



Fig. 2. a) Various morphological conditions of symbiotic *Symbiodinium* (zooxanthellae, ZX) observed in *Zoanthus*, including, b) healthy ZX (HZ), DZ (dividing ZX, not shown), c) pale ZX (PZ), d) left TZ (transparent ZX), and d) right DDZ (dark degraded ZX). Black bar in A) is 10 μ m. All images are the same scale. For a detailed explanation of these morphological conditions refer to Table 2.

sampling to insure that there were no *Symbiodinium* or other dinoflagellates/microalgae present that could contribute to inaccurate results. No identifiable *Symbiodinium* were seen in seawater samples throughout the course of the study.

The ratio of “normal” or healthy condition *Symbiodinium* (NZ ratio) was calculated as the number of NZ *Symbiodinium* present divided by the total number of *Symbiodinium* counted (NZ+ SZ) for all five fields of view per sampled polyp. NZ ratios from all five sampled polyps per sampling site per month were averaged. The resulting NZ ratio was then expressed as a percentage (NZ%).

It should be noted that during the course of this study we observed transparent, motile dinoflagellates in all samples of non-bleached *Zoanthus*. However, we have not included such data in our analyses, as we could not ascertain whether these dinoflagellates were *Symbiodinium* spp. or not. Regardless, the percentage of these motile dinoflagellates was approximately 5%, and did not vary month to month in a drastic manner so disregarding these data did not affect our analyses. Further experiments on these potentially novel motile dinoflagellate morphotypes are currently being conducted.

Potential Salinity Effects on *Symbiodinium*

To confirm that seawater added to samples did not influence external *Symbiodinium* morphology and condition through changes in osmotic pressure, sample *Symbiodinium* were placed on a hemocytometer and freshly-collected seawater added.