



## *Tridacna maxima*

Roding (1798a)

### Common Names

Maxima clam, rugose clam, great clam, small giant clam, and variable giant clam. They're also sometimes sold under the trade names striped maxima, teardrop maxima, super maxima, ultra maxima, etc., all of which refer to their overall appearance relative to other specimens. Again, specimens with names like these have particularly appealing colors and/or patterns.

### Natural Habitat

Maximas are most commonly found in shallow and very clear waters, with the majority living at less than 7m. In such environments they're also sometimes found in especially large groups that can reach densities as high as 60 clams per square meter (Richard 1985), covering every spot of substrate and actually touching each other. However, they aren't restricted to such shallow depths, and are commonly found all the way down to about 15 meters. No big groups in deeper waters though, as Jaubert (1977) reported that the density of individuals decreases rapidly below 7m, with the deeper-living clams occurring mostly as solitary individuals.

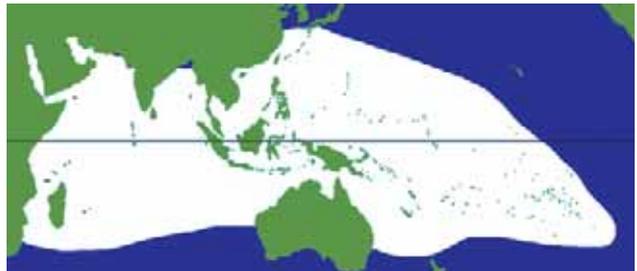
Regardless of their depth, maximas are typically found on limestone substrates or on coral rubble, and occasionally on sandy bottoms or amongst/on top of living corals, too (Pasaribu 1988). On hard bottoms they usually create a shallow indentation when they settle down, as crocea does, and bury the bottoms of their shells in it. They also strongly affix themselves to something using their byssus when possible. However, they typically aren't completely encapsulated in the substrate the way croceas are, as only the bottom 1/3 or 1/2 of the shell is out of sight most of the time, with the upper part being exposed. Likewise, on coral rubble bottoms, they partially bury themselves amongst the coral chunks and attach to something solid with their byssus if they can.



*Like croceas, maximas can also settle and grow right on top of living corals at times.*



*Maxima's shell is usually partially or sometimes completely exposed, but there are occasions when they're almost completely encased, looking much like crocea.*



*Maxima's natural range*

### Geographic Range and Status

Maximas are spread all over, and are indeed the most widely distributed species of tridacnids. They're found in the Red Sea and from East Africa all the way across the Indo-Pacific to Polynesia. They also live as far north as southern Japan, and as far south as the Great Barrier Reef. However, while their natural range is relatively huge, they've been over-fished in some areas and are extinct in Hong Kong (Morton & Morton 1983, Lewis *et al.* 1988, Wells 1997, and Raymakers *et al.* 2003). They're considered to be a Lower Risk species by the IUCN (2004).

## Physical Characteristics

### Maximum Size

Rosewater reported that maxima can reach shell lengths of 35cm, but Kinch (2002) reported that they can reach lengths of 40cm. However, McMichael (1974) claimed that 35cm would be "an extraordinarily large individual." In fact, in a survey performed by McMichael at One Tree Island, Australia in 1968, he found that less than 3% of them were greater than 23cm, and only a single individual of the several hundred measured made it to 25cm. Like I said, there can be a big difference between maximum size and the normal "full size."

### Shell Color

Typically the shell is grayish-white, but sometimes it may be tinted with light yellow or pinkish-orange. On occasion the shell may also be completely yellow. Coloration is often common on the inner surface of the shell at the upper margin, too.

### Shell Form

The shell is almost always strongly elongated in form, being much longer than it is tall, with the hinge being only about 1/3 of the total shell length. Sometimes it's closer to 1/2 of the total length, but not very often. Inflation is highly variable, as some maximas are very thin, while others are quite fat. Deformed shells are not particularly uncommon either, as maximas sometimes live in very crowded groups and/or partially burrowed into coral rock. So, they can also sometimes get in a bind for space and end up with odd-shaped shells, despite their genetic disposition.

Here's a bit of trivia, too. Maxima was named *T. elongata* by Lamarck, but for some reason that was dropped, despite the typically elongated shape of the shell. Stranger still, the name *T. maxima* has replaced it, despite the fact that maxima is by no means the largest of the giant clams.

### Folds

Maxima's valves typically have anywhere from six to 12 folds, with six or seven of them being strongly developed and convex. However, there are occasional unusual individuals that have fewer than this.

### Scutes

Maximas usually produce lots of tightly-spaced thin scutes, which run up the larger folds. However, when this clam burrows partially into the substrate, many of the scutes are not formed or are broken/eroded away in the process. This is why their ornate shells very often have no scutes on the bottom portion, while large scutes are still present on the rest. Then again, some may have none at all. This does occur, as an

occasional maxima in its natural habitat may have no scutes whatsoever. Conversely, aquacultured specimens usually retain most or all of their scutes, except those that would be on the very bottom of the shell.

### Upper Margin

The upper margin of each valve typically has four or five smoothly-curved and inter-digitating projections that are symmetrical to those on the other, allowing them to close together tightly. However, there are many maximas that have more elongated and even pointed tooth-like projections along the upper margin which don't inter-digitate as smoothly with those on the opposite valve. The shell can still be closed fairly tightly, but it cannot be sealed shut the way others' often can.

### Byssal Opening

Maxima's byssal opening is variable in size, being moderate to relatively large. Typically its length is approximately 1/2 of the distance between the umbo and the edge of the shell, and about 1/4 to 1/3 of its width, but I've seen bigger and much smaller, too.

