



Divergent Adaptive Strategies of Coral-Dwelling Decapods to Host Bleaching

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From Healthy to Dead Reef

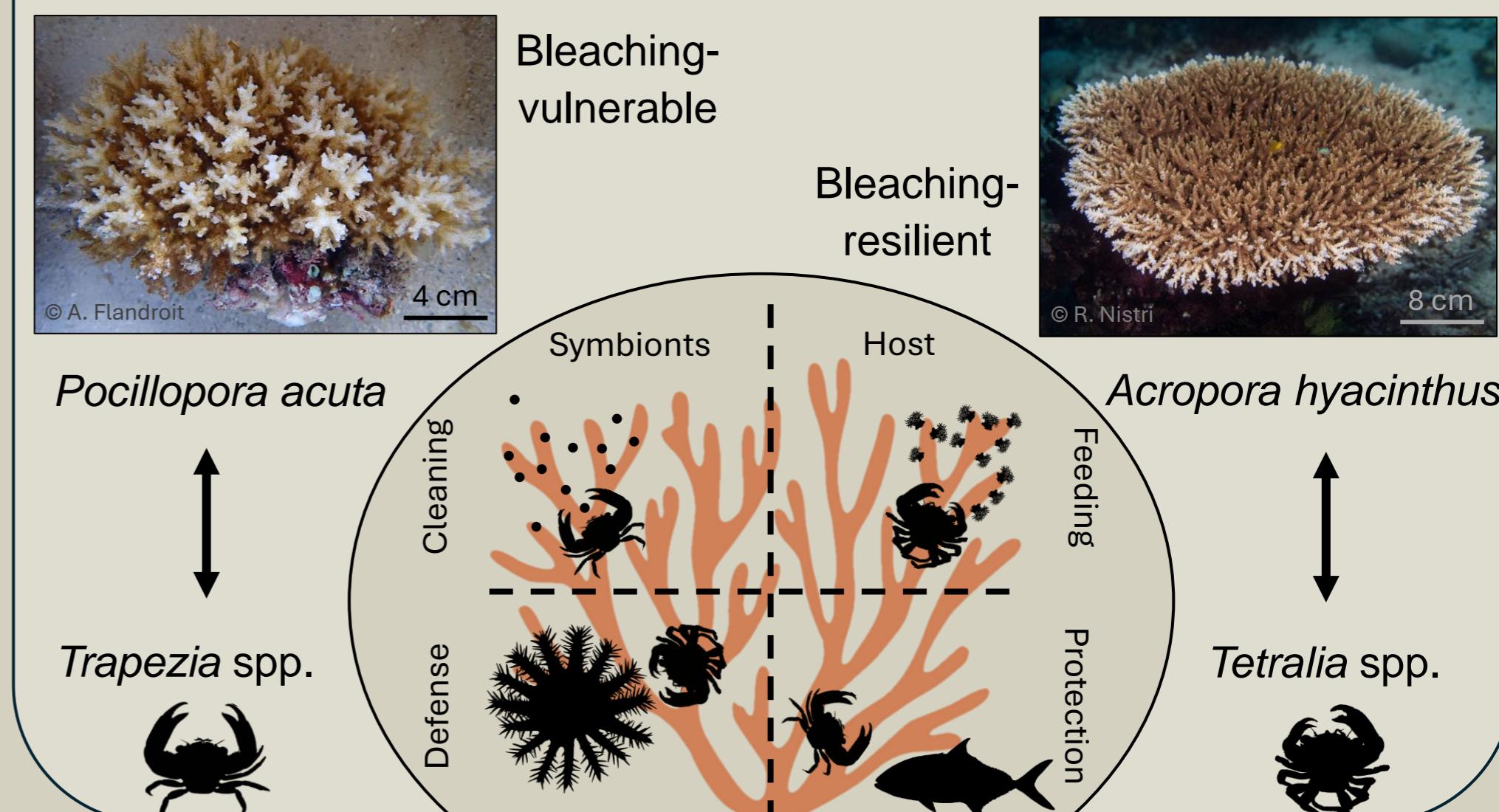
Coral reefs face increasing threats from different (a)biotic factors, notably causing **bleaching** (i.e., the loss of endosymbiotic zooxanthellae) that may lead to the death of corals and their associated symbiotic fauna.



Between life and death, corals experience an intermediate bleaching phase, where the fate of their symbionts remains uncertain.

How do coral **ectosymbionts** cope with this bleaching?

