

The Wanderer

October-November 2022

Interviews...

Meet Team SAWS and
the Astrophysicist!

A job to 'Killer whale' for...

Battle of the Bulls

**Fashionable
Field
Gear**

*Weather
for the brave*

MARION'S
MARVELOUS
BIRDS

Northern Giant Petrels

Circle of Life

Part 4: Round Island for the Readers



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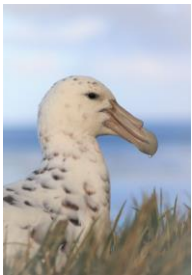
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COVER IMAGE:

Southern Giant Petrel
(*Macronectes giganteus*)

White morph
Elsa van Ginkel



letter from the *editors*

October and November were two enormously busy months. The elephant seals' breeding season came to an abrupt end and immediately shifted to the moulting season. Brown skua nests and small chicks have started to appear widespread across the island. Flowers are in full bloom from the coast to the midlands; and the new Wandering Albatross breeding pairs have suddenly made their appearance on the Marion plains, while the past year's Wanderer-juveniles have almost all fledged by now. The team is in high spirits as we approach the festive season and we are enjoying sunnier days. The wind speeds, however, have kept their 'Roaring Forties' name, respectably high. Enjoy this edition of *The Wanderer*!



A handwritten signature in black ink, appearing to read 'Elsa van Ginkel'.

Elsa van Ginkel
Editor

The past two months had the most birthdays up to date, which made these months extra special but also tough for the field personnel. I would like to highly appreciate everyone that assisted the field personnel during the breeding season. All in all, I think it all comes down to the fulfilment this pristine island comes with; and its closeness with mother nature and her beauty. I am glad that we now get to see field personnel more often, now that the breeding season has calmed down. The team is still holding it together and we are well underway with the preparations for all the festivities. The base definitely feels like the festive season has arrived, with all the plans to put up the Christmas decorations and trees. We're looking forward to ending the year on a high note.

We wish all our readers a safe, great, and blessed festive season!



A handwritten signature in black ink, appearing to read 'Tankiso H. Moso'.

Tankiso H. Moso
Co-Editor

Interviews...

Meet the Astrophysicist and the South African Weather Service Team!

- by Tankiso H. Moso and Elsa van Ginkel

Astrophysicist (UKZN) – Austine Acro Gumba

I was appointed to the M79 Marion Island overwintering team, as the UKZN Astrophysicist. My work involves characterizing and integrating the various subsystems of the receiver signal chain for Probing Radio Intensity at high-Z from Marion (PRIZM) and the Array of Long Baseline Antennas for Taking Radio Observations from the Sub-Antarctic/Seventy-ninth parallel (ALBATROS) experiments. This is not limited to operating and maintaining the radio instruments. I also perform data analyses on the characterised measurements, and the received on-sky observations, with the support of our international collaborators at McGill University. The main aim of the ALBATROS and PRIZM experiments, is to probe the dark ages and the cosmic dawn an epoch before, and when the first luminous sources in the universe were formed. Due to the exceptional radio-quiet nature of Marion Island, it provides a promising observation site. The PRIZM project has two radio instruments, each operating at a frequency band of 50-90 MHz and 70-100 MHz, respectively. The ALBATROS experiment has two antenna elements operating at a band of 0-125 MHz. These instruments are located at Junior's Kop (towards the interior of the island), and at the Hydro-shack site (near the Van den Boogaard River). During the take-over period in 2022, our Astro-team successfully commissioned another ALBATROS instrument at the Repetto's site. We named this site the Devil's peak, due to its horrifying and humbling nature while working up there.

I obtained a National Diploma degree in Electronics Engineering from the Durban University of Technology (DUT). Then I pursued a Bachelor of Technology in the same field, specialising in Microwave (radio frequency) engineering.

My interest in expanding my scientific knowledge, led me to enrol for an Honours degree in Physics on the National Astrophysics and Space Science Programme (NASSP), under the University of KwaZulu-Natal (UKZN) node, and my research focused on astrophysics and cosmology. Afterwards I completed a MSc degree in Physics at UKZN. This transition, is a path rarely followed by most engineering students. Last year, I enrolled for a PhD in astrophysics, under the supervision of Prof. Kavilan Moodley; and the wagon still keeps on rolling until I have achieved my goal.

