

Observations on the Genus *Rhytisma* in the Aquarium Trade

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Genus *Rhytisma* Alderslade, 2000

(fig. 1-3)

Material

Aquarium specimen. Imported from Jakarta, Indonesia Distributor; 10 March 2011 (AquaTouch Col. #100311).

Aquarium specimen. Aquacultured from Los Angeles, California Wholesaler; 6 April 2011 (AquaTouch Col. #060411).

Description

Thin, membranous colony encrusted to coral rock substratum (fig. 1). The basal mat measures up to 3 mm high in a preserved state. Monomorphic autozooid polyps are completely retractile into apertures that form polyp mounds when retracted (fig. 2). Polyps are up to 5 mm long. Tentacles are conical, which terminate in a slightly pointed tip. They measure 2 mm to 3 mm long by 0.5 mm wide. There is a single row of 8 to 12 pinnules (fig. 3) on each side of the tentacle. Colonies are zooxanthellate.

Sclerites

The basal portion of the colony contains numerous spindle sclerites in the interior and at the surface (fig 4a). Spindle sclerites can be very large, over 3 mm in length. A few widely spaced short spines can be found on the surface of some of the spindle sclerites. These spindles are often arranged in a conspicuous honeycomb-like network that is visible when polyps are retracted (fig. 2). The polyps also contain spindle sclerites. They measure 0.2 to 0.5 mm long and are arranged in a crown-and-points fashion. Additionally small, elongated scale and cross sclerites (fig 4b) less than 0.08 mm long occur in the polyps. The micro-architecture of these sclerites gives them a grainy surface texture when viewed with a compound microscope. Sclerites are colorless.

Color

In life colors are highly variable. Basal mat tissue can be light cream to brown, purple, green or yellow. Polyps are also light cream to brown, intense green, yellow or blue, or even orange. Specimens preserved in ethanol have a whitish encrusting mat with light gray to white polyps.

Etymology

From the Greek word *Rhytisma*, which means “a patch”. It refers to the small, flat appearance of colonies attached to coral rocks.

Distribution

Although few records exist (Fabricius & Alderslade, 2001), this genus is recorded from the Red Sea, Zanzibar, Madagascar, Papua New Guinea, Great Barrier Reef and Indonesia (this study).

Remarks

Representatives of the genus *Rhytisma* are relatively new to the aquarium trade. Initial observations suggest that this is a coral well suited for closed system aquaria as it is now being cultivated via fragmentation. The widely spaced pinnules and large oral disc are indicators that these polyps are capable of capturing prey items in the realm of copepods, rotifers, artemia, and the like. With thick membranous basal tissue and a dense aggregation of sclerites it is likely species of *Rhytisma* are less prone to predation. Further observations of this species in captivity will be required to determine optimal environmental parameters such as water flow, light, water chemistry, and the potential for sexual reproduction.

As is sometimes the case with aquarium soft corals, the identification to family or genus level can be initially incorrect. It is common practice for coral taxonomists to look at the microscopic components of hard or soft corals in order to identify them with reasonable certainty. When *Rhytisma* sp. octocorals started to appear in the USA aquarium trade in late 2010 it was labeled as a *Sympodium* sp. or “Blue / Green *Sympodium*.” It was also described as a *Briarium* sp. or “Star Polyp” among aquarium hobbyists. The sclerites in Figure 4 are distinctly different than the oval platelets found in *Sympodium* species (Figure 5). *Sympodium* is also a genus with highly contractile polyps, however when contracted the basal area does not exhibit the dense white color from sclerites aggregated in the epidermis. This is very pronounced in species of *Rhytisma* (Figure 2). *Rhytisma* is easily distinguished from species of *Briarium* by the sclerites (Sprung & Delbeek, 1997: pp 245). *Rhytisma* sclerites are colorless where as *Briarium* sclerites are distinctly magenta colored in the medulla and or cortex of the colony.

Microscopically, *Briarium* spindle sclerites are coated with numerous fine wart-like tubercles. The spindle sclerites found in *Rhytisma* are much smoother.

A final note on some confusion between *Rhytisma* and other small polyp encrusting soft coral colonies often found on live rock. *Rhytisma* colonies can be distinguished by an encrusting basal mat or thick ribbon of tissue that produce a smooth surface when the polyps are retracted. Many of the other encrusting polyp colonies belong to the family *Clavulariidae*. They are identified by a narrow stolon of “chain-like” material connecting individual polyps. When the polyps are closed they retract into a sheath like calyx (Janes & Wah, 2007), which gives the polyp stem an upright appearance with the polyp head concealed.