Model Species & the Value of Symbiosis



Trapezia crabs



Abundance & Diversity

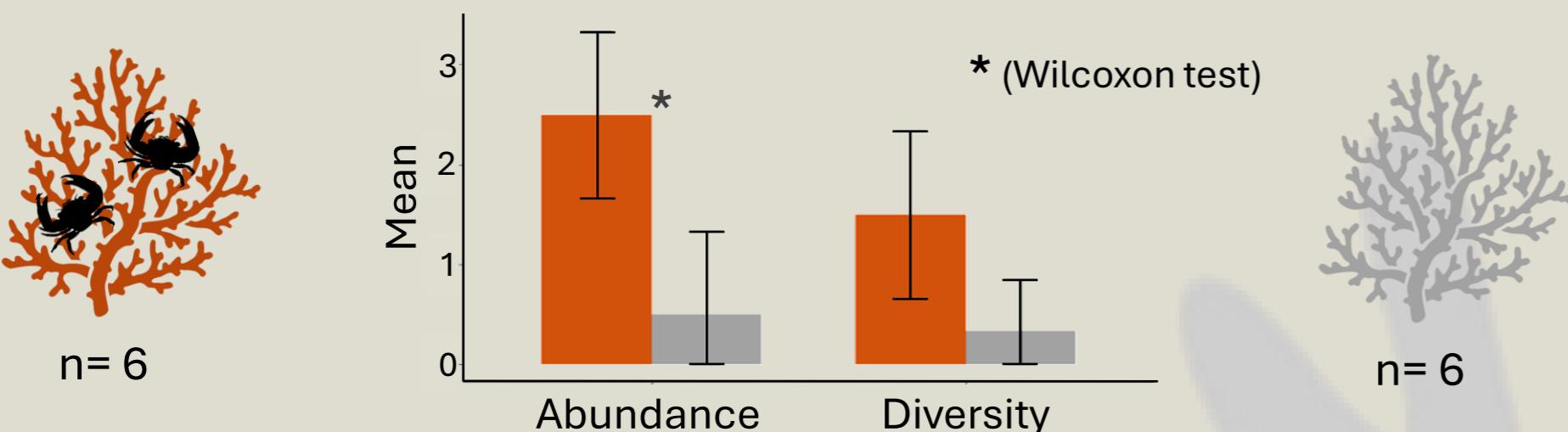


Fig. Mean abundance and diversity of *Trapezia* crabs from unbleached and bleached *P. acuta*

Tetralia crabs

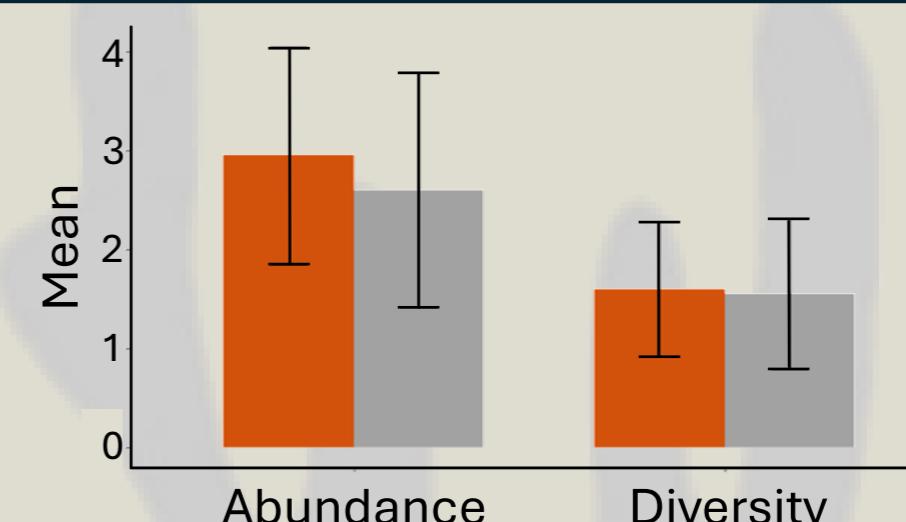


Fig. Mean abundance and diversity of *Tetralia* crabs from unbleached and bleached *A. hyacinthus*