Life, as we all know, is full of surprises; and I always feel there is a connection between my childhood and adulthood life... This got me thinking, how did I end up here? Well, my journey dates back 22 years ago, as an ambitious young boy, where I used to collect scrap wires, and where I scavenged some of my uncle's tools to come up with crazy antenna designs that would capture radio waves from foreign channels. Since, in the 90's, our black and white television could only pick up the one and only government-owned channel. To my astonishment, my antenna could pick up South African channels. Back then, I was the little Frankenstein who didn't know what fate has in store for him, and I had so much thirst for knowledge. My first take-off point, was receiving a full scholarship from the South African Radio Astronomy Observatory (SARAO), of which I will always be grateful for. My undergraduate mentor, Mr. Stuart D. MacPherson inspired me and also rekindled my passion for radio astronomy. My PI (Principal Investigator for this project), Prof. Cynthia Chiang, has been instrumental towards my journey to Marion Island. Despite my determination and hard work, she instilled a sense of belief in me, and her support and encouragement guided me on this course.

My mentors created a path every student would wish to travel. Sometimes you need that extra hand that would pull you from one point to another, until you get to your destination. I would call that the helping hand of God.

As an enthusiastic young scientist, getting the opportunity to conduct research on Marion Island was met with mixed feelings; especially because of the impact it would have on my PhD studies. I had to think hard about it. Of course, there is the sacrifice of being away from family and friends, but this is the part that I made peace with more than ten years ago while pursuing my academic career. On the brighter side of things, I felt I would gain more experience, skills and knowledge in the radio astronomy field, which would significantly contribute towards my PhD research.

Fresh vegetables and fruits are the rarest thing on this Island, and I crave this most often. However, I appreciate that we have a talented chef (Sanza), and a spirited Saturday braai team that always deliver a stormy meal, despite the funny jokes of *chowing errors*. Honestly, when it comes to preparing a mouth-watering meal, the team always delivers. They say food is the path to a man's heart.

When I was officially handed the mantle by my PI, I had lost the sense of belief of achieving the set targets because of the harsh and humbling Marion weather. However, before the end of the year, I would wish to have all my instruments up and running and taking quality data. A *Round Island* adventure is also on my bucket list, so that I can see the beautiful scenery of Marion Island. I would also use that opportunity to survey the Marion terrain for more possible sites for our ALBATROS experiment, to improve our instrument sensitivity.

The future astrophysicist considering this job, should be prepared both mentally and physically to soar through the Island-experience, as the weather and the terrain will always be a challenge. Sometimes I feel the '*Marion Lords*' are always keeping an eye on us, and '*hey Baba*', there is no summer here - just a friendly, heads up!

Birthdays are always memorable, as celebrating and appreciating the day one of our team members saw their first light, is something to always look forward to. We have the best baking team (Team Gladys) on the Island. The cakes are breath-taking and always leaves a mark in one's heart. Then, there is the arrival of the two 'tote-bins' from Moso, the SANSA engineer, followed by dancing and having fun. A good vibe of music dubbed as *International music*, is the order of the night, as you would want to feel the music through your veins for your body to move. When it comes to music, our DJs are Sihle and Moso. Also, the first-ever quiz night that I participated in, was mind boggling. We had lots of fun, thank you to Elsa and Monica for organising it. I always don't shy away from these events as these are what memories are made up of. You should live life, when you have the chance.

If one would have asked me whether I love my job seven months ago, my sincere answer would be a 'No', with a sad face, but not because I am lazy or hated the job. I have spent almost my entire life in warm places: from Mombasa, Kenya to Durban, the warmest place in South Africa. However, as humans, we always have traits that allow us to adapt to the environment. As I write this, my answer would take a drastic U-turn, and give a 'Yes', with a smiley face. My body has fully adapted to the humbling nature of the Marion weather (snow grains, ice pellets, ice sleuths, and gusting winds). I have also become comfortable with the Island terrain (mires and rocky lavas). All these were key towards embracing the challenges of my job. What I am most passionate about my job here, is that I learn new things every day and this gives me an opportunity to grow my skills and expertise in radio astronomy instrumentation. For the hectic times, I always look forward for better days. Also, interacting with my team members gives me an understanding to know what they do.



'The greatest thing about tomorrow is that I will be better than I am today',
by Tiger Woods

Senior Meteorological Technician (SAWS) - Thendo Sikhwari

Qualifications

MSc Environmental Science

Your passions? What led you to Marion Island?

For a very long time, I was curious about different weather phenomena. This opportunity to work on Marion Island, exposes me to more extreme weather than I have ever experienced before, e.g., full snow cover.

Favourite animal or plant on the island so far?

Albatross bird species and the fur seals.

Who do you miss most from the mainland?

My family and friends.

Any food cravings?

Yes, of course! I would die for a plate of beef tripe, pap and some fresh vegetables.

Achievements during this year?

Making several trips to different parts of the Island.

Any advice for future Marionites?

Just be who you are.

Any lessons so far, from the island experience?

