

EFFECTS OF SYMBIONTS ON ANTHOZOAN BODY FORM. D.G. Fautin. California Academy of Sciences, San Francisco.

In spite of the fact that polyps are essentially tubes with tufts of tentacles at one end, anthozoans assume a great diversity of forms. Some of these permutations are correlated with the presence of algal or animal symbionts. Close spacing of coral polyps and robust skeletalization are properties of zooxanthellate species. Polyps of colonial corals lacking zooxanthellae are more widely spaced, and typically their skeletons are more fragile. Zooxanthellae occur in temperate actinians, but only tropical species have morphological adaptations increasing surface area for exposure of algae to sunlight. Zooxanthellae-packed protrusions from the body of some have a diel cycle of expansion. Tentacles of others are unusually short and numerous. Among the latter are species that have oral discs so widely flared that they cannot be entirely retracted. Most or all such species are symbiotic with anemonefishes.