Duke of Edinburgh Gold Award

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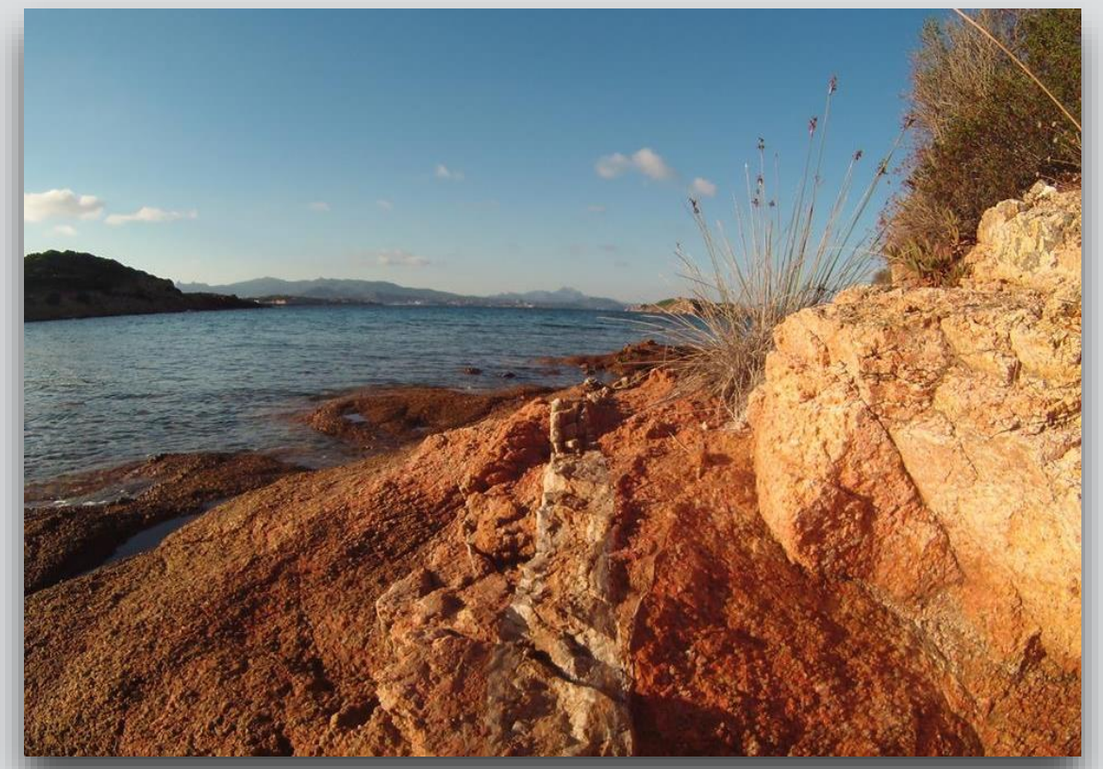
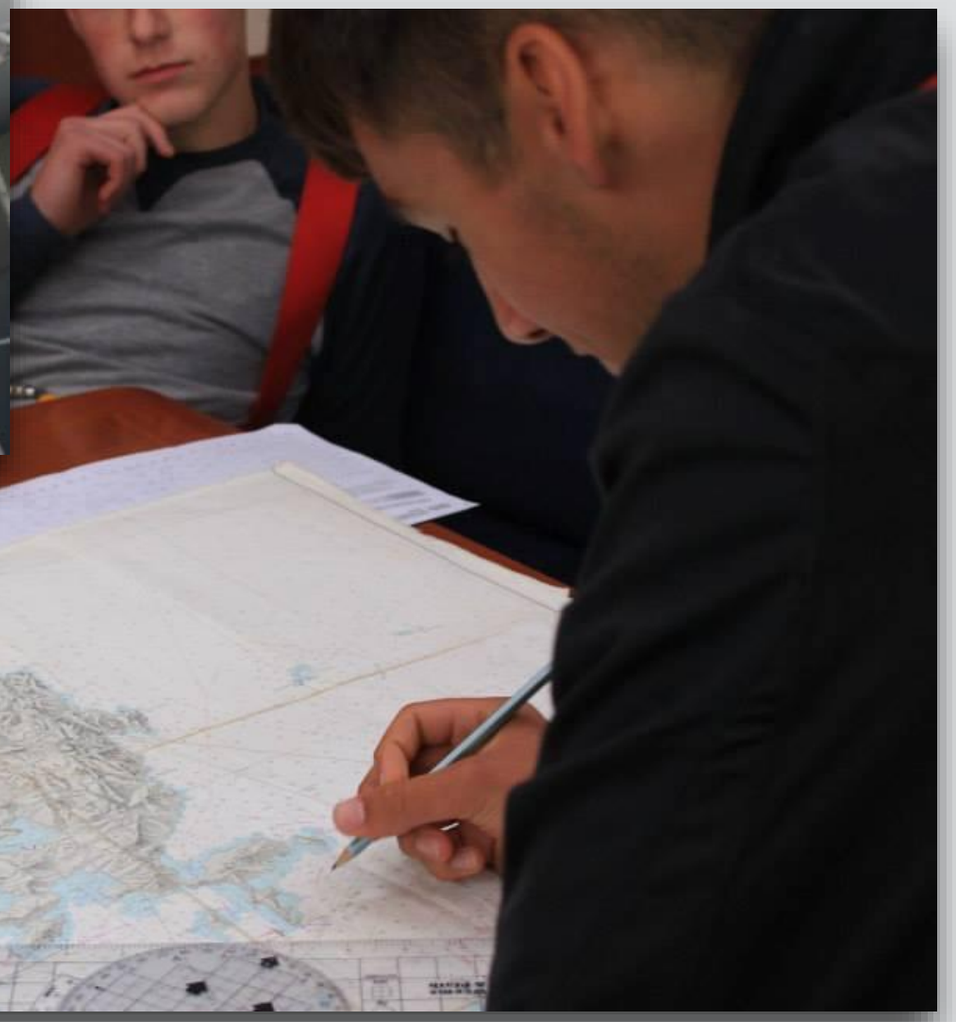
Setting the scene


