

# Use of remote video to access cleaning interactions

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## INTRODUCTION

Cleaning interactions are characterized by the important ecological service offered by cleaner organisms to a great diversity of clients

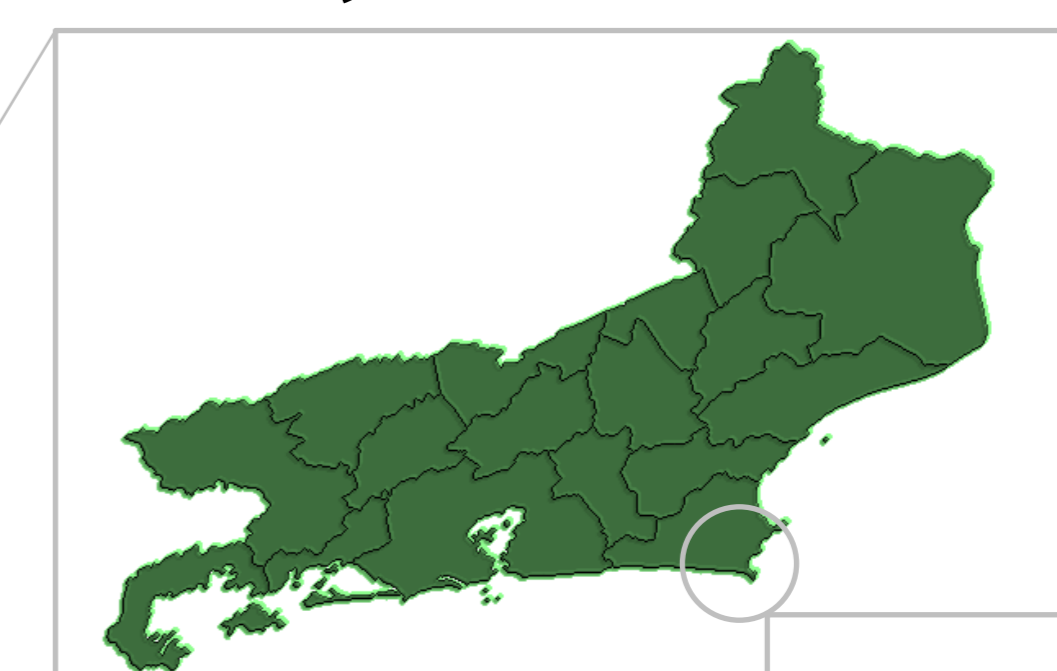
In the Southwestern Atlantic reefs few cleaner reef fish were investigated considering cleaning activity patterns and human impacts

We aimed to investigate the possible effect of diver presence on frequency and duration of interactions among Brazilian endemic cleaner fish *Elacatinus figaro* and their reef fish clients.