Living on this island, requires team work.

Favourite event so far, on the island?

Birthday celebrations.

What do you love most about your job?

The unpredictability of the weather. You can experience all four seasons in one day.

Hobbies?

Playing Snooker.

Favourite quote

'Whether you think you can, or think you can't; you are right', by Henry Ford.

Anything extra you would like to mention?

What you are today, is the sum of the time that you have utilized.



Meteorological Technician (SAWS) - Tangedzani Tshitavhe

Qualifications

Master of Environmental Sciences

Your passions? What led you to Marion Island?

I am passionate about atmospheric science, meteorology, climate change and adaptation. I was participating in SEAmester IV, South Africa's Class Afloat, 2019 programme. It was on board of the SA Agulhas II and that is where I got introduced to Marion Island, Gough Island and SANAE (South African National Antarctic Expedition), under SANAP (South African National Antarctic Program); from there on, I fell in love with the idea of working on these Islands.

I am an adventurous person. I love exploring and travelling, and are eager for challenges. Marion Island was the perfect working environment for me, which thus solidified my interest in applying for the Meteorological Technician position.

Favourite animal or plant on the island so far?

My favourite animals are the Killer Whale (*Orcinus orca*) and all the penguin species found on the Island. My favourite plant is *Blechnum penna-marina* (a fern species); walking on it, feels like a good leg-day workout.

What do you miss most from the mainland?

Shopping, Netflix, live streaming, warm beaches.

Any food cravings?

Fresh fruits and vegetables, hot wings, chicken thighs and drumsticks.

Achievements during this year?

Advance and broaden my skills in meteorology. Explore the Island. Write and publish a scientific research article. Complete my short courses.

Any advice for future Marionites?

Do thorough research before coming to the Island. Be physically and mentally fit. Have emotional intelligence.

Any lessons so far, from the island experience?

Our core values and ethics will differ. We all come from different backgrounds and life experiences, but what's important is that we honour those values. If we ignore our core values and ethics, then conflict and confusion results and we are caught in the crossfire. Defining what we value and then acting upon those values, brings clarity and direction. We all need firm boundaries.

Favourite event so far, on the island?

Walking to the field huts and staying there for a day or more. It's such a breather.

What do you love most about your job?

There is no such thing as bad weather, only different kinds of good weather...

I love performing surface and atmospheric meteorological observations, equipment maintenance and verification.

Hobbies?

Health and fitness, travelling, hiking, photography, volunteerism and art.

Favourite quote

'The good you do, comes back to you; the evil you do, stays with you.'



Meteorological Technician (SAWS) - Siphesihle Faltein



Your passions? What led you to Marion Island?

I'm passionate about observing various factors of the natural environment.

Any lessons so far, from the island experience?

I've learnt how to observe changes in the weather.

Favourite animal or plant on the island so far?

Seals.

Favourite event so far, on the island?

Pool tournament.

Any food cravings?

No cravings.

What do you love most about your job?

I enjoy observing the changes in the weather.

Achievements during this year?

I would like to increase my knowledge and understanding.

Hobbies?

Playing Pool.

Fashionable Field Gear

Sub-Antarctic style advice straight from Marion Island

- by **Monica Leitner**

Welcome fashionistas! Do you find yourself looking for ways to spruce up your work wardrobe? Look no further as we bring you the latest fashion trends and advice from M79, who don't let the sub-Antarctic weather or isolation from mainland South Africa cramp their style...

This month's feature:



RAIN GEAR REVELATIONS

WET WET WET! The recent rainy days had the field assistants feeling a little **BLUE** (the colour of our rain gear). To our fashion pleasure, this led to much improvising with everyday items. Field assistants are fighting dull weather and dull looks to keeping us on the cutting edge of fashion once again.

Banele (top left) sports the low-key fitted blues look, but much like his personality of looking on the bright side, he adds some colour with a green all-purpose moonbag, red backpack and those bright yellow gloves. Ready to tag seals and strike a pose despite the rain.



Mike (top middle) had enough of being wet this season and sports all sorts of genius homemade fashion hacks - everything from washing up gloves to black bag vests. The result: wild colour combinations, a general plastic rustling noise wherever he goes and a dry, happy field assistant.

Monica (top right) beats the drab grey weather by wearing the colours of the rainbow underneath oversized blue rain gear: green cap, yellow goggles, pink jacket and a final waterproof layer of Mike's genius black bag vest. She may be drowning in her clothing, but will not be drowning in the rain.

This look may have mainland South Africans clutching their personal belongings and dialing 10111, but Lucy (left) had a field gear revelation! The face-buff and sunglasses provide total protection from horizontal ice pellets, together with her usual rain gear, Lucy can continue Skua counts in any weather that Marion throws at her. Watch out for that crook you fashion critics!

