

Ecosphere

Corallivory varies with water depth to influence the growth of *Acropora hyacinthus*, a reef-forming coral
M. C. Ladd, E. M. Winslow, D. E. Burkepile, and H. S. Lenihan

Appendix S1

Fig. S1. Map of Moorea, French Polynesia with study site location (red star) adjacent to the Moorea Coral Reef Long Term Ecological Research (MCR LTER) permanent study sites on the north shore. The MCR LTER permanent benthic photoquadrats are taken annually at 10 m and 17 m depth on the fore reef.

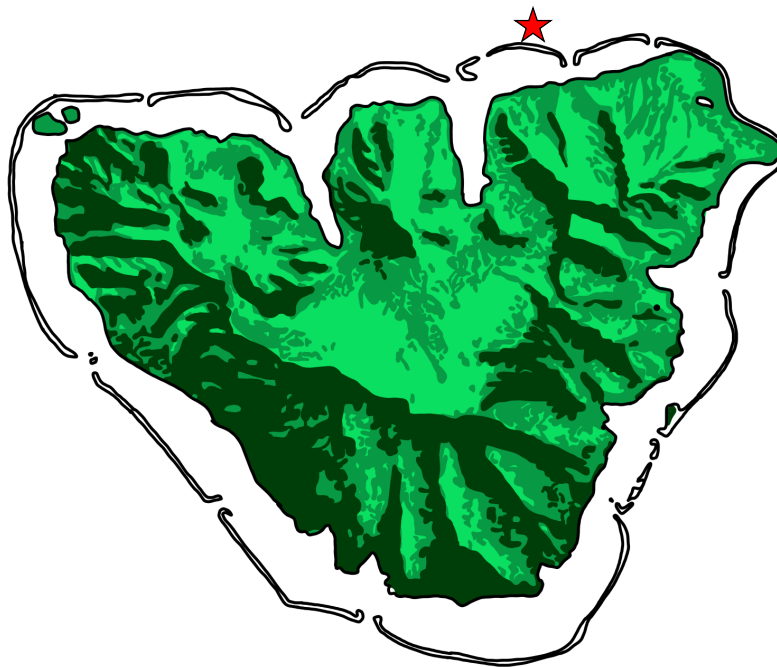


Table S1. List of fish species known or suspected to be corallivores in Moorea, French Polynesia. Only species highlighted in gray were included as fishes capable of being scraping/excavating corallivores (i.e. species and sizes that can remove skeleton) *sensu* Rojtan and Lewis (2008), Penin et al. (2010), and Brooks (2018).

Functional Group	Type of Corallivory	Species	Included as excavating corallivore?
Corallivore	Excavator	<i>Arothron meleagris</i>	Yes
Corallivore	Non-Excavator	<i>Chaetodon auriga</i>	No
Corallivore	Non-Excavator	<i>Chaetodon bennetti</i>	No
Corallivore	Non-Excavator	<i>Chaetodon citrinellus</i>	No
Corallivore	Non-Excavator	<i>Chaetodon ephippium</i>	No
Corallivore	Non-Excavator	<i>Chaetodon flavissimus</i>	No
Corallivore	Non-Excavator	<i>Chaetodon lunula</i>	No
Corallivore	Non-Excavator	<i>Chaetodon lunulatus</i>	No
Corallivore	Non-Excavator	<i>Chaetodon mertensii</i>	No
Corallivore	Non-Excavator	<i>Chaetodon ornatissimus</i>	No
Corallivore	Non-Excavator	<i>Chaetodon pelewensis</i>	No
Corallivore	Non-Excavator	<i>Chaetodon quadrimaculatus</i>	No
Corallivore	Non-Excavator	<i>Chaetodon reticulatus</i>	No
Corallivore	Non-Excavator	<i>Chaetodon trifascialis</i>	No
Corallivore	Non-Excavator	<i>Chaetodon unimaculatus</i>	No
Corallivore	Non-Excavator	<i>Chaetodon vagabundus</i>	No
Corallivore	Non-Excavator	<i>Heniochus chrysostomus</i>	No
Herbivore	Excavator	<i>Chlorurus frontalis</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Chlorurus spilurus</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Leptoscarus vaigiensis</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus altipinnis</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus forsteni</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus frenatus</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus ghobban</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus globiceps</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus niger</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus oviceps</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus psittacus</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus rubroviolaceus</i>	Included individuals ≥ 15 cm
Herbivore	Excavator	<i>Scarus schlegeli</i>	Included individuals ≥ 15 cm
Invertivore	Excavator	<i>Balistapus undulatus</i>	Yes
Invertivore	Excavator	<i>Balistoides viridescens</i>	Yes
Invertivore	Excavator	<i>Melichthys vidua</i>	No

Invertivore	Excavator	<i>Sufflamen bursa</i>	No
Invertivore	Excavator	<i>Cantherhines dumerilii</i>	Yes
Invertivore	Excavator	<i>Cantherhines sandwichiensis</i>	Yes
Invertivore	Non-Excavator	<i>Forcipiger flavissimus</i>	No
Invertivore	Non-Excavator	<i>Forcipiger longirostris</i>	No
Invertivore	Non-Excavator	<i>Canthigaster solandri</i>	Yes
Planktivore	Excavator	<i>Odonus niger</i>	No

Fig. S2. Mean growth rate (mg day^{-1}) of experimental *A. hyacinthus* corals after twelve weeks at each experimental depth and treatments. Data are means \pm SE. Statistics are from linear-mixed effects model. Different letters above bars denote statistically significantly differences ($p < 0.05$) between growth rates or percent change in mass per post hoc tests.

