Composition of the coral community on the reef has changed over time, from reefs dominated by massive boulder corals, such as Orbicella spp, to smaller corals such as Agaricia spp and Porites spp.

Coral Species Composition 1999 vs 2019

**Coral Health State 20-Year Comparison**

There has been a gradual decline in coral cover over the last 20 years, going from roughly 24% to 20% average coral cover. However, this change is not statistically significant. The slow rate of decline indicates that the reefs of Little Cayman are more resilient than reefs in other parts of the Caribbean where declines were rapid and have not rebounded.

The 2019 average coral cover of 20% is classified as "good" in terms of reef health. Over time, the health state in Little Cayman has fluctuated with more sites classified as "poor" and fewer sites classified as "very good". However, in 2019, none of the surveyed sites were "poor", and the majority were either "good" or "good+", indicating a relatively healthy reef system overall.
MACROALGAE
There was a gradual decline in the percent cover of algae on the reefs in Little Cayman since 1999. This decline in algal cover again indicates a healthy reef that has not yet undergone a phase shift from coral to algae.

FISH COMMUNITIES
We found no significant trend in density or biomass over the survey period. Relative to 2018, however, fish biomass and density was significantly higher in 2019. The data showed a significant trend of increasing density of parrotfish over the 20 years. Parrotfish density was shown to correlate positively with coral cover and negatively with macroalgal cover, demonstrating the importance of these key herbivores to healthy reef composition.

CONCLUSION
Whilst Little Cayman reefs are not immune to the impacts of local and global change, they have remained stable over time and appear to be more resilient than other Caribbean coral reef systems.