Now back to work you lot!

Stay tuned for more fun fashion trends and inspiration in our next edition!

MARION'S MARVELOUS BIRDS

Northern Giant Petrels

- by Lucy Smyth

Breeding season on Marion Island is a much-awaited time of the year for field assistants: a time that is characterized by long days of fieldwork, beautiful mating displays of birds, elegant nests and fluffy chicks. Unsurprisingly, given the sub-Antarctic climate of Marion, most birds on the island breed in summertime, when food is abundant and the weather is not quite as wet and cold as in wintertime. Having arrived on Marion towards the beginning of winter, there were a good few months of build up for us field assistants before the chaos of breeding season hit in full swing. As a birder, the species on my schedule, which signalled the beginning of the breeding season, was the Northern Giant Petrel (NGP).

NGPs are large grey birds, similar in size to a common goose. They have impressively large, sharp tipped beaks and some frightfully sharp claws. They look similar to their close relative, the Southern Giant Petrel (SGP), and are distinguished by their red-tipped beaks (as opposed to the green tipped beaks of SGPs), and their uniformly grey feathers (compared to the darker bodied and lighter headed SGPs).

Their feathers tend to become paler with age and some birds have beautiful bright blue eyes, while others' eyes are darker. The birder from whom I took over, referred to them as 'Marion Dinosaurs', and I must say that it is a pretty good description of an NGP. There is something prehistoric-looking about them, and the swooping sound they make as they soar over my head as I stand on one of Marion's many beds of ferns, makes me feel like I am living in a different era. Being a large seabird species, they are unsurprisingly very good flyers, and seem to use their feet like rudders to help them turn sharply while in flight. They are also rather vocal birds, calling to each other while on land as well as in flight. When vocalizing while in flight, NGPs lift their heads slightly, open their beaks and let out a long whinnying noise, which further adds to the prehistoric atmosphere. I personally am not sure what noise dinosaurs made, so I cannot say with any certainty that NGPs sound like dinosaurs, but their calls are so unlike anything I had heard before coming to Marion, that they seem like they could come from the time of the dinosaurs.



NGPs are both vicious hunters and avid scavengers, eating a combined diet of seafood buffet from the southern oceans, penguin chicks, the occasional albatross chick and any other carcasses which they come across. When foraging, NGPs are feisty and ferocious. They fan out their tails, hold their wings out sideways and charge towards their desired meal, fighting off other competitors in their search for food. This was the main context in which I had seen NGPs in, until August arrived and a flood of hormones kicked off their breeding season, resulting in a drastic change of behaviour.



The appearance of a Giant Petrel when they are feeding on a carcass, fighting off other competitors.



A Northern Giant Petrel on its chick.

While sitting on nests, NGPs transform from brutal predators into gentle giants. Partners often nuzzle and preen each other, and while I gently lifted up their feathers to read their rings (our way of identifying which partner is sitting on the nest), they would often nuzzle my hand, gently nibbling my fingers and making soft whinnying noises. I became very attached to the pairs of NGPs nesting in the monitoring colony I was responsible for checking, and eagerly awaited the arrival of their fluffy white chicks.

The chicks arrived at the beginning of October, and what an exciting day that was. I knew they would be coming soon, and set out on my monitoring mission that morning, camera in hand, and eyes peeled. After checking on a few birds still sitting on eggs, I found my first NGP chick. The sweetest little ball of white fluff I have ever seen. All tucked up under its parent, with delicate grey feet and a too-big-for-its-body bill, the little baby was fast asleep in the warmth of its parent's feathers. At the next nest, I came across a pipping egg - the biological term for an egg cracked from the inside, by a chick on its way into the world - with the front of the chick's beak starting to poke out of the egg. Over the next few weeks, more and more babies appeared, and grew bigger by the day. After less than a month, some were already too big to fit underneath their parents anymore, and they started being left alone in the safety of their nests.

From the beginning of August, NGP pairs started to build nests in their chosen spots, usually nestled against biggish rocks, which provide some protection from the ferocious Marion winds. These rocks however are also grey in colour, making NGPs sitting on nests particularly difficult to see. Unlike their SGP cousins, who nest in colonies, NGP nests are relatively spread out across the landscape, and much of my August fieldwork, felt like a giant, month long Easter Egg hunt. I zigged and zagged my way over the *Blechnum* (fern) covered slopes, through the infamous Marion mires and to every big grey rock I could find, in the hopes of locating as many pairs of nesting NGPs as possible, dutifully incubating their beautiful white eggs. My legs certainly became a lot stronger, and my camera's SD card a lot fuller.

