem stones and mineral collecting. Next we travelled to Cape d'Or, from the precipice above the lighthouse you can see the crosscurrents between the upper arm of the Bay of Fundy, Chignecto Bay and the Minas Basin. From there we turned north towards Apple River, the third location.

One goal of the trip was to find the Neptune species-*Neptunea decemcostata.* Although it's supposed to be common, subtidally, on rocks, we did not find any. Only after visiting stacks of empty lobster traps at Apple River, did we find the Neptune as well as numerous *Lunatia heros and Coleus stimpsoni and Buccinum undata,* all dead, and vacant, but their opercula were embedded in the muck that remained in the apertures.

Figure 1. Nova Scotia, showing portions of the Bay of Fundy:



The Houston Conchology Society Announces the Harold W. Harry Memorial Award for 2001.

All Paper work must be submitted by May 1, 2001. Announcement will be made by June1, 2001. (see insert).

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Editorial Comments:

The Texas Conchologist, thanks to Constance E. Boone, had many successful years, and we wish to continue this tradition of excellence that has been its hallmark since its inception in 1964.

I have several ideas that I would like to pursue with the assistance of club members. I would like to publish an updated index to the Texas Conchologist. This would be an extensive reference to the contents of the first 36 volumes. It would provide an important reference guide as well as contain articles written by the members, and lists of species and collecting locations. I also plan to also include current trends in Conchology and Malacology.

Because our members collect along the Texas Coast and throughout much of the world, you are a good source of information. Therefore, please submit your comments, articles and suggestions to me:

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The Drift Line...

In June 2000, at Surfside Beach, Texas, a large number of janthinids washed in with the sargassum weed. We found large numbers of *Janthina globosa*, but surprisingly, no *Janthina janthina*, which is usually very abundant. The shell of *Janthina janthina* is light purple blue on top as to blend in with the light waters of the surface dark blue underneath blending with the darker water below. *Janthina* species float using a raft they make comprised of air bubbles trapped in mucus. Janthinids are frequently found in association with the Portugese Man of War feeding on this siphonophore.

In September, 2000 at Big Lagoon State Park, near Perdido Key, Florida, the only observed mollusk shells were inhabited by hermit crabs. The shells were 2 *Cantharus sp.* and 1 *Pclinices duplicatus.*

In September 1999, on the Spit, in Homer, Alaska, numerous live *Fusitriton oregonensis* were exposed when the tide receeded 20 feet.

Jennifer Elizabeth Davidson, Winner of the Harold W. Harry Memorial Award for 2000

We are pleased to announce that the winner of the Dr. Harold W. Harry Memorial Award for 2000, is Jennifer Elizabeth Davidson a student at Texas A. & M. University, Corpus Christi working on a Master of Science Degree in Biology. Her project is outlined below.

Summary:
There has been a recent succession from *Halodule wrightii* to *Syringodium filiforme* in the Upper Laguna Madre. Molluscan diversity and abundance will be assessed to determine any changes in community structure since the shift in seagrass composition.

Introduction:

Seagrass beds are areas of high productivity that provide a habitat and nursery area for a diverse community of fish and invertebrates. The hypersaline Laguna Madre contains approximately 79% of all seagrass habitat on the Texas Gulf Coast (Pulich, 1998). Five species of seagrass inhabit the Laguna Madre: *Halodule wrightii* (shoal grass), *Halophila engelmanii* (clover grass), *Ruppia maritima* (widgeon grass), *Syringodium filiforme* (manatee grass) and *Thalassia testudinum* (turtle grass) (McMillan and Moseley, 1967). Of these, *H. wrightii* is the most tolerant of higher water temperatures, higher salinity and longer exposure to air (Humm, 1956 and McMillan and Moseley, 1967). Moderation of hypersalinity due to channelization and pass stabilization over the past 50 years has resulted in successional change in seagrass communities throughout the Laguna Madre. Historically the Upper Laguna Madre between John F. Kennedy Causeway and Baffin Bay was dominated by *H. wrightii*, but since 1988 *S. filiforme* cover hs increased from less that 1% to 17% (C. Onuf pers. comm). This shift has also been observed in the lower Laguna Madre which is now dominated by *S. filiforme* and appears to be moving toward a *T. testudinum* climax (Quammen and Onuf, 1993).