Reproduction

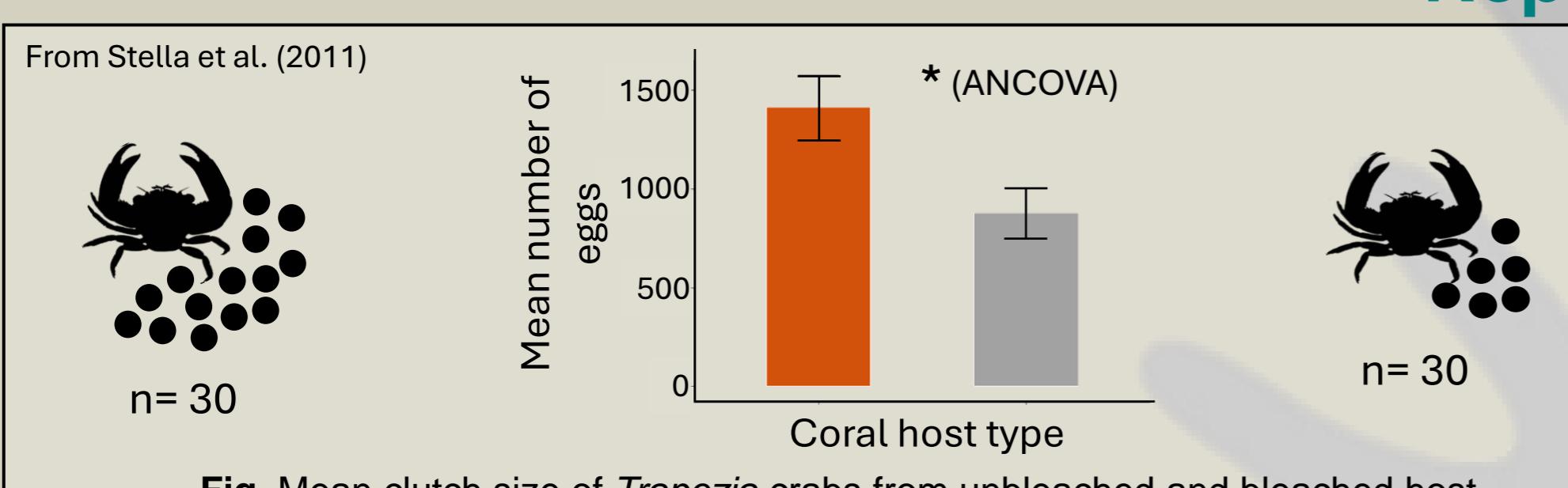


Fig. Mean clutch size of *Trapezia* crabs from unbleached and bleached host

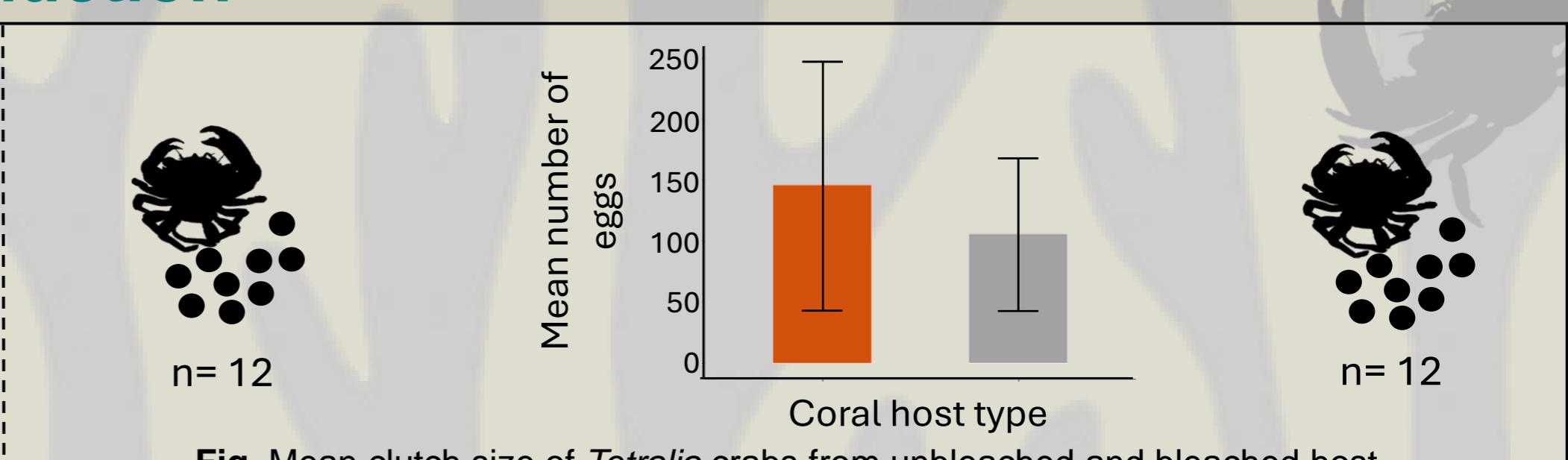


Fig. Mean clutch size of *Tetralia* crabs from unbleached and bleached host

Migration

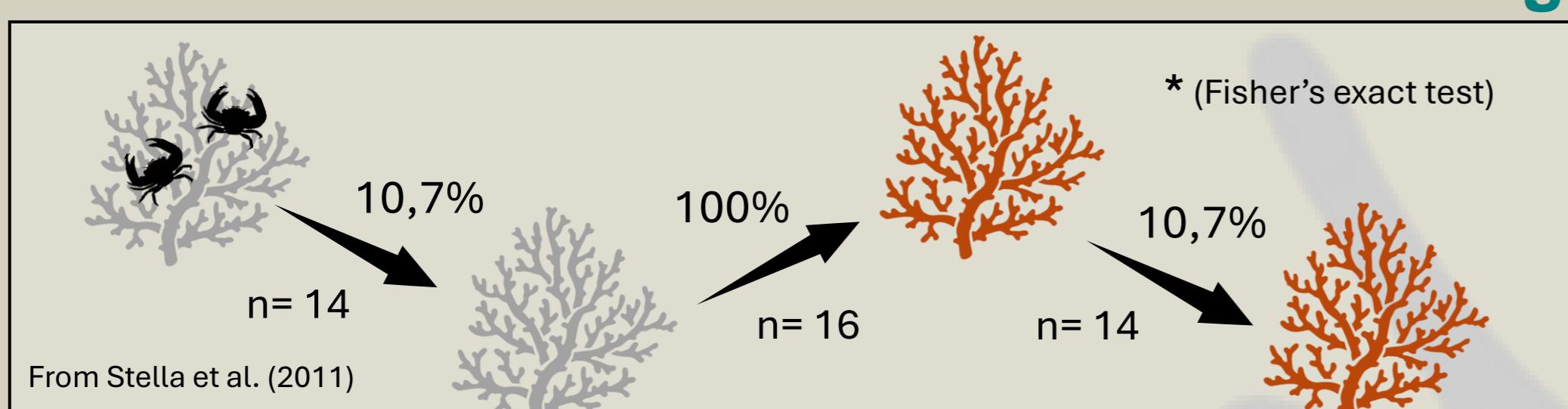


Fig. Proportion of *Trapezia* crabs that moved to a host of either the same or different quality