Acknowledgements

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References

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Figures:

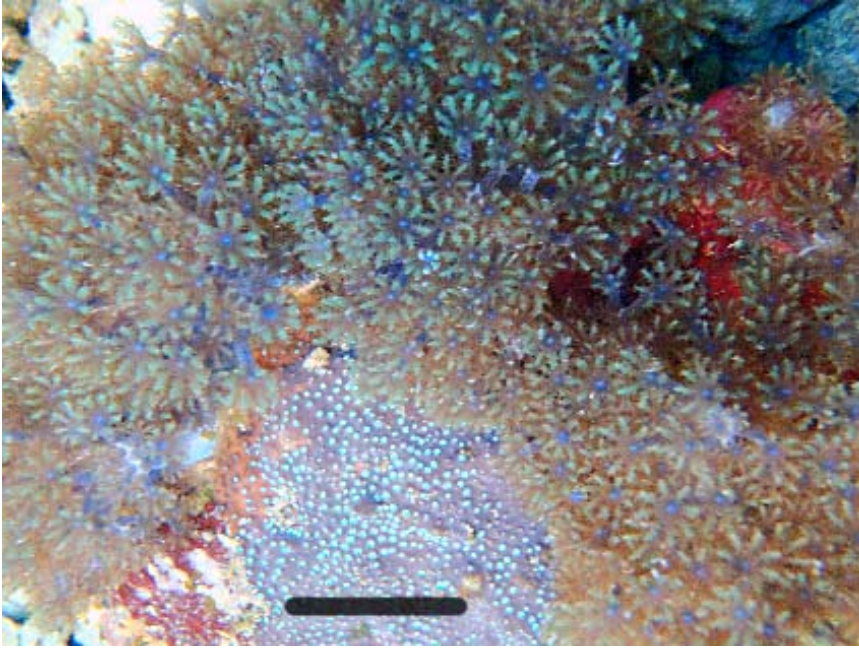


Figure 1. *Rhytisma sp.*; Wild colony encrusting on coral rock. Scale 2 cm.

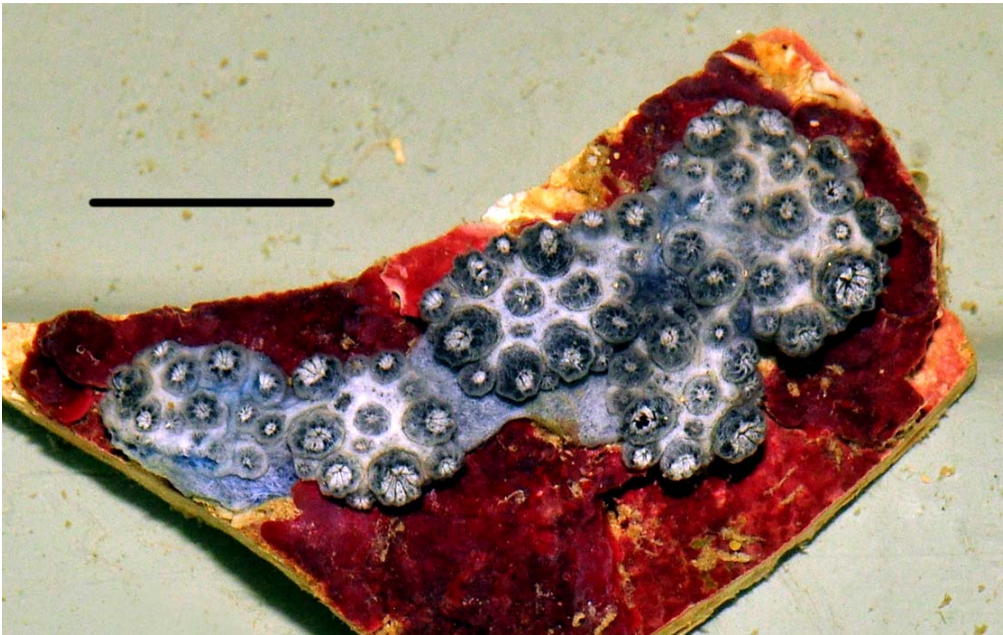


Figure 2. *Rhytisma sp.*; Retracted polyps. Scale 2 cm.

