

Figures

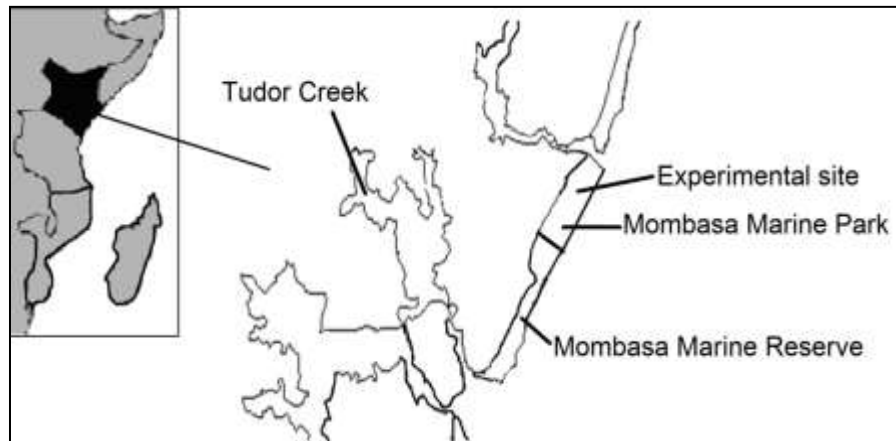


Figure1. Map showing the location of the experimental site within the Mombasa Marine Park, Kenya

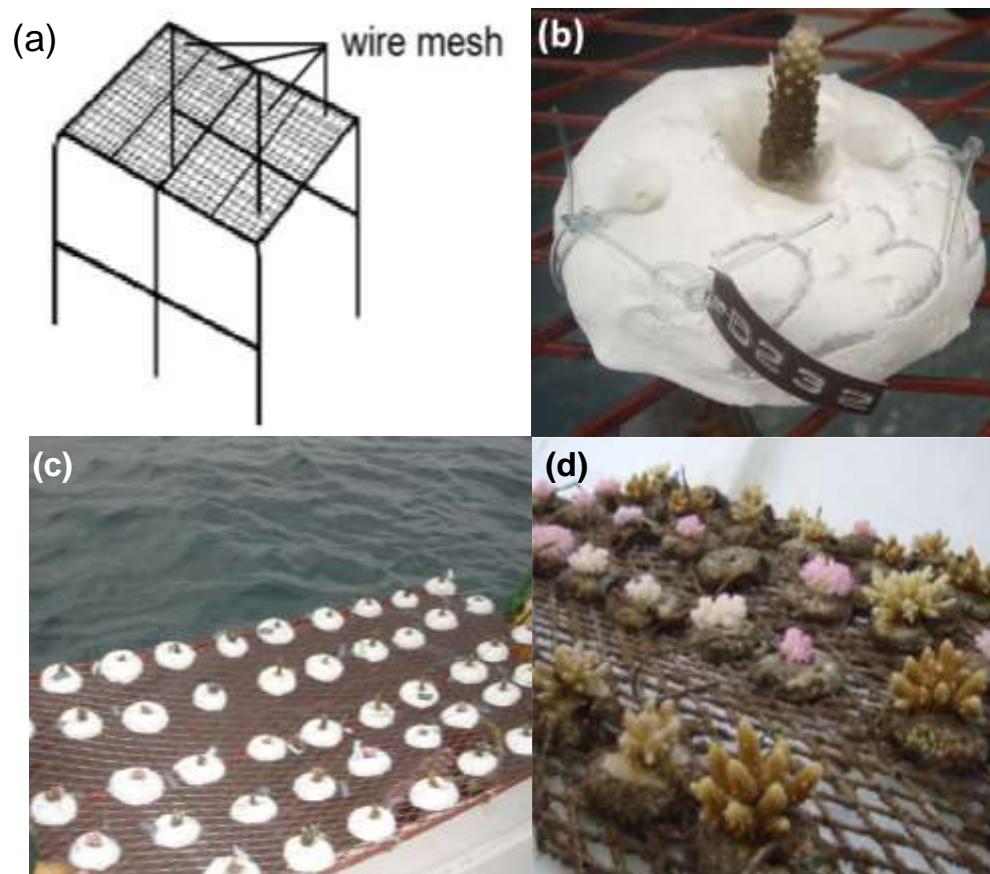


Figure 2. (a) Diagram of a constructed culture table, (b) A labelled *Acropora humilis* fragment attached to a cement disk tied to a wire mesh using monofilament line, (c) A “seeded” wire mesh ready to be lowered onto the culture table *in-situ*, and (d) Coral fragments at the end of the experimental period in April 2011.