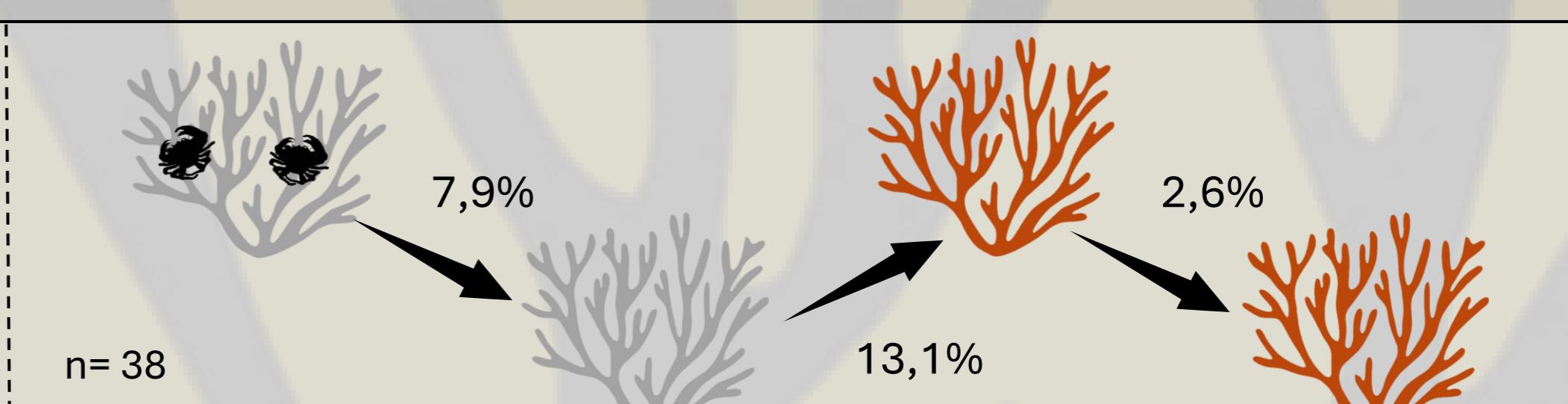


Fig. Proportion of *Tetralia* crabs that moved to a host of either the same or different quality

Vulnerable to Host Bleaching

Take-Home Message



Crabs on bleaching-resistant hosts adapt to the stress, while those on bleaching-vulnerable hosts are affected and leave when bleaching occurs, seeking alternatives.

What drives them to leave their host, and how can they find another one?