Preliminary Report

Mollusks Collected on the DGOMB-2000 Cruise in the Gulf of Mexico

by Roe Davenport

Introduction:

The Texas A&M University Research Vessel Gyre departed from Galveston on May 3, 2000 for a seven week cruise in the Gulf of Mexico. The purpose of the cruise, termed DGOMB-2000 (Deep Gulf of Mexico Benthos), was to evaluate the benthic communities of the continental slope and the abyssal survey plain in the northern Gulf of Mexico. These areas could be affected by future exploration and the harvesting of fossil fuels. The project was funded by the Minerals Management Service of the Department of the Interior, Contract No. 1435-01-99-RP-30991and will include follow-up cruises in 2001 and 2002. For this cruise, 43 sites were chosen along the continental slope from off Port Aransas, Texas to the Florida escarpment to the east.(see Figure 1.) Sites were examined by transects to determine species variability with depth across the Gulf. The cruise involved two legs, with the first leg starting at Site WC5 and moving westward to Port Aransas. After refueling and resupplying the ship, the second leg began with Site C1 and went eastward returning to Site MT1.

Material & Methods:

Sampling procedures were designed to extract the maximum amount of information from the effort expended. To this end, four procedures were performed at each site: 1) water properties were evaluated utilizing a CTD (conductivity, temperature, depth) rosette, which included 24 water bottles in addition to the instruments for measuring conductivity, temperature and depth. The bottles were used to collect water samples at predetermined depths for the evaluation of salinity, dissolved oxygen, inorganic nutrients (nitrates, nitrites, ammonium, silicate, and phosphate), photosynthetic pigments and suspended particulate matter; 2) benthos was sampled using a 0.2 m^2 box core, from which seven subcores were taken. The subcores are used for determining meiofauna, profiles (2), surface geology, surface hydrocarbons, surface trace metals, bacteria, and surface geochemistry. The remaining mud (top 15 cm.) was sieved for macrofauna. Five replications were performed at each site; 3) a digital camera, with a capacity of 48 images was used to photograph the bottom in each area, (the camera and strobe lights were triggered by con-

tact with the bottom); and 4) each site a 40 foot otter trawl was deployed from the fantail A-frame. Megafauna was divided into fish, invertebrates (primarily crustaceans, echinoderms and molluscs), and miscellaneous taxa.

Climate:

The weather was generally good over the course of the cruise. On the first leg (duration 3 weeks) rougher seas were encountered, with one day of high winds and heavy rain during transit between sites. The seas were much calmer on the second leg (duration 3.5 weeks) especially in the northeastern Gulf. While in that area, several waterspouts were encountered over a two day period, and patchy light showers occurred.

Results:

The only thing that prevented the completion of all activities at all sites was equipment loss or damage. The 24 bottle CTD was lost during the course of the first leg and a 12 bottle CTD replacement had to be used.. An attempt was made to duplicate the 24 bottle capability with two runs, but this proved to be too cumbersome, and the idea was abandoned. At Port Aransas, an older 24 bottle CTD was loaded for use on the second leg, and although it required regular maintenance functioned well. The pinger, used to detect the bottom, was lost with the CTD, and prevented the digital camera from being deployed until a replacement could be obtained. The box core had to be repaired several times in the course of the cruises, but this did not prevent the acquisition of samples. Most problems occurred with the trawl nets. On the first leg, two nets were lost, and after losing the second net, only a beam trawl was available for use at the last sites of the first leg. New nets allowed the successful sampling of all 21 sites of the second leg, with only minor repairs being required. After completion of the scheduled sites (2nd leg) we were able to obtain area photos and samples trawl missed during the 1st leg.