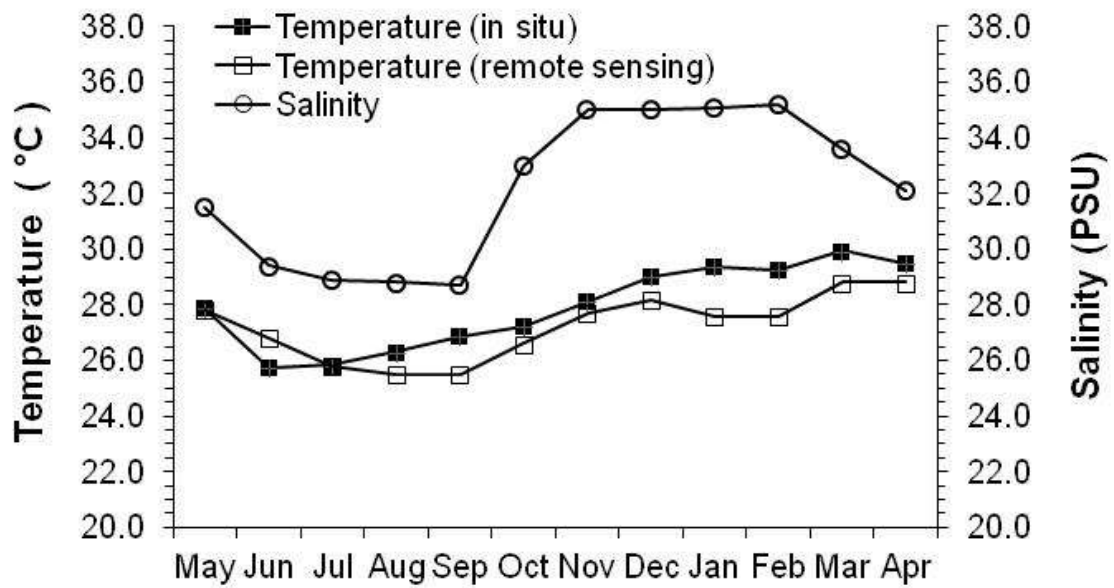


Figure 3. Mean monthly *in-situ* temperature and salinity at the experimental site, and remote sensed mean monthly sea surface temperature for the Bamburi area, Kenya during May 2010 to April 2011 (source: www.worldseatemp.com/en/Kenya/Bamburi)

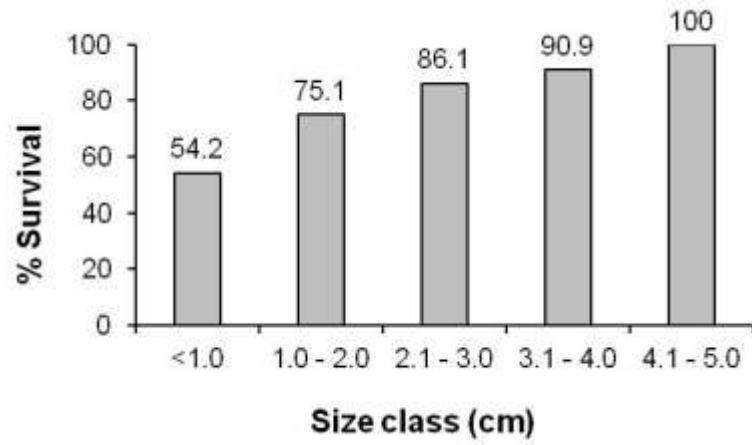


Figure 4. Percentage survival of coral fragments propagated at the Mombasa Marine Park during April 2010 - April 2011, grouped by initial size

