

## Project Update: January 2019

Over the past 3 months I have carried out fieldwork in South Africa, given a public seminar and presented at an international conference on mangroves. Sampling trips were carried out at the Mlalazi (28°57'10.4"S 31°46'26.0"E) and Mngazana (31°41'52.3"S 29°24'30.3"E) mangrove forests over 2 weeks from the 27<sup>th</sup> September to 13<sup>th</sup> October 2018. Data were collected on the physiological responses of crab larvae that were sampled using cheap, inexpensive light traps (Fig 1 & 2). An on-site laboratory was set up and larval micro-respiration measurements were taken at three different temperatures (Fig 3). These samples still need to be identified to their lowest possible taxonomic level and measurements taken of their bio-volumes. 3D scans of the pencil, knee and stilt roots were taken using a low cost 3D scanner (Xbox Kinect) in order to quantify the complexity of these microhabitats (Fig 4)

I gave a public seminar at the South African Institute for Aquatic Biodiversity on the 25<sup>th</sup> October 2018 titled "The importance of mangrove microhabitats at their northern and southernmost distributional limits". This seminar was well attended by students, research staff as well the Ulovane environmental training college. Furthermore, I have got into contact with the Mangrove Action Project which works to restore and rehabilitate degraded mangrove areas to remedy ecosystem system service loss associated with mangrove loss - I have proposed to make my data available to them.

Data analysis is ongoing for the community structure component, which would prioritise mangrove conservation, as well the physiological responses of organisms under climate change scenarios and the effects that ocean warming in Africa will have on them. One manuscript already in preparation and is planned to be submitted by February 2019.