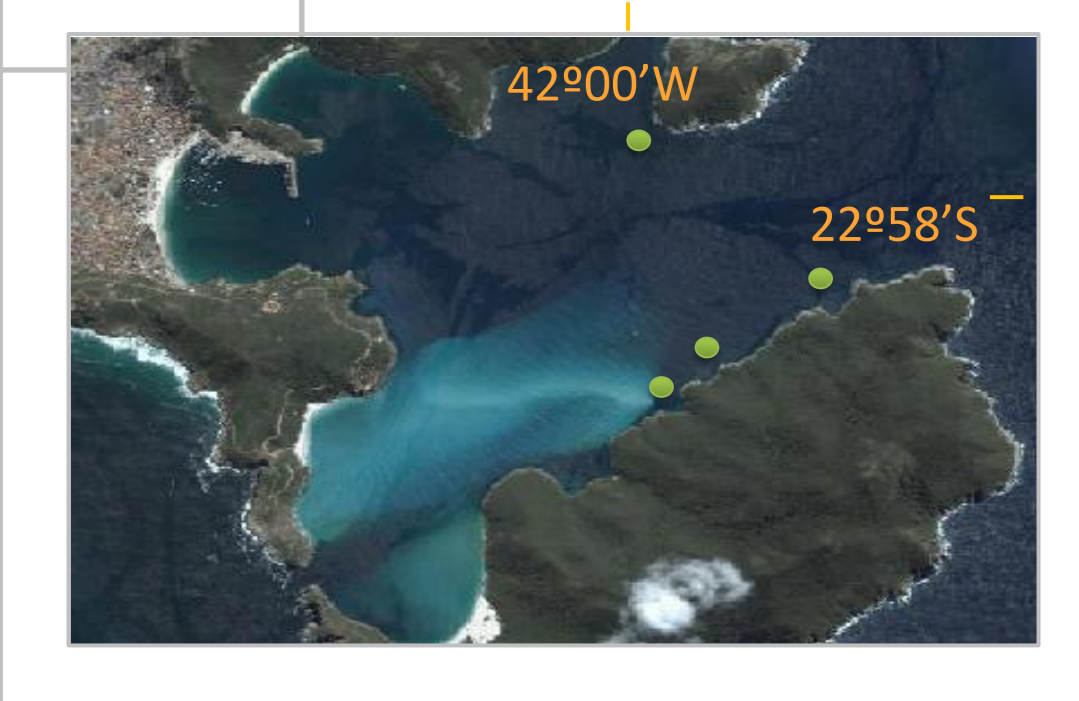
## METHODS



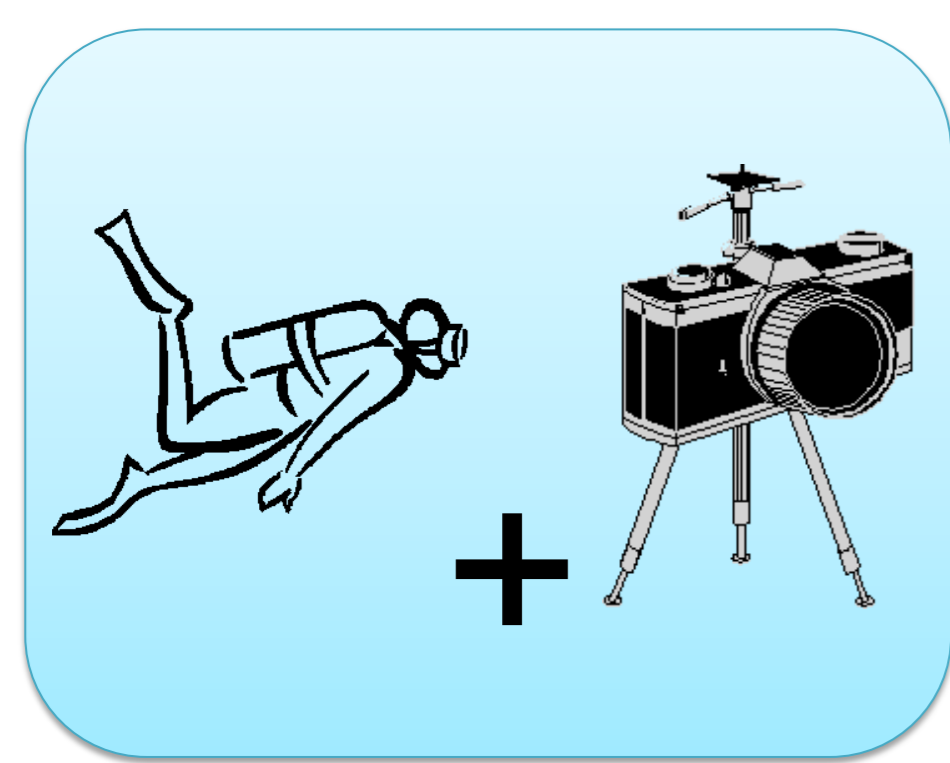
Rio de Janeiro



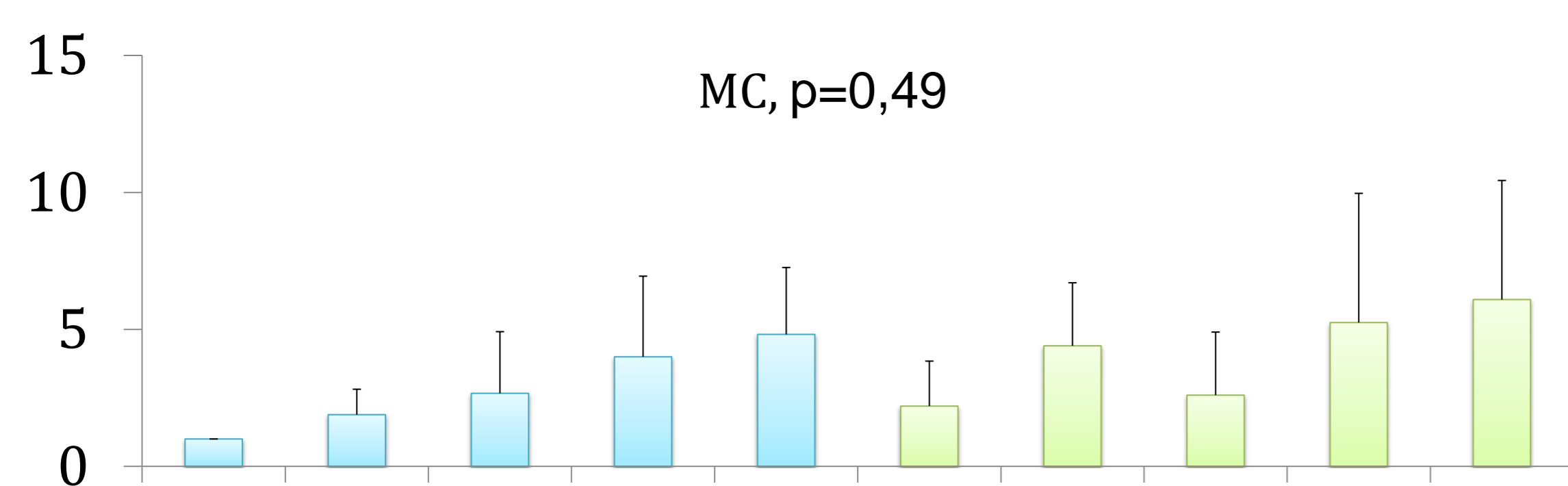
Arraial do Cabo



## RESULTS



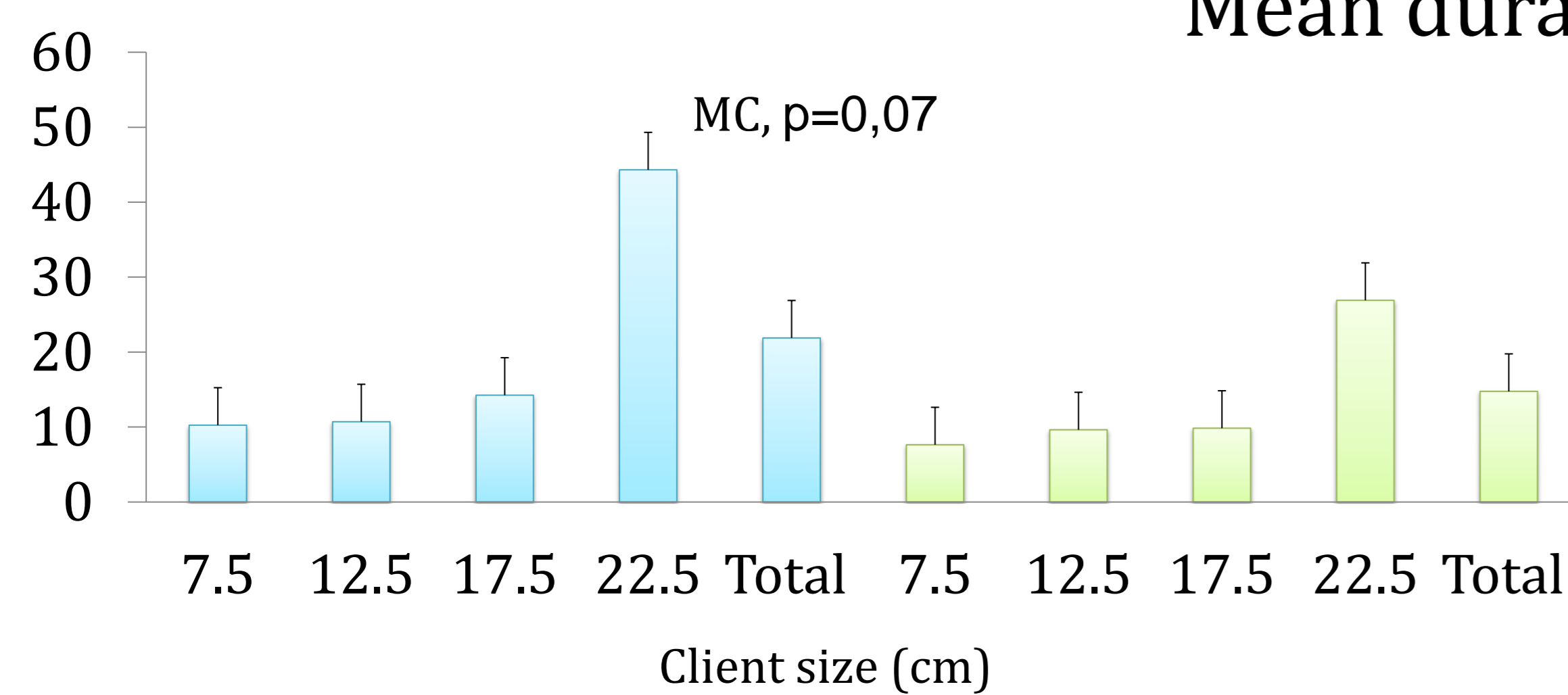
Mean number of interactions



Permanova analysis

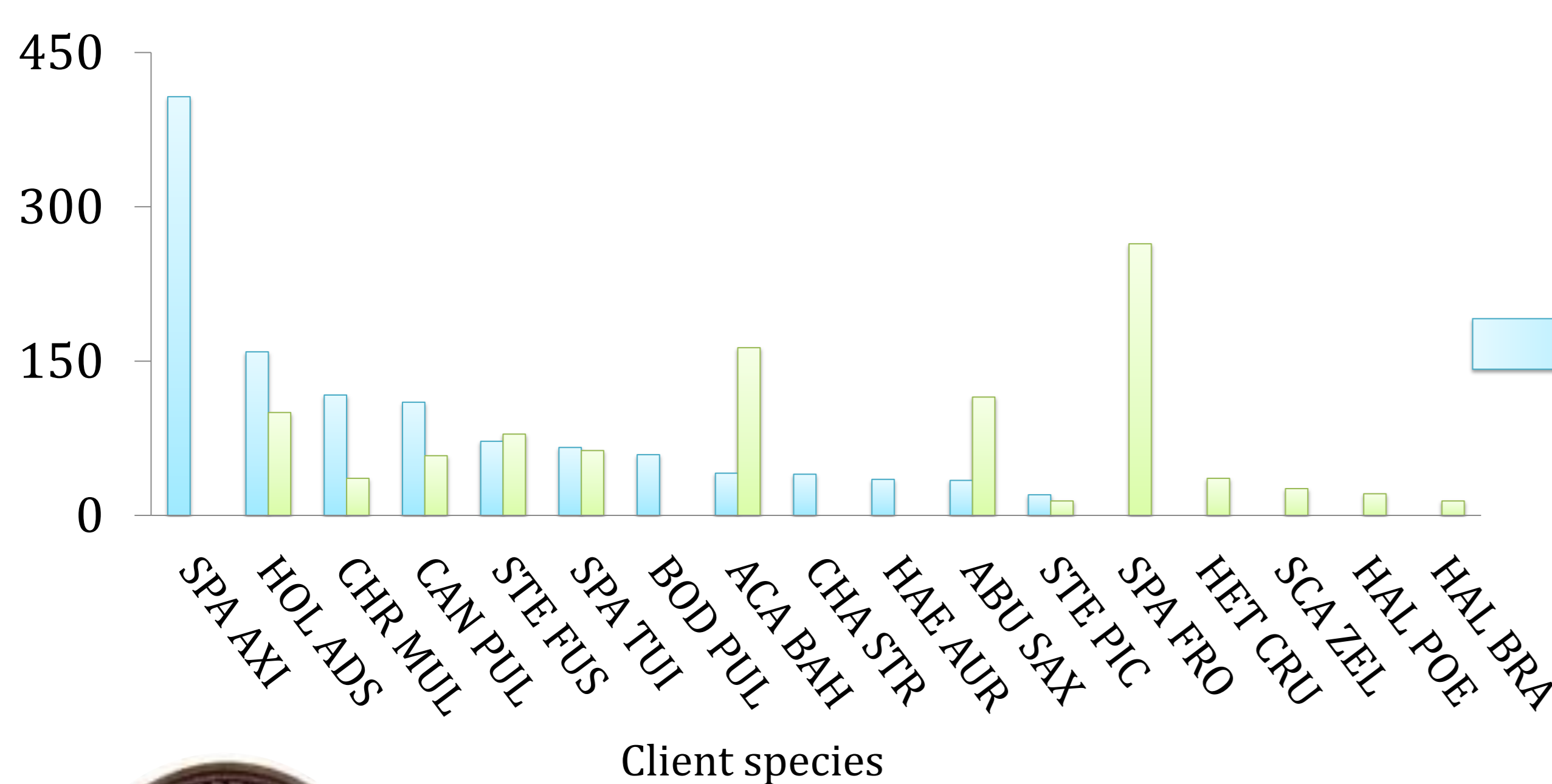
	Df	Sums OfSqs	Mean Sqs	F Model	R2	Pr(>F)
Factor	1	0.5051	0.50509	1.3111	0.06152	0.225
Residuals	20	7.7051	0.38526		0.93848	