FITCH


PROMISE
TL
BENETEAU



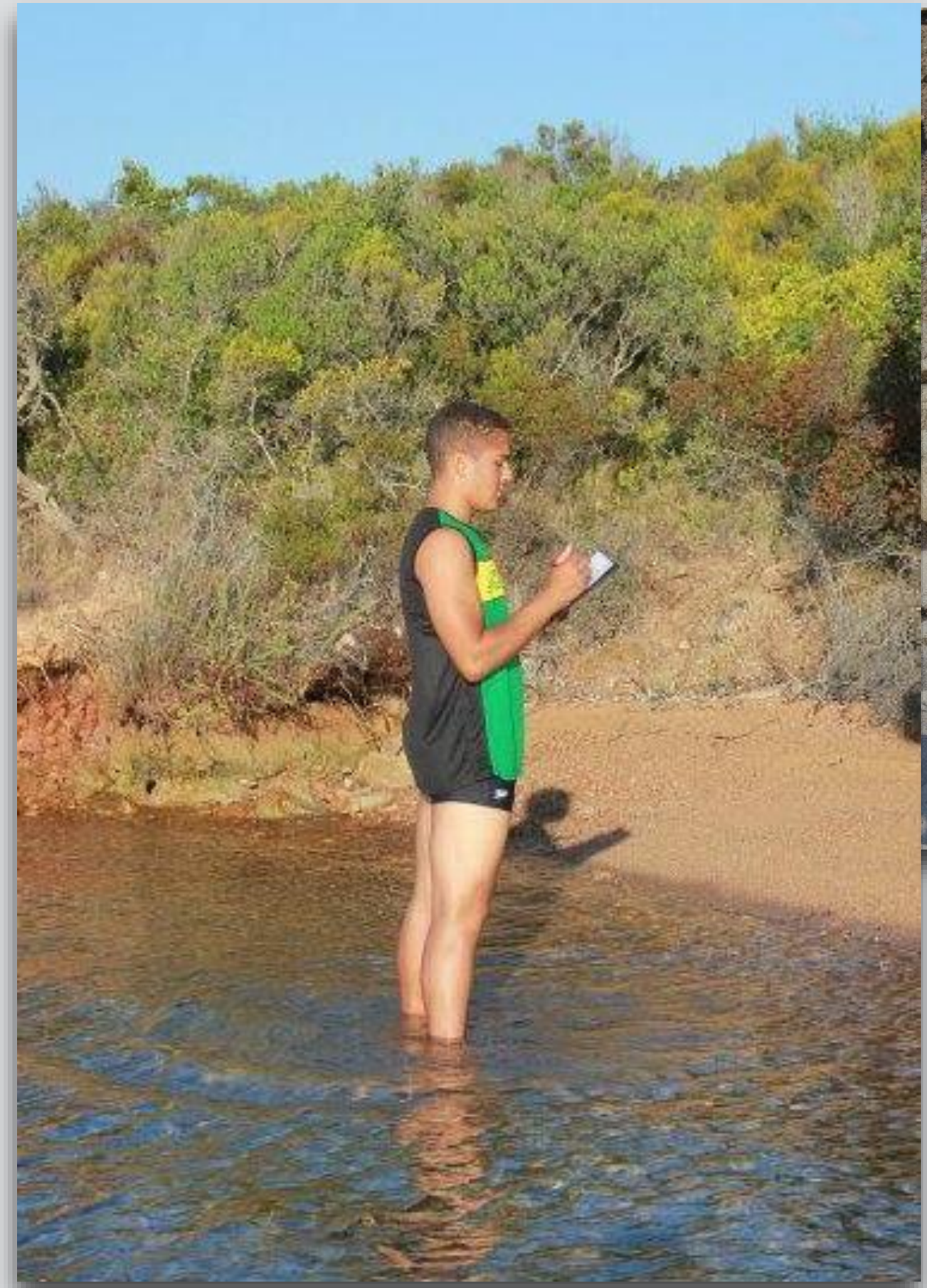
What we learnt



- Helming
- Navigation

- Cockpit organisation
- Anchoring

- Winching
- Bearing



- Data recording

Much harder than it looks!

Much better than it looks!

- Team development
- Cooking

- Rowing
- Snorkelling

- Very changeable weather!