The Wanderer – Northern Giant Petrels

I find it quite amazing to think that while I often get freezing cold and sopping wet while working out in the field, these amazing little creatures effortlessly withstand all of the wild Marion weather: tucking in their heads, closing their eyes, and waiting out the storms. They are incredibly well adapted to this harsh but beautiful landscape. They are not, however, adapted to the Marion mice, an introduced species which causes chaos amongst birds on the island, with NGPs being no exception. I unfortunately found a number of adult NGPs with mouse inflicted wounds on their backs between their wings, whose nests subsequently failed. The adults have such a strong instinctual urge to incubate their eggs that they continue sitting on their nests, even while literally being eaten alive by hungry mice. Despite having heard a lot about the devastation inflicted upon seabirds by mice, it was a true tragedy to witness the effects of mice with my own eyes.



Northern Giant Petrel chicks getting bigger by the day!



Northern Giant Petrel.

We are now at the end of November already, and the NGP-chicks continue to grow by the day. They are getting big and strong enough to move off their nests by themselves, and soon their elegant dark juvenile plumage will start poking through their grey fluff. In a couple of months' time, they will head out to sea to start foraging for themselves and in a few years' time, they too will be overcome by a flood of hormones at the beginning of August, and will bring joy to another generation of field assistants; and new life to the island as they join the breeding population of NGPs on Marion Island.

Memorable shots!



Michael Ross



Elsa van Ginkel









Monica Leitner



Elsa van Ginkele



Battle of the Bulls

- by Michael Ross

If there is one thing which draws people to Marion Island, it is the breeding season. Starting in earnest around September, it is a true spectacle of nature, with new life springing up across the island. For field workers, it is also the busiest, most stressful and tiring time of the year. In amongst all the chaos, there are some hilarious moments which are worth writing down, so I can fondly remember them in the future and so that others can enjoy the experience with me.

In general, Southern elephant seals display extreme polygyny, where one male control a harem of multiple females. On Marion Island, these harems can exceed 50 females. Male elephant seals fight for control of the beach, with the victor earning the title of 'beachmaster' and gaining exclusive rights to mate with the females, save for some sneaky males who mate with the odd female when the beachmaster is otherwise occupied. Being the beachmaster is therefore a coveted prize for a male elephant seal, allowing his genes to be spread amongst many females. Subordinate bulls are termed 'bachelors', and receive very little, if any, opportunity to mate. The breeding season is probably a rather sad time for the bachelors, who hang out on the periphery of beaches, watching the action, but not getting any themselves.

As this story unfolds, let me introduce the protagonists. In one corner, we have Alpha Male (the choice of this name will soon become apparent), in another we have Beta Male and lastly, we have Purple-Green (a male who has been uniquely tagged with numbered purple-green tags, allowing us to individually recognize him).

These three humongous bulls were all lying in close proximity to one another on one of the beaches. Given the breeding strategy of elephant seals, with only one beachmaster per beach, something was bound to happen. The tension in the air was palpable.

One otherwise ordinary morning, I spotted Alpha Male sneaking towards Beta Male. 'Sneak' is potentially the wrong word, considering he probably weighs about 2 tons and the ground shakes when he moves. Nevertheless, Alpha Male continued his slow progression towards Beta Male until their heads were almost touching. I was unsure what would happen next - it seemed a bit odd for two bulls who were supposed to be bitter enemies to be lying so close together... *were they actually friends?* Before I could quite get my head around what was happening, Beta Male roared. This was followed by a deafening roar from Alpha Male. The roar was clearly quite intimidating because Beta Male quickly realized that he was the beta male and made a run for it. Alpha Male, secure in his position as the superior male, didn't bother chasing Beta Male.

Unfortunately for Beta Male, his escape route put him on a collision course with Purple-Green. He reached Purple-Green and a battle quickly ensued. The two titans reared up (they have seriously impressive core strength), and they started lunging at one another, inflicting deep wounds with their massive canines. Both sides were taking hits, but Purple-Green appeared to be stronger. This realisation soon dawned upon Beta Male, who decided that this was not going to end well, and he scampered off.

Purple-Green wasn't going to let Beta Male off the hook so easily and he set off in hot pursuit. I don't know quite how to describe an elephant seal 'running' on land, but if you picture a gigantic, blubbery, two ton worm galloping at a surprising speed, you get some idea.