Total	21	8.2102			1.00000	

Mean duration of interactions (min)



	Df	Sums OfSqs	Mean Sqs	F Model	R2	Pr(>F)
Factor	1	0.3601	0.36006	0.9453	0.0451	0.493
Residuals	20	7.6177	0.38089		0.95487	
Total	21	7.9778			1.00000	

Total duration of interactions (sec)



Model selection based on AICc						
	K	AICc	Delta_AICc	AICcWt	Cum.Wt	LL
1	15	1037.99	0.00	0.45	0.45	-501.69
2	17	1039.64	1.65	0.20	0.65	-499.82
3	13	1039.82	1.83	0.18	0.83	-505.19
4	12	1040.00	2.01	0.16	0.99	-506.54
5	6	1046.50	8.50	0.01	1.00	-516.88
6	5	1048.83	10.84	0.00	1.00	-519.15
7	3	1078.73	40.74	0.00	1.00	-536.26

(1) Cleaning station (CS), client size (Csi); (2) All variables (CS, Csi, Treatments, Client abundance); (3) Cleaning station, Treatment; (4) Cleaning station; (5) Treatment, Client size; (6) Client size; (7) Treatment

*Elacatinus figaro* cleaning stations

12 cleaning stations

2 Treatments: Camera or Camera + Diver

15 min registrations

Number of interactions  
Duration of interactions  
Client diversity

## Conclusions

Diver disturbance on client community could not be detected, since the number of interactions, their duration and the client composition did not change among treatments.

Client size and cleaning station location are important predictors of the duration of cleaning interactions more than the presence of a diver.

## Financial Support

