

## Jolly Olivellas, Hungry Agaronias

by FATHER AL LOPEZ, S.J.

**MANAGUA** — In the beaches of the Panamic Province, the Olividae are found in abundance. Some eight species of *Oliva*, twenty-five of *Olivella* and three of *Agaronia* have been reported. No other region in the world has such a variety of *Olivella* and *Agaronia*, although the Indo-Pacific province has many more kinds of olives.

The beaches of Nicaragua, in the center of the Panamic Province, are alive with members of the Olividae. Something like 95 per cent of the specimens, however, represent a single species — *Olivella semistriata* Gray, 1839. (Its synonyms include *Oliva attenuata*, *Olivina semisulcata*, and *Oliva affinis*.)

This tiny shell — it is about 15mm long — makes up in numbers what it lacks in size. Huge colonies line the sand beaches in strips perhaps fifty meters long and two or three meters wide. Often there will be one colony at the high tide line, another at the low-water mark, and sometimes a third in between!

*Olivella semistriata* is a merry little shell. If you pick one up with some wet sand, it will wiggle and crawl around in your palm in a very carefree manner. Its preferred life style seems to be to lie buried in wet sand, waiting for a wave to bring food.

As the wavelets ripple over them, they extend two paddlelike appendages of the front lobe of their foot and wave them rhythmically. Presumably this picks up plankton and particles of food from the water.

Sometimes they emerge from the sand and crawl around for a while, leaving the entire beach covered with a modernistic pattern of winding tracks.

Other members of the Olividae in evidence on the western beaches of Nicaragua are the *Agaronia*, especially *A. propatula* Conrad, 1849 and *A. murrha* Berry, 1953. The first is extremely variable in size and color, ranging in length from 10 to 70mm, from pure white (albino, perhaps) through orange and brown to almost black, with or without zigzag lines and spots of different shades. It is not unlikely that this great variety may include different as-yet-unrecognized species.

A very similar shell, *A. hiatula* (Gmelin, 1791), found in the eastern Atlantic, is a different species, according to Myra Keen in *Seashells of Tropical West America*.

*Agaronia murrha* is much more uniform. It reaches a length of 65mm and is usually off-white, although pink and gray shells are sometimes seen. The mollusc is light gray, whereas *A. propatula* is purple.

*Agaronia testacea* is scarce in Nicaragua. I have seen no live shells, only beach specimens. All were from Aposentilla in the northern part of Nicaragua, with a maximum length of 35mm.

Despite the family relationship, there is no good feeling between the *Olivella* and the *Agaronia*. In fact, the *Agaronia* eat the *Olivella*.

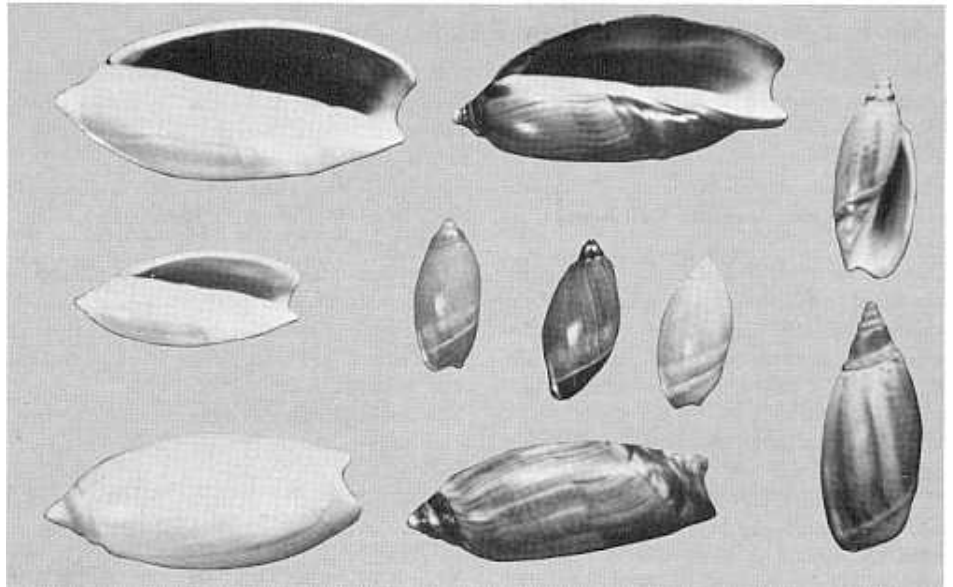


Photo: Lopez

Three species of *Agaronia* from Nicaragua's Pacific beaches: left, *Agaronia murrha*, from Corinto; center group, *A. propatata*, from Aposentillo; and, right, *A. testacea*, Aposentillo.

It is interesting to watch an *Agaronia* prowl for a meal. It does not have far to go, since there is always a colony of *Olivella* nearby. Its technique seems to be to cut through an *Olivella* track, hoping for a close encounter of the right kind. The operation involves no finesse, no accurate zeroing in on the target. It is a hit or miss affair. I have seen an *Agaronia* try to find an *Olivella* only half an inch from its proboscis, and succeeding only after several clumsy attempts.

Sensing something moving in the sand just in front of it, the *Agaronia* will extend its body and throw out its foot in an effort to envelope its prey. If the cast is successful, the frantically wriggling victim is quickly engulfed by the foot and passed

to its posterior lobe. The latter operation seems to require strenuous exertion and convulsions on the part of the *Agaronia*, which stands on its head to carry it out.

When the victim is safely enveloped in the rear lobe of the foot (which by then looks like a small balloon), the *Agaronia* dives smoothly into the sand, digging with the front of his foot, now free for action. It quickly disappears to enjoy its meal in private.

One wonders how this last operation is carried out. In spite of its wide aperture (propatula means "gaping") the victim is too big for the *Agaronia* to swallow. In fact, the prey occasionally is another *Agaronia*, the same size.

The *Olivella* themselves may not be so innocent as they appear. I have seen a large *O. semistriata* standing on its head, in the throes of what seemed to be an attempt to swallow another shell, just like the *Agaronia*. When I picked it up to observe, the *Olivella* released a tiny terebra.

## Remember the October 7 Shell Auction

The Hawaiian Malacological Society's big October 7 Shell Auction will be held in the lanai meeting area of the First United Methodist Church in Honolulu, Auction Chairman Andy Adams has announced. The church is the former meeting place of the Society.

Shells will be on display from noon, Adams added. The sale itself will start at 1 p.m., continuing until about 5 o'clock.

Two auctioneers are expected to alternate in conducting the sale.

"The idea is to push the action as fast as we can," said Adams. "One of the criticisms in the past has been that too much time was spent between sales.

"Receipts of shells from overseas members

have been encouraging, and we are beginning to get some good material from our Hawaii collectors. For some reason they are always tardy contributors. I expect that we will have a fine selection of both types this year.

"With a little luck, we will have a preliminary sales list ready to circulate with the September issue of *Hawaiian Shell News*. Donors will be identified. Remember, American members can deduct the value of their contributions from their U.S. income tax."

Proceeds from the 1978 Shell Auction will go to support the HMS Scholarship Fund. The fund earlier this year distributed \$2,100 among three graduate students of biology to help finance their further studies.