The chase didn't last long and soon the two bulls were back at it. Purple-Green was the aggressor, hoping to teach Beta Male a lesson, while Beta Male was fighting to avoid injury, having given up his chance of being a beachmaster on this beach, at least for now. While attempting to manoeuvre into a better position to launch another furious attack, Purple-Green slipped into a rut in the ground, and Beta Male ended up on top of Purple-Green. The result was a most unexpected stalemate. Purple-Green was clearly winning the fight, and would likely continue to chase Beta Male if he could, but in his current position, he was unable to harm Beta Male, given Beta Male was lying directly on top of his head. Elephant seals have *T-rex-esque* front flippers, which can do essentially no harm to another seal. Their strength comes from their large body size and powerful canines. Both of these had been rendered useless to Purple-Green. The two seals continued this time-out for a couple of minutes, as Beta Male was seemingly enjoying a break from being attacked and didn't want to move out of position for risk of the offensive continuing. It was rather strange seeing the two fierce challengers lying peacefully. Eventually, Beta Male decided that this was not a long-term solution, and sped off. Purple-Green half-heartedly pursued Beta Male, roaring all the way and claiming the victory.

Alpha Male and Purple-Green are both still on the beach, and a showdown is surely looming. Beta Male has been relegated to the far side of the beach, where he spends his days sulking and contemplating what could have been. Perhaps the strangest part of this story is that there often aren't any females on this beach, while a few hundred meters down the coast, lies an unclaimed beach, which is likely to have more than 30 females. Maybe all the fighting will be for nothing, and the defeated Beta Male, having been chased off the beach with no females, will find himself at a beach with many females and having the last laugh.

P.S. In the days that followed this incident, Purple-Green clearly demonstrated his superiority, defeating Alpha Male and banishing Beta Male from the beach. Fortunately for Purple-Green, the females flocked to his beach, where he admirably protected all 14 of them. Alpha Male spent the rest of the breeding season strategizing for next year, and grumpily roaring at the sealers whenever we walked past.



Purple-Green looking very comfortable on his newly claimed beach.

The Wanderer – Battle of the Bulls

The real victor in this saga, surprisingly, was Beta Male, who found himself at the beach further down the coast, surrounded by 44 females. He too was shocked by the turn of events, and spent the first few days at this beach, hiding around the corner, as if he expected another male to turn up at any moment, ready to dish out another mauling. Alas, it was not to be, and Beta Male eventually took up his mantle as defender of the harem and sire of a great many progenies.



Beta male settling into his new position as beachmaster, despite looking not much bigger than the females!

Perhaps there is a life lesson buried within this story, or perhaps there is not. In any case, I hope you at least had a little chuckle as you imagined this comical scene unfolding on far away Marion Island.

A job to 'Killer whale' for...



- by Monica Leitner

Sitting on a rock at the edge of the Southern Ocean and having the absolute privilege of a killer whale swim 3 meters away from you, in crystal clear water, is an absolutely awe-inspiring moment. I am still in disbelief that this is my day-job!

I am continuously amazed at the beauty, behaviour and sheer size of these enigmatic creatures. Before coming to Marion Island, I thought I would only ever see these animals on documentaries, and now I spend 4 days (or 26 hours) a week, waiting for them to come past me in Rockhopper bay (where Marion base is located).



The Marion Island Marine Mammal Programme (MIMMP) has been monitoring the marine mammals around Marion Island for the last 40 years; and even though its origins are with the characteristic elephant seals on the island, killer whale monitoring began in 2006. To date we know of 75 individuals around our coastline (over the last 16 years). Some of these killer whales are also known from Iles Crozet (1000 kilometers east of the Prince Edward Islands), and it is very special seeing these individuals, knowing they travel the vast ocean between us and our nearest neighbouring island.

While sitting on a rock near the sea, waiting for killer whales to come past, sounds like a picnic to most; in reality, the sub-Antarctic weather and ocean conditions are challenging and many an hour is spent sitting still in the cold, waiting in anticipation. During the winter months, weeks can pass without seeing a single animal! Luckily, in the absence of killer whales, sometimes other animals swim by (leopard seals, elephant seals, fur seals and penguins) and others sit on the rock next to me and keep me company; or simply get up to mischief (Crozet shags, Lesser sheathbills and Antarctic terns). I also occasionally have some lovely M79 human visitors to the rock and I greatly appreciate their support and company too!

In contrast to the quiet winter days, the abundance of killer whales in the summer months can sometimes barely leave enough time to eat lunch between sightings! I also witness incredible interactions and behaviours, like killer whales hunting penguins, calves playing in the shallows (below left) and even the occasional breach: spy-hop (below middle) and tail slap (below right).