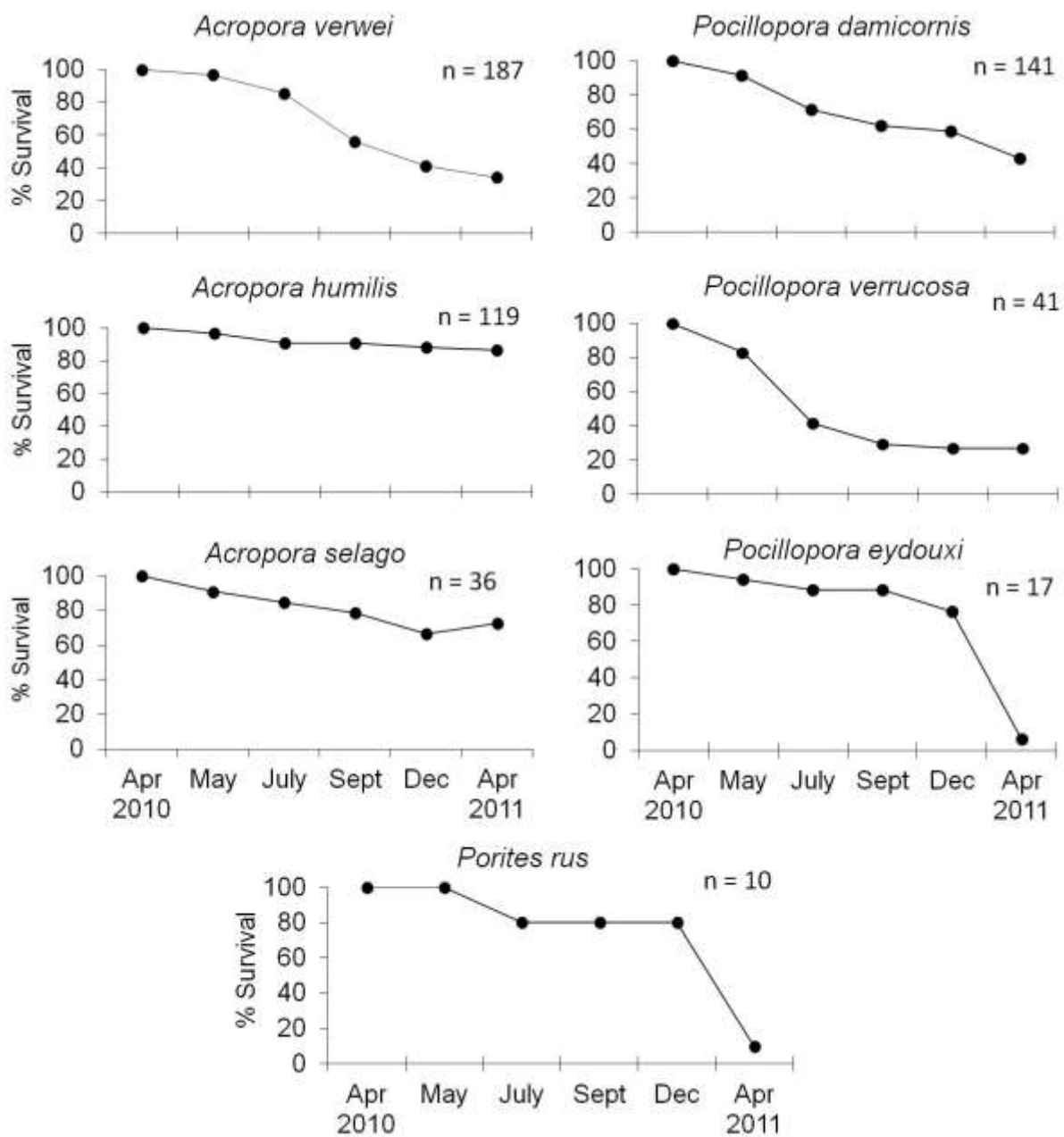


Figure 5. Percentage survival of *Acropora humilis*, *Acropora selago*, *Acropora verwei*, *Pocillopora damicornis*, *Pocillopora verrucosa*, *Pocillopora eydouxi* and *Porites rus* fragments propagated at the Mombasa Marine Park, Kenya during April 2010 to April 2011 (n = the initial number of fragments)