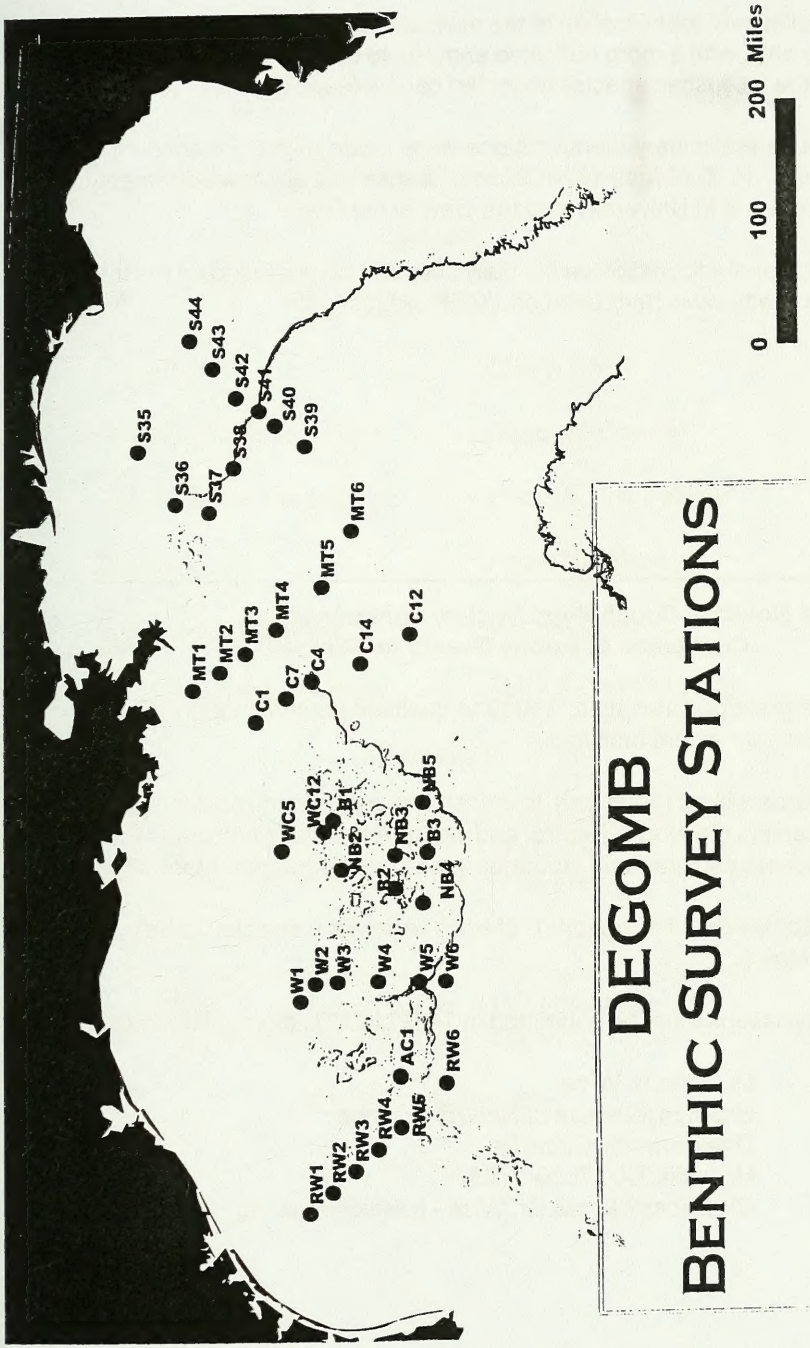
Large amounts of data were obtained with many wet and dry samples still requiring identification and analysis. Bacteria samples were sent to the University of Washington for analysis. Meiofauna samples are being analyzed at the University of Texas Marine Science Institute at Port Aransas, Texas. The remainder of the material will be sorted, identified and analyzed at Texas A&M University.

Table 1

Subclass/Family	Genus	Species	Site	Depth(m)	Shell Only	Live	#
Polyplaophora	Chiton	sp.	W3	870		x	1
Cocculinidae	*Cocculina*	sp.	NB3	1800		x	10
Trochidae	*Solariella*	*infundibulum*	S40	3000	x		1
	Gaza	*superba*	MT1	500	x		1
Crepidulidae	*Crepidula*	sp.	W1	400		x	2
Xenophoridae	*Tugurium*	*caribaeum*	S44	210	?	?	1
	Tugurium	*longleyi*	W1	400	?		1
	Tugurium	*longleyi*	S43	400	3	1	4
	Tugurium	*longleyi*	MT1	500	x		1
Cassidae	*Oocorys*	*abyssorum*	NB5	2100	x		?
	Oocorys	*abyssorum*	C14	2500	x		6
	Oocorys	*abyssorum*	MT5	2200	?	?	?
	Oocorys	*abyssorum*	S35	700	x	x	3
	Oocorys	*abyssorum*	MT2	700	?	?	3
	Oocorys	*abyssorum*	MT1	500		x	3
	Oocorys	*bartschi?*	MT1	500		x	1
	Oocorys	*sulcata*	S36	1835	x		1
	Oocorys	*sulcata*	S37	2385	x		1
	Oocorys	*sulcata*	MT4	1400	x		1
	Oocorys	sp.	W6	3000		x	1
Muricidae	*Siratus*	*beauii*	S44	210		x	2
Buccinidae	Buccinid	*sp.*	S35	700	?	?	2
	Buccinid	*sp.*	MT2	700	1	2	3
Columbellidae	*Mitrella*	*profundi*	C1	300		x	3
Volutidae	*Scaphella*	*kieneri*	C1	300		x	1
Conidae	*Conus*	*mazei*	RW1	200	x		4
Turridae	*Polystira*	*albida*	S44	200		x	1
	Polystira	*tellea*	RW1	200	1	2	3