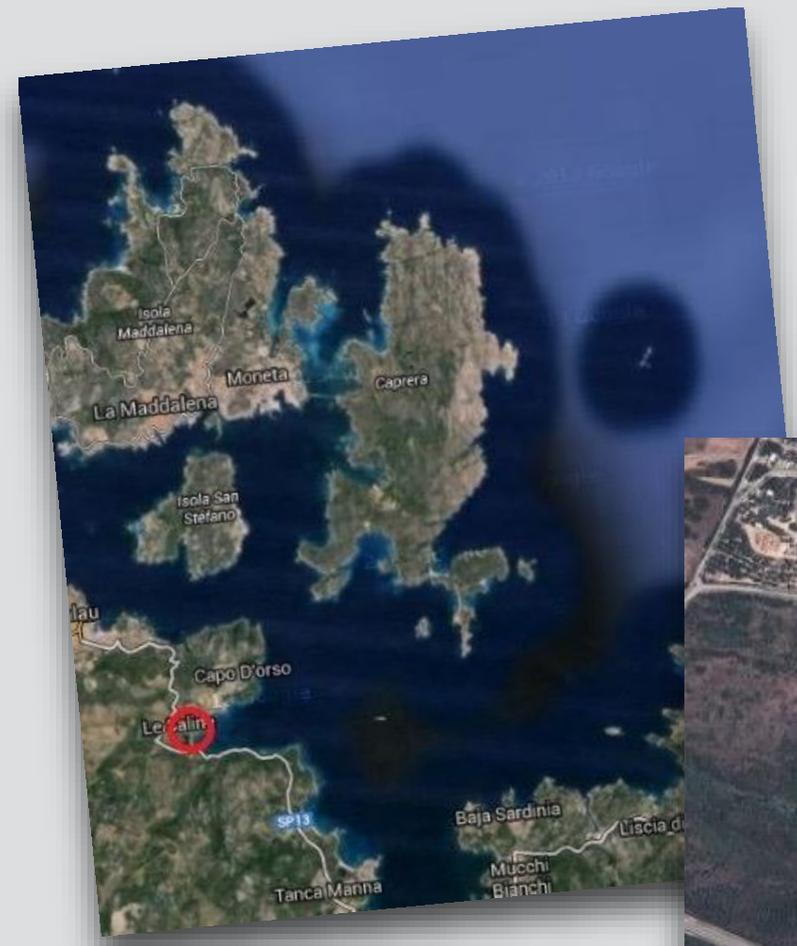
The Project

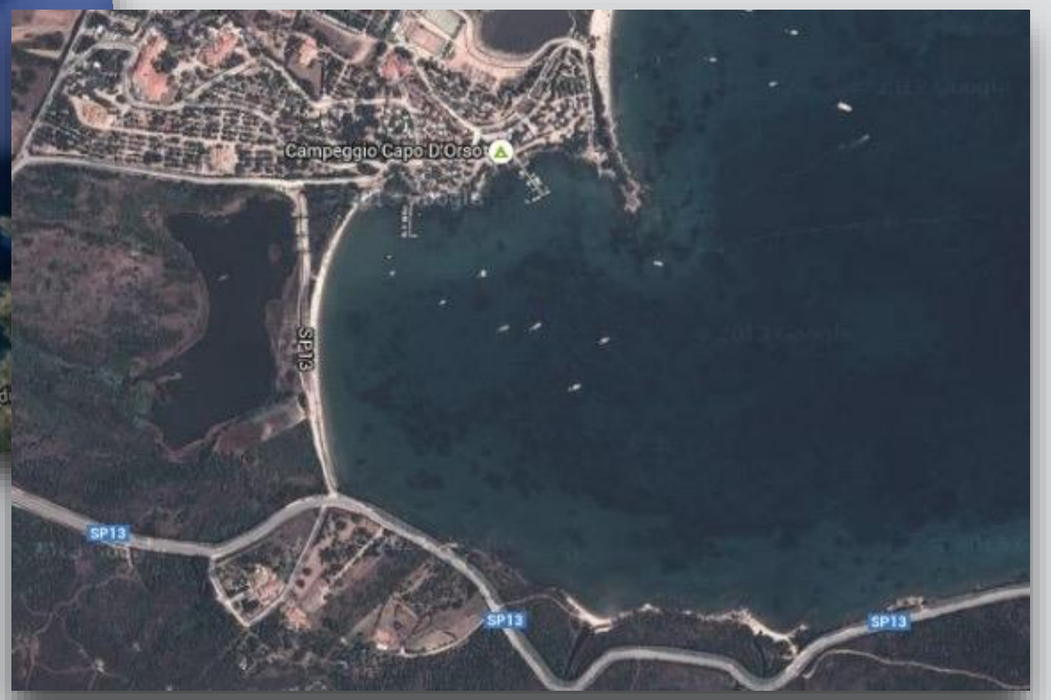
Methods

- Gradient or linear pattern along which different species of plant are located
- Visualise changes taking place along the line
- Fast and clear results gathered

Golfo Saline – Site 1

pH of water: 6.8
Sea temperature: 27.2
Location: N41˚,9,4 E9˚,24,3
Key features: Large bay area with high hills either side, with low land directly behind the cove. East facing shingle beach
Lagoon situated behind main beech area with a more acidic pH of 6.2.