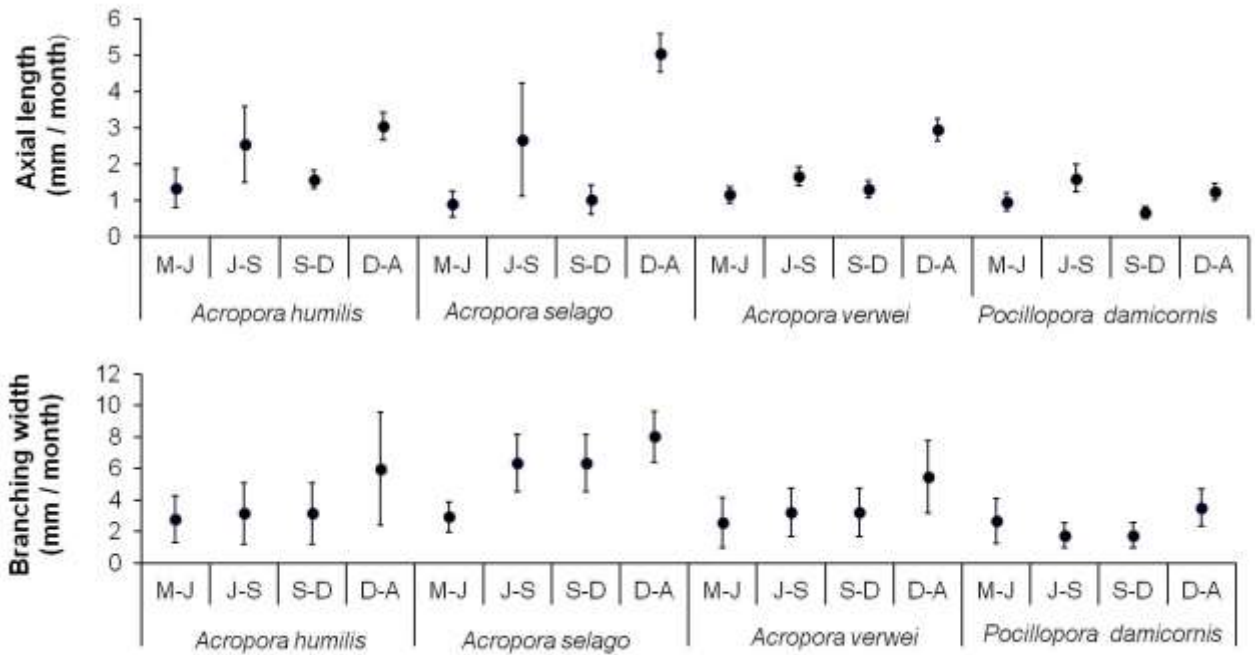


Figure 6. Mean axial length and branching width growth rates of propagated *Acropora humilis*, *Acropora selago*, *Acropora verwei*, and *Pocillopora damicornis* fragments transplanted in Mombasa Marine Park, Kenya during May-July 2010, July-September 2010, September-December 2010, and December-April 2011

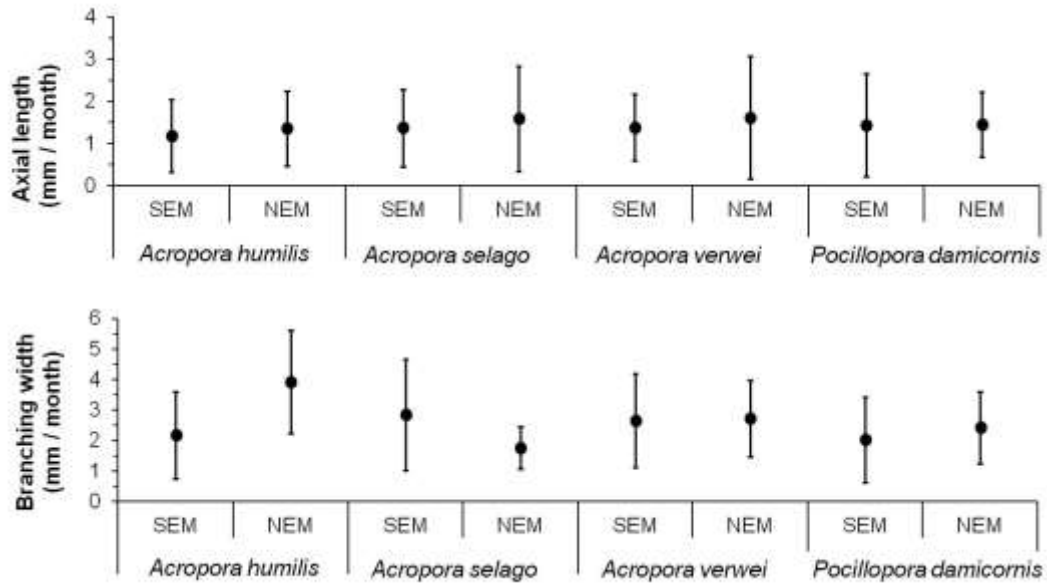


Figure 7. Monthly axial length and branching width growth rate of propagated *Acropora humilis*, *Acropora verwei*, *Acropora selago* and *Pocillopora damicornis* fragments transplanted in Mombasa Marine Park, Kenya during the northeast monsoon (NEM) and southeast monsoon (SEM) season from April 2010 to April 2011