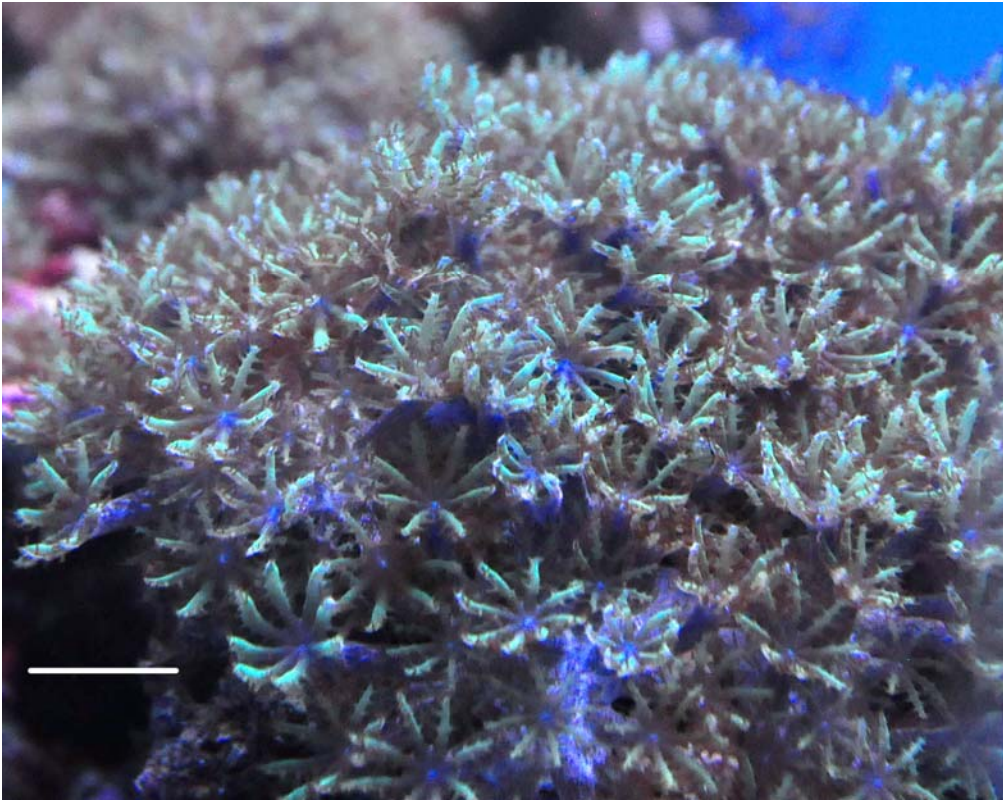


Figure 3. *Rhytisma sp.*; Polyps expanded. Scale 5 mm.

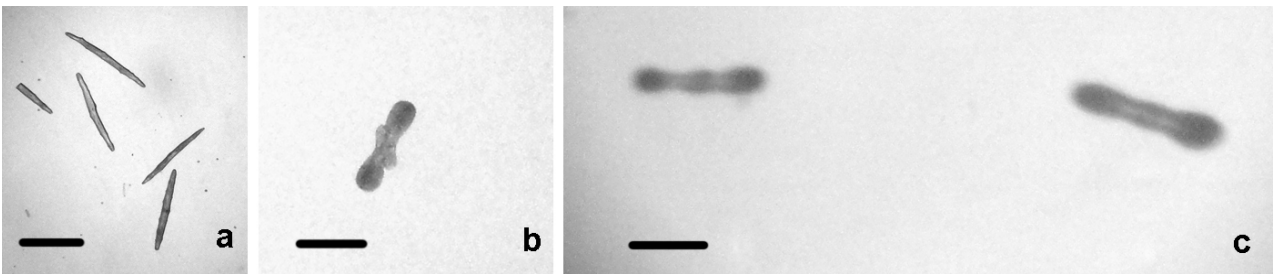


Figure 4. *Rhytisma sp.*; a) spindle sclerites from the interior of the base of the colony b) cross sclerites from the polyp c) elongated scale sclerites from the polyp. Scale a) 1.50 mm, b & c) 0.05 mm.

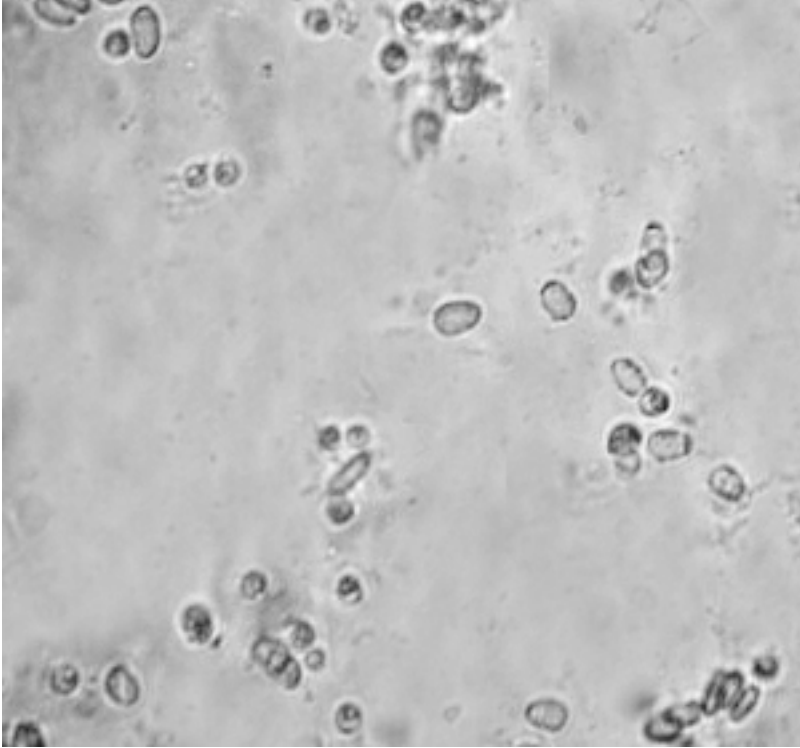


Figure 5. *Sympodium caeruleum* sclerites.