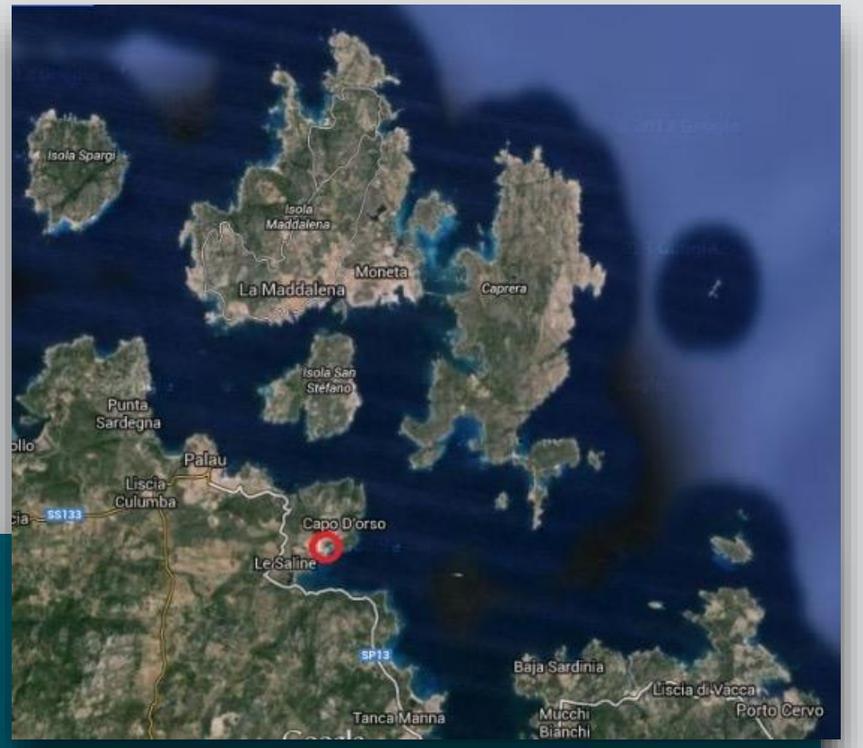


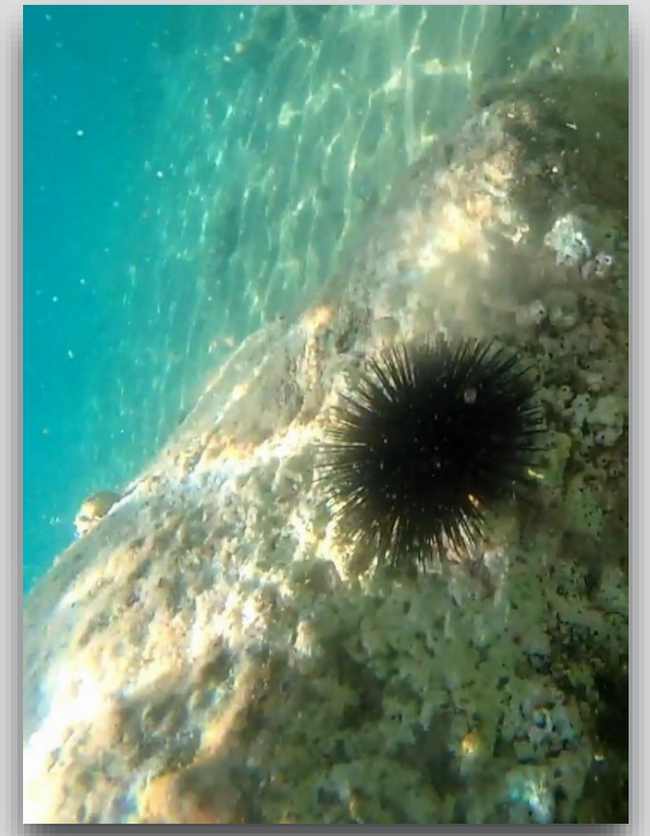


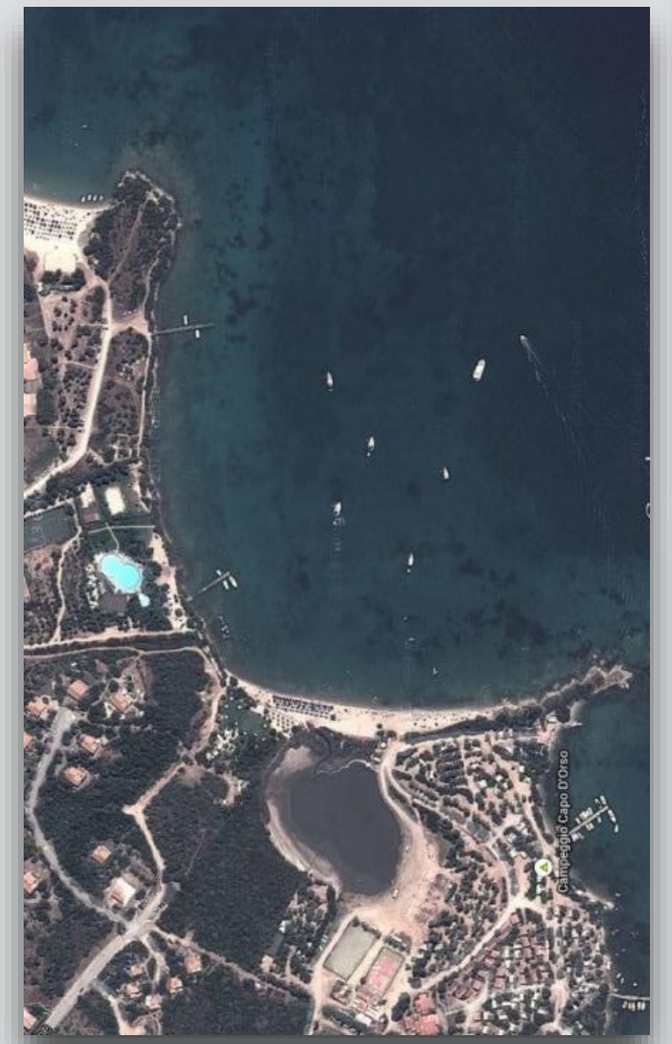
Distance from shoreline (m)	Sample pot 1 (%)	Sample pot 2 (%)	Thick bladed grass(%)	Sample pot 3 (%)	Thin/fine grass (%)	Sample pot 4 (%)
4	40					
8		5				
10			5			
12			5	15		
14				25	5	
16				100		
18				20		80

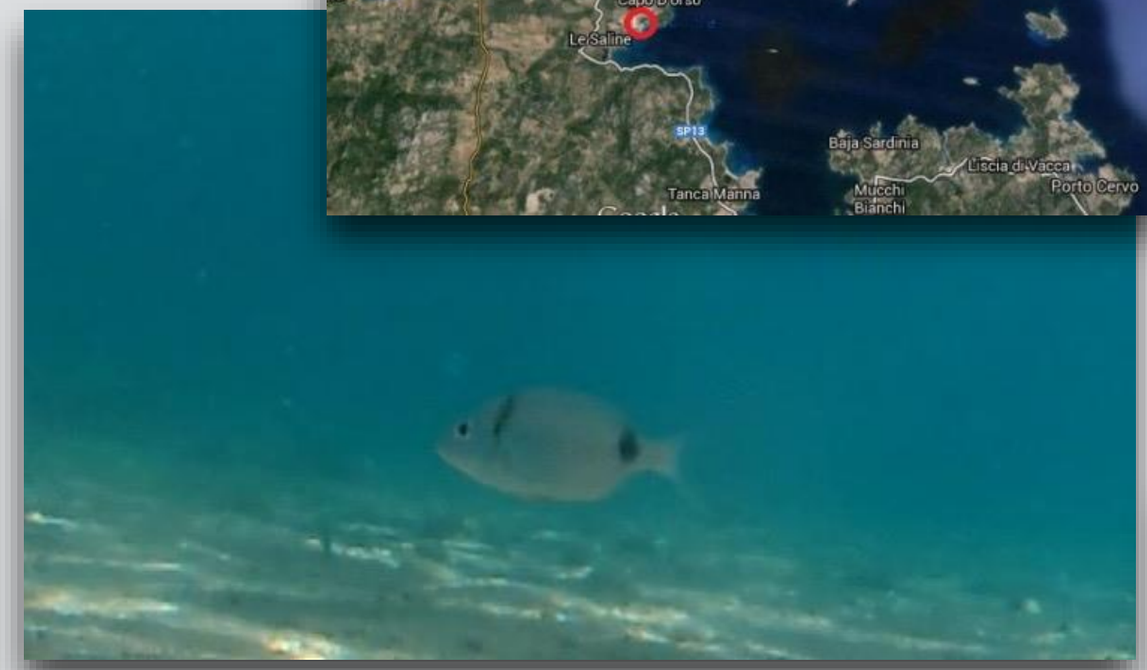
Golfo Saline Site 2

pH of water: 6.7
Sea Temperature: 27 ℃
Location: N41°12’00 E9°07’00
Key features: Wide sand beach, large amounts of vegetation, low land with salt water lagoon running through several streams to sea.