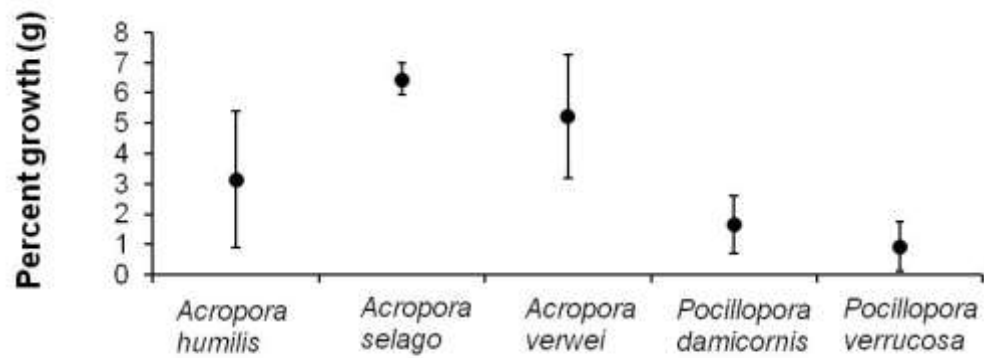


Figure 8. The percentage growth by weight (g / month \pm SE) for propagated coral fragments of *Acropora humilis*, *Acropora selago*, *Acropora verwei*, *Pocillopora damicornis* and *Pocillopora verrucosa* from December 2010 and April 2011

Tables

Table 1. The number of coral fragments transplanted to Mombasa Marine Park, Kenya during phase I (initiated in April 2010) and phase 2 (initiated in November 2010)

Coral Species	Phase I	Phase II
<i>Acropora humilis</i>	133	43
<i>Acropora selago</i>	36	46
<i>Acropora verwei</i>	197	48
<i>Pocillopora damicornis</i>	161	46
<i>Pocillopora eydouxi</i>	17	8
<i>Pocillopora verrucosa</i>	46	0
<i>Porites rus</i>	10	9
	600	200

Table 2. Variation of environmental variables (temperature and salinity) in the coral culture site

Environmental Factors	SEM	NEM	Test Statistic	P	Annual mean
Temperature	27.0±1.39	29.1±1.25	Z=6.30	<0.05	28.2 ±1.65
Salinity	30.5±3.73	33.9±4.55	Z=2.65	<0.007	32.4±4.53
Total Suspended Matter	0.07±0.017	0.04±0.047	Z=3.79	<0.05	0.061±0.039

Table 3. Results of linear regressions of axial length with fragment and branching width of five coral species propagated in Mombasa Marine Park

Species	Regression formula	R	DF	p
<i>Acropora humilis</i>	W=28.9+0.915L	0.618	90	>0.001
<i>Acropora selago</i>	W=23.6+1.220L	0.730	20	>0.001
<i>Acropora verwei</i>	W=35.8+0.823L	0.579	63	>0.001
<i>Pocillopora damicornis</i>	W=10.7+0.402L	0.723	55	>0.001
<i>Pocillopora verrucosa</i>	W=12.1+0.822L	0.607	5	0.147

Table 4. The absolute growth rate shown as the initial and final size and percent increase in axial length and branching width for *Acropora verwei*, *Pocillopora damicornis*, *Acropora humilis*, *Pocillopora verrucosa*, *Acropora selago*, and *Pocillopora eydouxi* after 329 days; and *P. rus* after 208 days

Species	Axial length			Branching width		
	Initial	Final	% increase	Initial	Final	% increase
<i>Acropora humilis</i>	19.6±6.0	36.7±12.4	82	13.3±3.9	48.8±18.8	266
<i>Acropora selago</i>	18.2±4.6	39.5±13.6	116	12.2±4.2	58.3±21.9	374
<i>Acropora verwei</i>	19.0±5.4	37.9±9.3	99	15.5±6.7	60.2±16.3	287
<i>Pocillopora damicornis</i>	14.5±4.2	29.4±7.2	102	20.4±7.1	43.5±16.6	113
<i>Pocillopora eydouxi</i>	24.0±6.9	29.8±8.3	24	18.4±6.9	30.5±8.9	65
<i>Pocillopora verrucosa</i>	19.5±3.3	26.7±8.7	36	25.2±7.6	47.1±8.0	86
<i>Porites rus</i>	16.8±2.9	31.6±6.1	88	15.0±1.4	35.5±11.2	133