

attributed to Hurricane David which brushed the South Carolina coastline in September 1979.

Most of the shell growth (change in shell length, SL) occurred in the first 2 years. Growth appeared to be a function of age and size in that younger clams of the same size grew faster than older clams. Similarly, smaller clams grew faster than larger clams of the same age. The fastest growers in the population were consistently smaller than the slowest growers through a size (60 mm SL) and age (53 months) when growth leveled off. However, individual growth rates varied widely so that the fastest growers in one measuring time interval were rarely the fastest growers in another time interval.

Correlation coefficient computed between initial SL (at planting) and final SL was positive (.40) suggesting clams held a similar position in the size distribution after 4.5 years growth. Following the SL of individual clams through 9 measuring intervals disclosed that the larger clams maintained their position in the size distribution more consistently than smaller clams. The negative correlation coefficient ($-.44$) observed between initial SL and growth indicated that smaller clams were exhibiting compensatory growth or were overtaking the larger clams. However, some of the smaller clams did not exhibit compensatory growth and, therefore, remained as small individuals in the size distribution. Also, not all of the larger clams were overtaken by compensating clams because as these small clams got bigger the difference in growth was reduced to the point where the larger clams which continued to grow maintained their relative position in the size distribution. For these reasons, the gradual decline in variability with age and growth, which has been assumed to occur as a result of compensatory growth, was not observed. Instead, the standard deviations about the mean SL increased slightly over the 4.5 years. The evidence of this study suggested that the overall reduction in variability in size with time is not a prerequisite for growth compensation, and that the mechanism of compensation may be occurring more frequently among molluscs than previously detected or thought.

FAUNAL ASSOCIATION WITH *ATRINA SEMINUDA* (LAMARCK, 1819). E. C. Rios, B. L. Albuquerque and G. P. Oliveira, Museu Oceanográfico de Rio Grande, Brasil.

The Pinnidae, principally sessile bivalves, serve as hosts to a number of crustaceans that live as commensals in the mantle cavity and others attached to the outside of their valves.

In 1980, the junior authors of this study collected many specimens of *Atrina seminuda* from off Salvador, Bahia State, in 20 meters of water. We removed 18 species of mollusks and other organisms from the valves. These included five species of Gastropoda, 12 Pelecypoda and one Polyplacophoran.

The other organisms found on *Atrina seminuda* included algae, anemones, barnacles, brittle stars, bryozoa, crustaceans, polychaetes and tunicates.

PACIFIC ISLANDS REVISITED—BIOGRAPHY OF A RECENTLY EXTINGUISHED LAND SNAIL FAUNA. Alan Solem, Department of Zoology, Field Museum of Natural History, Chicago, Illinois.

Analysis of the land snail families Endodontidae and Charopidae on the Pacific Islands show a pattern of minor geographic changes that do not correlate with tectonic events. Most of this radiation has become extinct within the past 50 to 150 years because of man-made habitat alterations or introductions.

PRELIMINARY STUDIES ON THE KARYOTYPES OF BRADYBAENIDAE (GASTROPODA: PULMONATA). Noorullah Babrakzai and W. B. Miller, Department of Biology, Central Missouri State University, Warrensburg and Department of General Biology, University of Arizona, Tucson.

Chromosome study of *Bradybaena similis*, *B. (Acusta) despecta sieboldiana*, and two species of *Euhadra*, reveals the unique nature of the karyotype of *B. similis*; in having 26 pairs of telocentric and only two pairs of metacentric chromosomes.

PHYLOGENETIC STUDIES ON *MESODON* AND *TRIODOPSIS* (GASTROPODA: PULMONATA: POLYGYRIDAE): A PROGRESS REPORT. Kenneth C. Ember-ton, University of Chicago, Illinois.

Mesodon and *Triodopsis* may be separated by reproductive anatomy and behavior. *Mesodon* has a smooth penis and elaborate courtship with intertwining of penes and external deposition of sperm masses; *Triodopsis* has a sculptured penis and little to no courtship with insertion of penes and internal deposition of sperm masses. The two genera have radiated into many of the same ecological habitats in the eastern U.S., resulting in very similar numbers of species and patterns of species diversity and endemism, and resulting in multiple conchological diversities (over a wide range of shell shapes), several of which occur in microsympatry.

In an effort to learn the evolutionary relationships among *Mesodon* and *Triodopsis*, I am using electrophoretic characters and secondary sexual characters. Three months were spent in the field in 1982, resulting in 2,000+ lots; 10,000+ specimens; and 2,500+ tissue samples, including most of the nominal species. My 1983 field season appears to have doubled these figures. All live specimens were relaxed and preserved in ethanol. All specimens will be catalogued at the Field Museum of Natural History, Chicago.

Dissections prove that *Triodopsis* penial sculpture is rich in characters for phylogenetic analysis; *Mesodon*'s will be dissected in the same way.

Starch-gel electrophoresis was performed at the Academy of Natural Sciences, Philadelphia. Thirty-five loci were assayed, 16 of which were chosen for the complete analysis of 950+ snails from 150+ populations comprising 37 nominal *Mesodon* species and 34 nominal *Triodopsis* species. Overall, there were two to 20 alleles per locus ($\bar{X} = 8.5$) and heterozygosity was low (ca 5%). A preliminary



Babrackzai, Noorullah. and Miller, W B. 1984. "Preliminary Studies on the Karyotypes of Bradybaenidae Gastropoda Pulmonata." *American malacological bulletin* 2, 97-97.

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