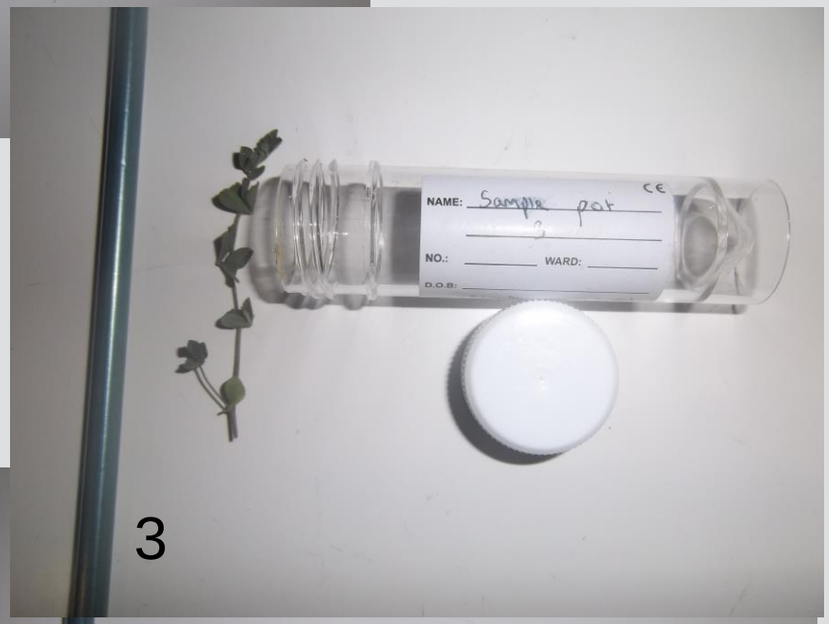






1

2



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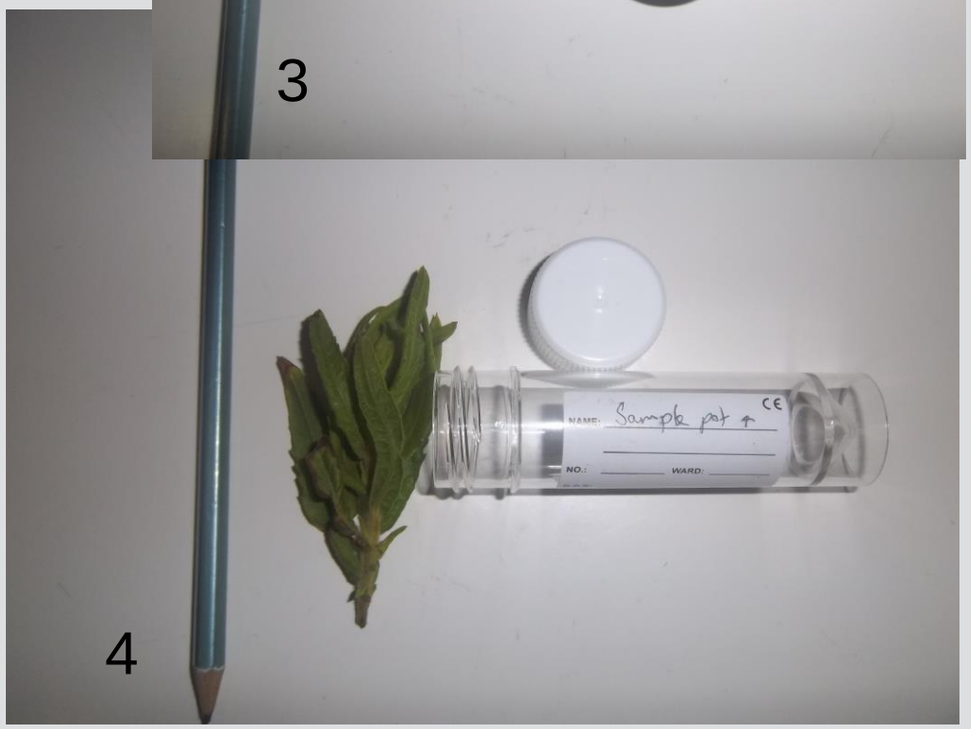
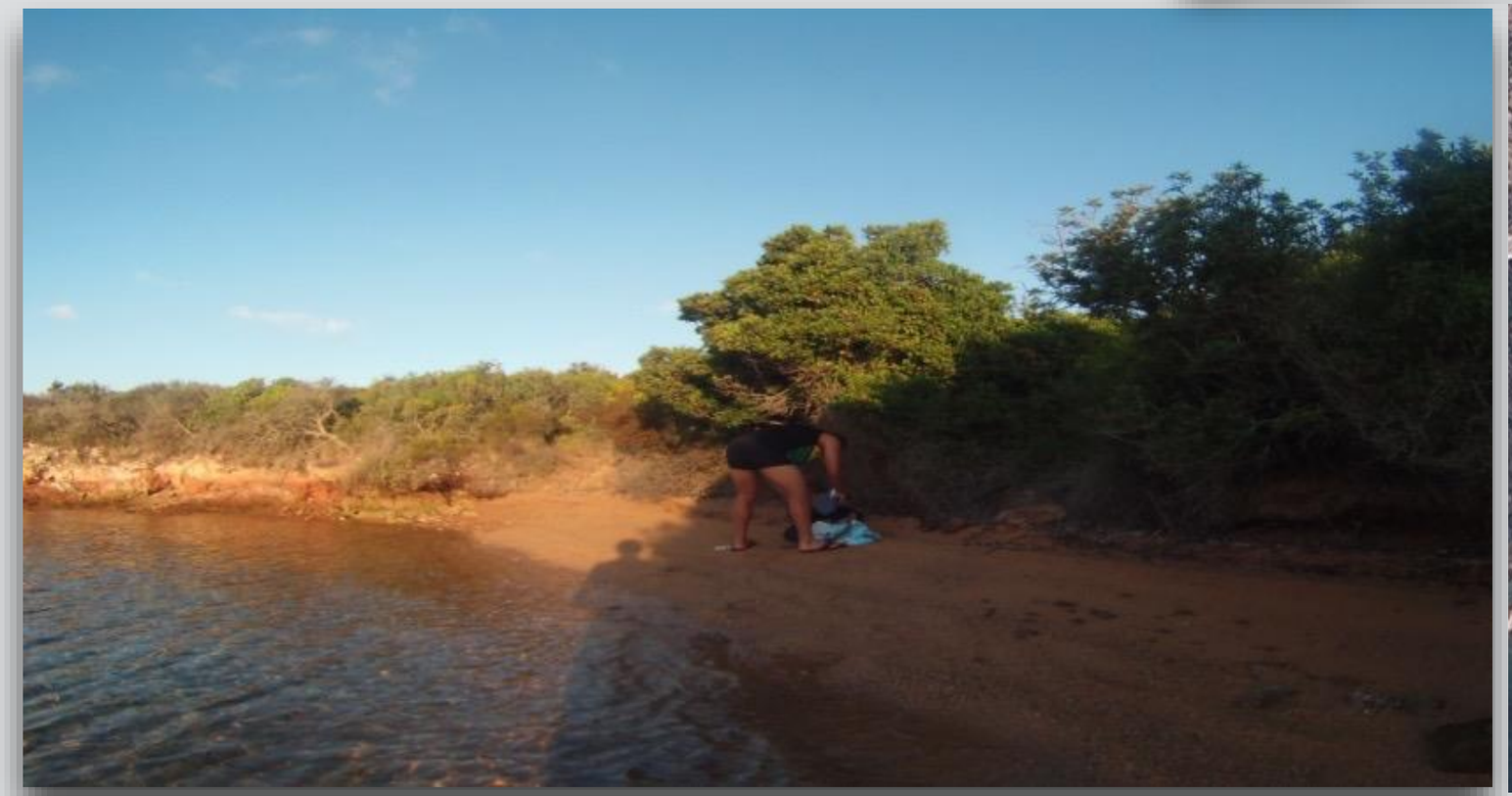