Turridae cont.	*Pleurotomella*	*pandionis*	NB5	2100	x		1
	Pleurotomella	*c.f. bairdii*	MT6	2750	x		1
	Pleurotomella	*c.f. bairdii*	S40	3000	10	2	12
	Phymorynchus	sp.	S40	3000		x	2
	Phymorynchus	sp.	B2	2600	x		1
	Turrid	sp.	NB2	1500	x		1
	Turrid	sp.	S38	2600	x		1
Scaphandridae	*Scaphander*	*watsoni*	C1	300		x	2
Cavolinidae	*Cavolina*	*tridentata*	NB3	1830	x		?
	Cavolina	*tridentata*	NB2	1500	x		?
Argonautidae	*Argonauta*	sp.	B3	2600	x		?
	Argonauta	sp.	NTB5	2100	x		?
	Argonauta	sp.	C14	2500	x		?
Mytilidae	*Amygdalum*	*politum*	W1	400		x	?
	Amygdalum	*politum*	S35	700		x	4
	Amygdalum	*politum*	MT2	700		x	2
	Amygdalum	*politum*	MT1	500		x	130
	Amygdalum	*politum*	MT4	1400		x	?
	Amygdalum	*sagitatttum*	C1	300	?	?	1
Pectinidae	*Aequipecten*	*glyptus*	RW1	200	x	1	1
	Aequipecten	*glyptus*	S44	200	x	4	4
Propeamussidae	*Propeamussium*	*dalli*	W1	400		x	8
	Propeamussium	*dalli*	MT4	1400		x	?
Thyasiridae	*Thyasira*	*grandis*	S40	3000	x		1
Semelidae	*Abra*	*longicallis americana*	B3	1800	x		?
?Vesicomyidae	?	sp.	S40	3000	x	3	?
	?	sp.	S41	2890	x		?
Veneridae	*Agripoma*	sp.	MT3	1000	x		1
Cuspidariidae	*Cuspidaria*	sp.	B3	2600	x		?
	Cuspidaria	sp.	NB5	2100	x		?

Cuspidariidae cont.	*Cuspidaria*	sp.	S41	2890	x		?
	Cuspidaria	sp.	MT5	2200	x		1
Verticordiidae	*Policordia*	sp.	B3	2600		x	1
Dentaliidae	*Dentalium*	*laqueatum*	B3	2600	x		1
	Antalis	*occidentalis ?*	C12	3000	x		?
	Antalis	*occidentalis ?*	MT6	2750	x		?
	Antalis	*occidentalis ?*	S39	3000	x		?
	Antalis	*occidentalis*	S40	3000	x		?
	Antalis	*occidentalis ?*	S38	2600	x		?
	Fissidentlium	*meridionale*	MT6	2750	x		?
	Dentalium	sp.	NB3	1800	x		?
	Dentalium	*sp.*	C14	2500	x		?
	Dentalium	sp.	MT5	2200	x		?
	Dentalium	sp.	S36	1835	x		?
	Dentalium	sp.	S37	2385	x		?
Laevidentaliidae	*Laevidentalium*	*perlongum*	B3	2600	x		1
	Laevidentalium	*perlongum*	C12	3000	x		?
	Laevidentalium	*perlongum*	MT6	2750	x		?
	Laevidentalium	*perlongum*	S38	2600	x		?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Preliminary identification of the mollusks was accomplished onboard the ship, with a more definitive analysis to be performed later. A list of the molluscan species collected can be found in Table 1.

These preliminary identifications were made using. *American Seashells*, R. T. Abbott, 1974. Special thanks and acknowledgement to Texas A & M University and the crew of the Gyre.

Additional information on the daily activities can be found on the Internet at http:www.gerg.tamu.edu/GERG/dgomb.htm

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The Houston Conchology Society announces the Constance E. Boone Grants to Malacology

The grant provides up to $1000 to qualified persons undertaking research on recent mollusks.

Awards will be made only to citizens or permanent residents of the Americas (i.e North, Central and South America), particularly under graduate and graduate students. (see insert for further information.)

Postmark deadline is April 1, of each year with a decision to be made by May 1.

Applications must be submitted in **TRIPLICATE** by regular mail to:

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Houston, TX 77030-1799
Questions? Email Dr. Wise - jwise@hmns.org

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