Shell of the Month

by Dr. Rick Batt

***Tonna galea* (Linnaeus, 1758)**
(Giant Tun)

Tun shells, members of the family Tonnidae, are tropical to subtropical snails with relatively large, inflated shells that though usually thin and light-weight are strong. Their spire is usually low, and most species have a deep suture separating the whorls. The shell is ornamented with raised spiral ribs separated from each other by relatively narrow furrows. The shell's overall shape inspired the common name: a "tun" being a large cask for beer or wine. Tun shells have been used for oil lamps and as vases.

The Giant Tun, *Tonna galea* (Linnaeus, 1758), is found on both sides of the Atlantic Ocean. To the west, it occurs from North Carolina south through the Gulf of Mexico and the Caribbean Sea to Brazil and Argentina. To the east, the Giant Tun ranges from Portugal to northwestern Africa and across the Mediterranean Sea. Throughout its distribution, the Giant Tun is easily distinguished from the only other Atlantic *Tonna* species, the smaller and higher-spired Atlantic Partridge Tun, Tonna pennata (Mörch, 1853). This wide distribution reflects the longevity of the free-floating (planktonic) larval stage, which facilitated dispersal across the Atlantic Ocean via the Gulf Stream. Giant Tuns prefer sandy or muddy bottoms offshore, usually at depths ranging from 3 to 40 feet.

The shell of a Giant Tun is globose and low-spired, with numerous fairly narrow spiral ribs separated by furrows that can be nearly as wide as the ribs. Color is overall whitish brown, with a darker brown aperture that becomes white closer to the outer edge. The Giant Tun is the largest species in the genus. Even though shells average between 130 and 200 mm (5 to 8 inches) in size, rare specimens exceeding 230 mm (9 inches) have been found, and at least a couple specimens have been documented greater than 300 mm (12 inches).

The first picture below features a 237 mm (9.3 inch) specimen from off Roatan, Honduras (U.S. quarter for scale), followed by a picture of the largest Giant Tun in my collection (270.4 mm, or 10.64 inches), which was trawled from deep water off Sanibel, Florida. The third picture shows four smaller specimens of Giant Tun. Clockwise beginning in the upper left are: 132 mm from Campeche, Yucatan, Mexico; 185 mm from Morocco (Eastern Atlantic); 132 mm from Haifa, Israel (Mediterranean); and 172 mm from off Cabo de Santa Marta, Brazil (a flat-spired form sometimes referred to as *Tonna galea brasiliensis* Turner, 1948).

Giant Tuns, like all tuns, are carnivores. Their primary diet is sea cucumbers and starfish, but they also enjoy an occasional fish, bivalve, or crustacean. They envelope their prey with their large proboscis and subdue it with highly acidic saliva (up to 5 percent sulfuric acid). When disturbed, they can also squirt their saliva in defense. The Giant Tun animal is also luminescent, giving off a greenish white light as it travels along.

A word of caution if you are identifying large tun shells in your collection. A long time ago, the Giant Tun (*Tonna galea*) was considered to have a worldwide distribution, including the Indian and Pacific oceans as well as the Atlantic. Now, only specimens from the Atlantic Ocean and the Mediterranean Sea are referred to as *Tonna galea*, and all specimens from the Indian and Pacific oceans have been assigned to other, closely related species. For a while, some shell identification books used the name *Tonna olearium* (Linnaeus, 1758) for the Indo-Pacific shells, but that name is actually a junior synonym of *Tonna galea*. Now, the Giant Tun shells from the Indian Ocean, ranging in size from 60 to 240 mm, are *Tonna tenebrosa* (Hanley, 1859). The next picture shows a small specimen of this species (92 mm) from Mozambique. The western

Pacific Giant Tuns are either *Tonna ampullacea* (Philippi, 1845) or *Tonna zonata* (Green, 1830) (the Oil Lamp Tun). *Tonna ampullacea* has wide, flattened spiral ribs that near the spiral end of the shell often have one or two raised narrow spiral threads in between. The second picture below is my largest *Tonna ampullacea*, from Negros Occidental in the Philippines, which is 291.5 mm (about 11.5 inches) in size. *Tonna zonata* looks similar to *Tonna ampulllacea* but the main spiral ribs are narrower and more numerous, and they are separated from each other by several (typically three) thin spiral threads over much of the shell. The final picture is my largest specimen of this species, also from the Philippines, which is 296 mm (11.6 inches) in size.