4

Distance from shoreline (m)	Sample pot 1 (%)	Sample pot 2 (%)	Sample pot 3 (%)	Sample pot 4 (%)
6	5			
8		15		
10			5	
12	15		5	15

Caprera Island — Site 3

pH of water: 6.4
Sea temperature: 26.9
Location: N41°13'23.9" E9°27'32.6"
Key Features: Narrow West facing beach with fine stone, a small cove area, steep rocks that were eroded and shingle forming sand further up the small beach



Sample pot 1

Sample pot 2

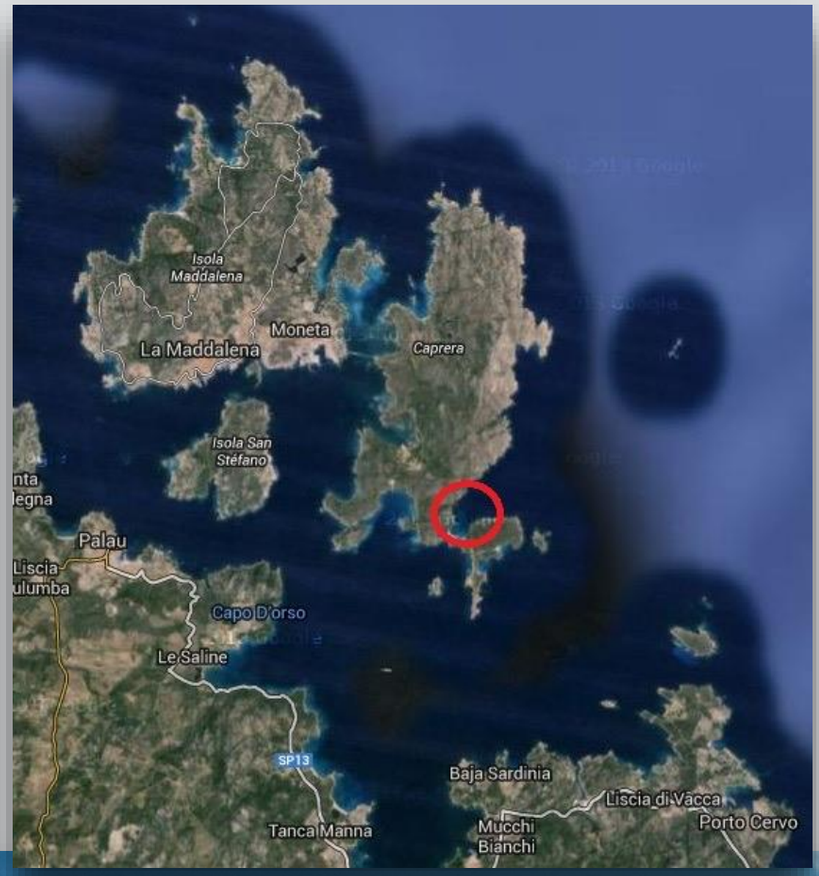
Distance from shore (M)	Sample Pot 1 (%)	Sample Pot 2 (%)	Sample Pot 3 (%)	Sample Pot 4 (%)
2	50			
3		40	20	20