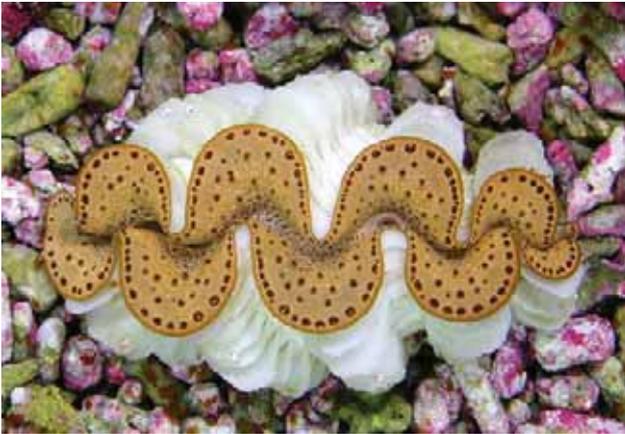
### Mantle and Siphons

Maximas typically extend their mantles well beyond the upper margin of the shell, often to the extent that it completely hides the shell and scutes when viewed from above. Like crocea the mantle sometimes has numerous eye-tipped tubercles/protrusions on its upper surface, and commonly has a row of tightly-spaced eyes near the outer edge, as well. The inhalent siphon is ringed with numerous small, simple tentacles that usually lack anything more than very fine branches. The exhalent siphon is highly variable in shape, but often takes on a relatively long, tubular/chimney-like form.

### Colors/Patterns

Maximas can come in a very wide range of colors and patterns. So many, in fact, that I wouldn't say there is a standard color, or even a standard range of colors. They literally come in mixtures of everything from black to bright white, and anything in between. In addition, the patterns covering their mantles may be striped, sprinkled, spotted, blotched, marbled, etc., some of which make them strippers, teardrops, supers, or ultras, etc.

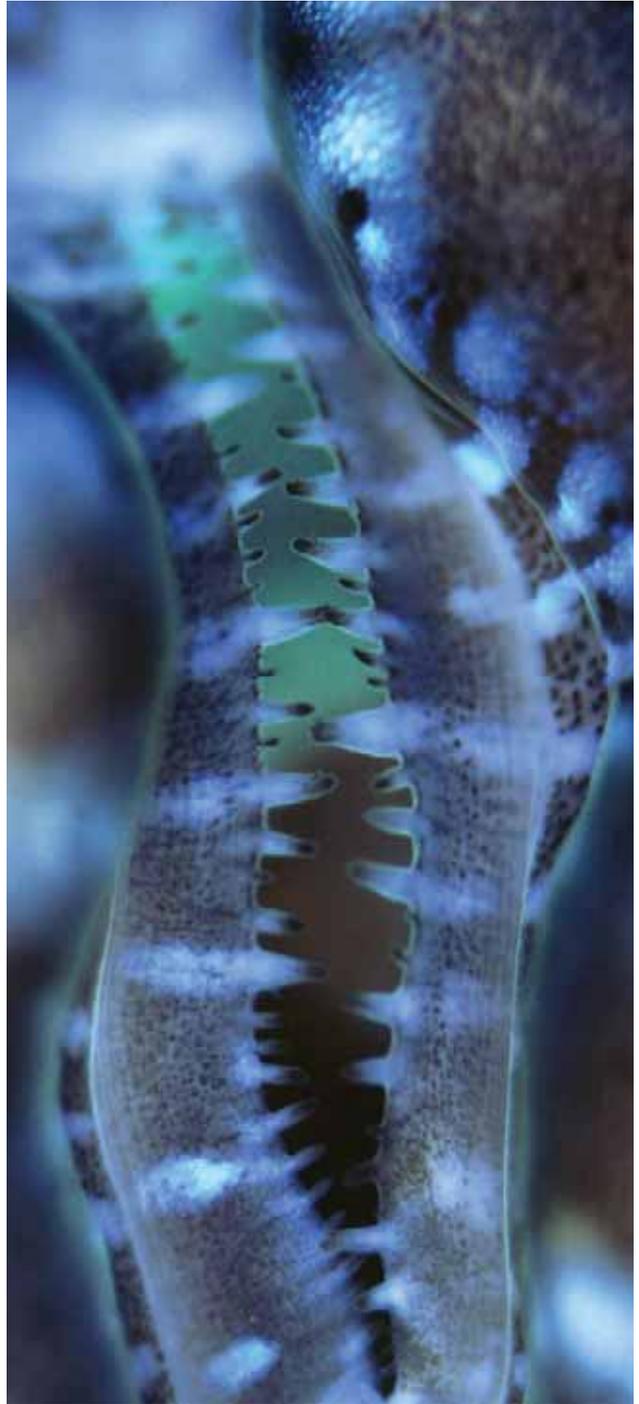
About the only patterns that are relatively consistent are those of the teardrop and striped varieties. Teardrops may vary a good bit in color, but they tend to have the same sort of pattern covering their mantle. Likewise, striped maximas tend to have a dark, solid background color with thin radiating stripes of blue, white, etc.



*Like crocea, some maximas may have eyes only in a band near the edge of the mantle, while others may have many more, which are more spread out. Bottom photo: ClamsDirect.com*



*Teardrop mantle patterns like this are unique to maximas.*



*Here's the inhalent siphon of a typical maxima. Note the fine, simple tentacles that cover its rim.*





Photos on this page: ClamsDirect.com