The Wanderer – Killer whales

Before heading to 'the rock' for a 3-hour, 8-hour or 10-hour observation session, I pack my bag with all sorts of clothing and supplies, in preparation for the elements. I wear a multitude of clothing layers (thermal top and pants, tracksuit top and pants and an Antarctic snow suit) and, much to the amusement of my team, I head out with a rather large backpack, containing snacks, field equipment and extra warm clothing (top right). To complete the 'pack mule' look, I also have a crossbow (for biopsy collection and satellite tracker deployments) and a walking stick (to balance over the slippery rocks and possibly fend off any aggressive seals along the way).

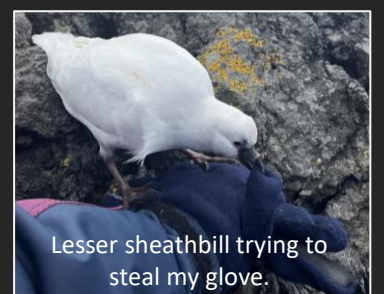


As any Marion field assistant will tell you, walking/movement is the key to staying warm in this environment, as your body heat does wonders in generating heat. Despite all my layers of clothing, I am mostly stationary on my rock and frequently resort to a few jumping jacks, push-ups and even the occasional dance move during the particularly cold days. I am sure this must be very entertaining to anyone watching from inside our cosy base!

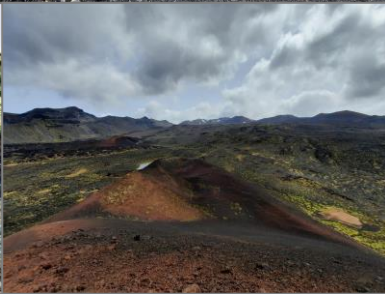


M79 team mate, Sihle Faltein (SAWS), treated to a swim-by from a calf playing in the shallows!

Putting aside the challenging weather, heavy backpack and the effort involved in simply getting to the rock with all the paraphernalia, it is always worthwhile. Even during the days where no killer whales are to be found, it is always a privilege to sit still for a moment and just observe the comings and goings of the bay, with its animals, weather and ocean state (bottom right). A true contrast to our all too busy lives these days. This being said, there is nothing quite as exhilarating as hearing *that* characteristic blow of an approaching killer whale (middle right and bottom left), seeing the white saddle patch and shadowy outline of this massive animal pass below me in the aquamarine water and, if I am lucky enough, the enormous 1.8 m high dorsal fin of an adult male slicing through the water just 3 meters away from me. I am still in absolute awe every time I see these animals; and will cherish the sights, sounds and experiences forever.



Lesser sheathbill trying to steal my glove.



Island life



October and November Birthday Celebrations!

October Birthdays

Andile's Birthday – 11 October

Andile, a busy Oceans and Coasts Birder, celebrated his Birthday amongst friends!



Banele's Birthday – 20 October

We take our work serious... thus I celebrated my birthday outside, with the animals. #sealer.

- Banele



Sihle's Birthday – 25 October

Sihle enjoyed a day with loud music, laughter and friends.



November Birthdays

Birthdays on Marion Island can be bitter sweet moments. On the one hand, one spends the day in one of the most incredible places imaginable, an island of adventure, with an abundance of spectacular mammals and birds. But on the other, one is stuck on a lonely outpost, far from home, with no prospect of seeing family or friends. Fortunately for me, my birthday was an overflow of sweet and I had a wonderful day, filled with time outside, treats from my fellow over-winterers; including a delicious cake, messages from home and some down time. It certainly was a birthday to remember! - Mike

Mike's Birthday – 4 November



Sanele's Birthday – 26 November



A quiet man but always willing to assist when it comes to work. Sanele spent a quiet and peaceful birthday on this sub-Antarctic Island.



Marion Island in November - what a special place to be for birthdays, and what a wonderful time of year. Celebrating another circuit around the sun as the days grew longer and the island buzzed with life, made for some very memorable days for Mike, Sanele and Lucy, M79's November babies. – Lucy

Lucy's Birthday – 27 November



Circle of Life

Part 4: Round Island for the Readers



Let me take you on an adventure...

- by Elsa van Ginkel

I would like to invite you to join me for a 'Round Island'. Now these words sound rather daunting, especially when you set foot on a sub-Antarctic Island for the first time in your life. What exactly do they mean, when they say it will be 'tough', 'you might regret your life decisions', '...it's one of the most challenging things you will ever do, but once you've completed a Round Island, you'll understand what it means to be a field researcher on Marion Island'? Of course, generally during the take-over period in April/May (when the new team receives their training from the previous team), each field researcher gets the opportunity to experience a Round Island first-hand – a rude awakening to an unprepared soul. Nonetheless, it is an experience of a lifetime!

