

Growing New—

Seafood Delicacy

A large, succulent crustacean from Malaysia could join shrimp and lobster in popularity with America's seafood consumers, if the efforts of a team of Sea Grant scientists in South Carolina are successful.

With support from the National Oceanic and Atmospheric Administration, specialists at several South Carolina institutions are working together to develop successful techniques for cultivating the giant Malaysian prawn — *Macrobrachium rosenbergii* — in captivity.

Dr. Paul Sandifer of the South Carolina Marine Resources Research Institute, located at Charleston, heads the Commerce Department agency-sponsored project. Associated with him in the Institute effort is Dr. Theodore Smith, mariculture specialist.

"In appearance, size, and flavor," Dr. Sandifer explains, "the Malaysian prawn lies somewhere on a scale between the shrimp and spiny lobster. Most important of all to the prospective grower, the prawn is known to reproduce and prosper in captivity."

Last spring and summer, the scientists stocked five outdoor freshwater ponds with about 25,000 laboratory-reared postlarval prawns.

When the ponds were harvested three to five months later, 60 to 70 per cent of the prawns had survived and grown substantially. The size of the harvested prawns varied, depending on their size when stocked and the length of time they had lived in the ponds.

The largest prawns harvested weighed more than an ounce.

One pond, stocked with very small juveniles weighing about one-hundredth of an ounce, yielded the equivalent of nearly 600 pounds of prawns per acre after only four months. The pond stocked with the largest prawns — averaging one-tenth of an ounce in weight — produced a yield equivalent to 1400 pounds per acre after five months.

Artificial culture of creatures of the sea requires development of complex, interdependent systems

and techniques — tanks, circulating water systems, special diets, and methods of hatching and raising larvae to the adult stage.

In the South Carolina Sea Grant project, Drs. Paul Zielinski and Walter Castro, engineers at Clemson University, have experimented with two types of tanks for rearing the prawn larvae.

Their studies not only are advancing the design of tanks, but are also providing new information on circulating patterns within the tanks and on the use of small air-lift pumps.

In the course of their work, they found that existing information on air-lift pumps does not apply to the small pumps that lift water less than 15 feet to provide circulation in culture tanks. Their efforts to fill this information gap will have wide application outside the field of aquaculture.