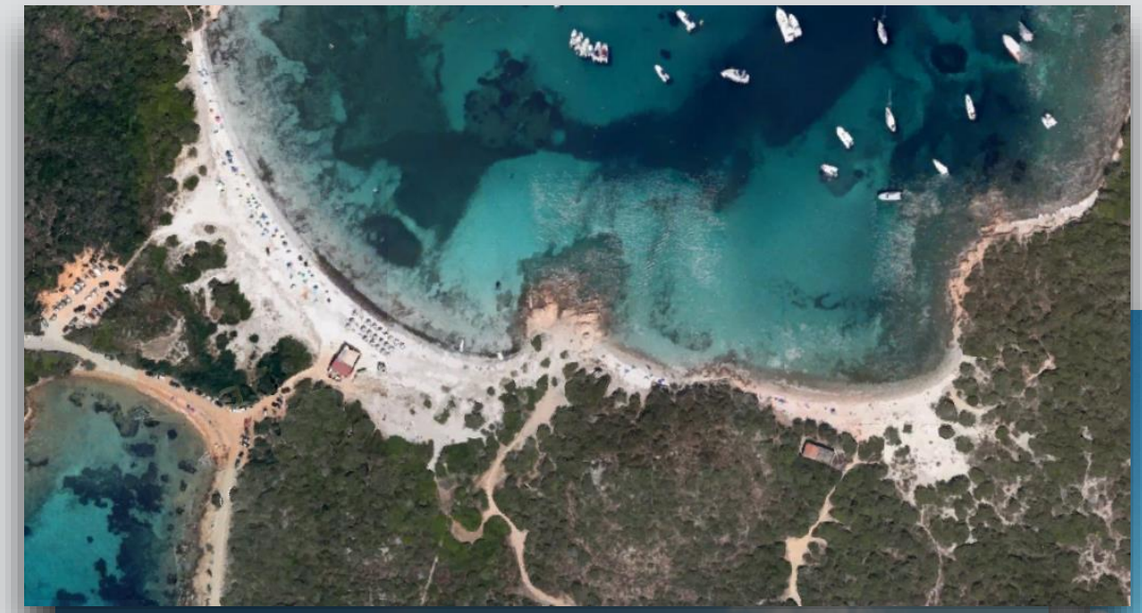
Sample pot 3

Sample pot 4

Cala Portese,Spiaggia i due Mari – Site 4

pH of water: 6.3
Sea temperature: 27.0
Location: N42°11’0.6” E9°27’51”
Key features: Two inlets opposite each other, creating a “two beach” landform. Cala Portese is a wide, white sand cove, surrounded by vegetation.





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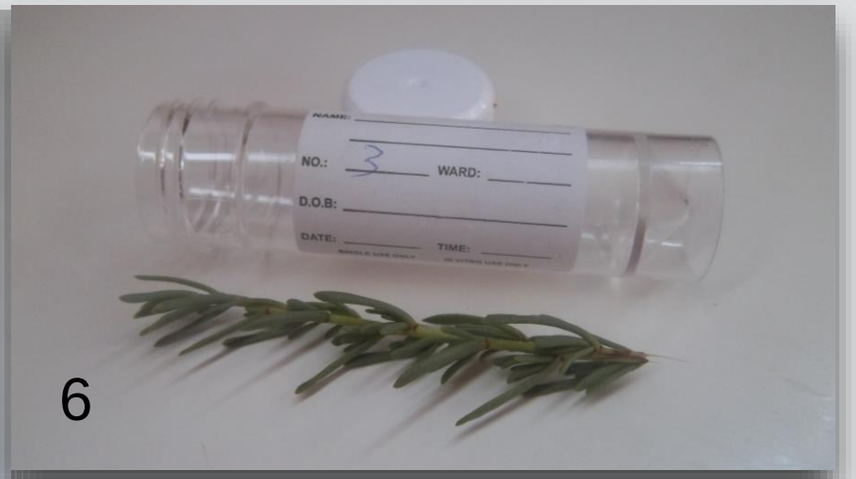
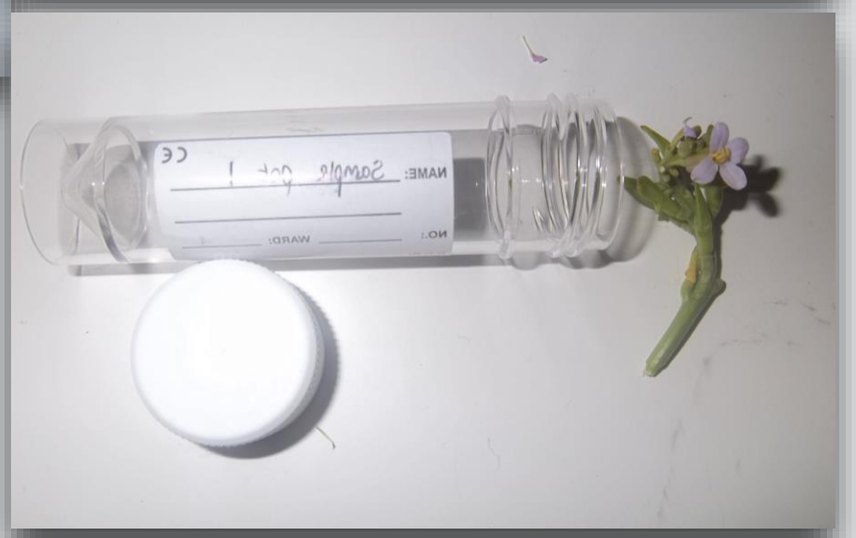


6

Distance from shoreline (m)	Fine Grass (%)	Sample pot 5 (%)	Sample pot 6 (%)	Sample pot 7 (%)	Sample pot 8 (%)
9		5			
15		15			
18		5	25		
21	40			20	
24				80	
27					30
30		5			
33		10			
36		15			
39		10			
42		20			

7



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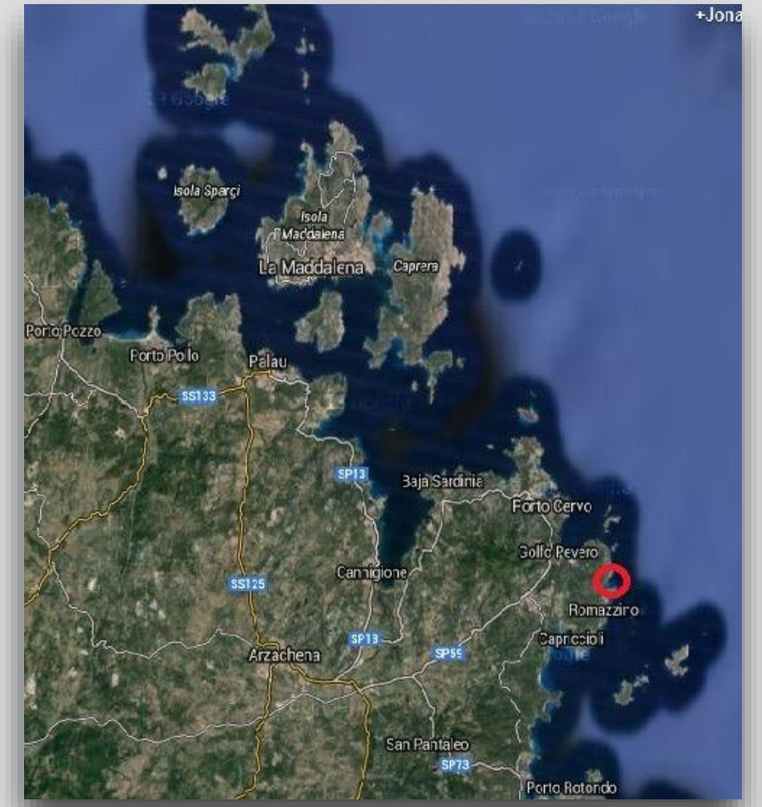
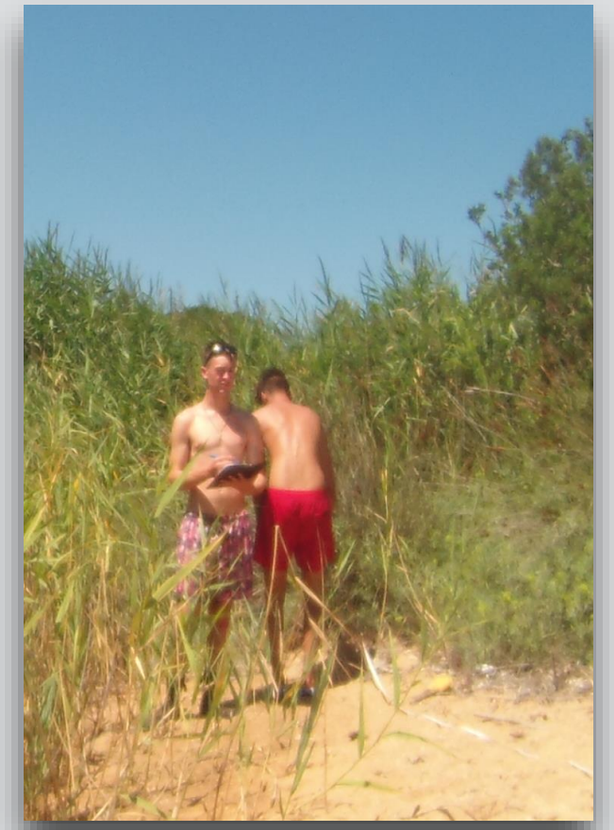
Golfo Romazzino — Site 5

pH of Water: 6.6
Sea temperature: 27.0
Location: 40º06’ 16”.00 N - 9º 34’ 04”.00
Key features: Small cove, shingle at the shore, sand at the back, rocks either side. Lots of vegetation behind. Small river, not running fast. The larger cove is East facing, but the smaller beach is South facing





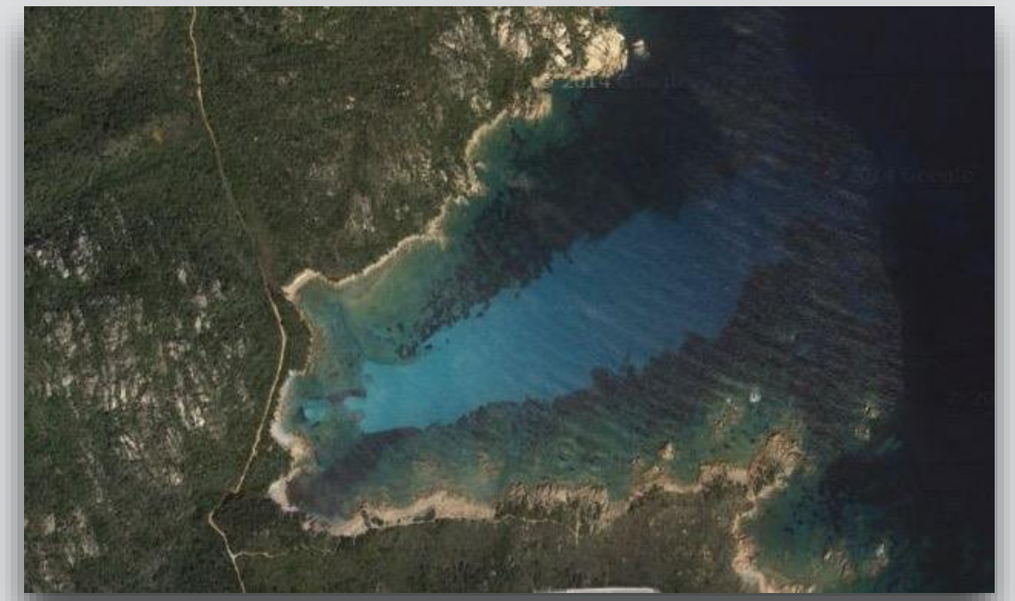


Photo 1

Photo 2

Photo 3

Photo 4

Distance from shoreline (m)	Photo 1 (%)	Photo 2 (%)	Photo 3 (%)	Photo 4 (%)
11	40			
15		20	50	
16		50	70	
17		70		20
18		90		

Method limitations

- pH
- Transect
- Calculating the biodiversity index

Conclusions

Marine fauna trends

Trend

- East facing coves have higher biodiversity

Site 2: 87
Site 3: 18
Site 4: 112

Potential reasons for the trend

- Prevailing winds
- Swell impact

$$D = \frac{N\,(N-1)}{\sum n\,(n-1)}$$

Flora trends

- Site 1: predominantly single freestanding plants
- Site 2: predominantly flora as part of large bushes and plants
- Site 3: predominantly flora as part of large bushes and plants
- Site 4: predominantly flora as part of large bushes and plants
- Site 5: predominantly single freestanding plants

Expedition review — limitations

- Weather
- Head gasket
- Alternator
- Bilges
- Heads
- Anchor watch
- Jonny