Although this island throws in the whole pot of salt, instead of a sprinkling, when it comes to the elements; one learns to conquer the black or grey lava rocks, while unwillingly running over them due to the extreme wind speeds forcing you forward. Rain is just an everyday phenomenon. Sentences like 'Oh, it's raining, I can't go out' and 'This work will have to wait for tomorrow'... well, these are illusions. They do not exist on this island. The work needs to be done and thus we do it. Most field researchers have work spread widely across the island, requiring us to travel extreme distances along the coast or towards the intimidating interior. The *birders* and the *sealers* can typically be found near the coast and they spend countless hours in treacherous weather conditions, to complete their everlasting work.

Luckily, to make our lives easier, there are field huts to shelter us from Marion's ferocious weather moods, as compared to several decades ago, where some field researchers had to camp in a tent in 40 knots (or more) of wind. There is always something to be grateful for! There are nine field huts located around the island, of which eight are situated near the coast and one can be found within the interior of the island. Katedraal hut, the hut located in the interior, is far out of the way of most people's work and will thus not be included in our Round Island trip, although I have spent several icy nights up there during June, earlier during the year.



Katedraal hut in the interior.



Marion Island Map, indicating the locations of Marion Base and the nine field huts, situated around the island (Marion Island Map – 1:25 000; supplied by Department of Agriculture, Land Reform and Rural Development, South Africa).

Base to Repetto's

We will start off in the northeast of the Island, at the Meteorological Base. I'll meet you in the boot room (where we usually leave our sopping wet field gear to dry when we come home from the field). I'll meet you there between 7:00 and 8:00 am; heading out earlier, rather than later makes the journey slightly less stressful, especially if you have a lot of work to do along the way, which tends to be the case. The more daylight hours you have, the more confident you are in the outcome of your day. *Disclaimer:* anything can happen throughout the day; unforgiving wind speeds, the unexpected snow squall or the worst weather alternative... a day filled with continuous, pouring rain, when the water seeps through your waterproof gear, dampening your layers of clothing to such an extent that it feels like you can feel the chill

onto the bone. This can turn any bearable walk into an extremely unpleasant experience, thus remember to bring along your necessary waterproof gear, even if the weather forecast seems inviting! This is Marion. She is a trickster!



Marion Base smothered in mist, as seen from the route leading to Repetto's

Out of the boot room door (alright, *NOW* you have committed to your journey; I hope you remembered to sign out on the register?). Our first stop will be Repetto's field hut. There is a relatively clear route towards Repetto's, which makes it an enjoyable walk if you happened to be walking inland, which means we'll be travelling for about three hours if we are not working along the way. Let's head northwest! We will meander past E-base (the emergency base, that can also house helicopters), over the Van den Boogaard River, near the old Hydro-shack, and pass over Skua's Ridge, towards Hoppie's Hell. As this name suggests, I suspect this area must have been 'hell' to walk through in the earlier days, when there wasn't an established route yet. It consists of black lava rubble, with patches of mossy vegetation but nowadays it's a 'breeze' to walk through. It leads you to the 3rd Sister (one of three sister's hills before Long Ridge), where you skirt along the foot of 3rd Sister hill, past a lake that usually has a Brown skua club of well over 30 individuals. Once you've reached this point, you get a glimpse of the Fairy Prion Valley, as you approach the start of Long Ridge. As this name implies, and of which the 'Long' is applicable in all directions of this ridge, Long Ridge consists of grey lava rocks, an area typically known as fellfield. This stretch always takes longer to cross than expected – just as you think you have reached the top, there is a slight dip in the topography, with another higher region coming up. At the highest point of this section, if it is a clear day, Repetto's Hill and 'Boot Rock' are already visible.



Repetto's Hill, as seen from the midlands.



Prinsloomeer always have large amounts of King Penguins in its vicinity.

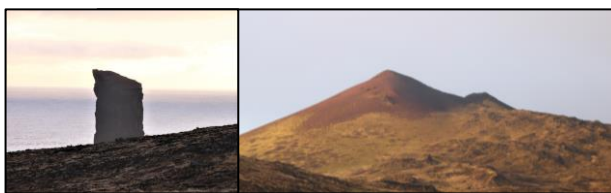
The next section includes Goney Plain (a plain painted with hundreds of Wandering Albatross nests), and Prinsloomeer (a large lake near King Penguin Bay). After Prinsloomeer, you need to be careful. The last section between Prinsloomeer and Repetto's hut, is the land of 'mires', where one can get swallowed up to waist level (or worse), if you aren't vigilant enough. Rarely, if you managed to go through the highlands for work, you actually do not encounter a single mire, which is quite a blessing – with my vegetation work, I occasionally get to experience this treat. Repetto's hut is situated at the foot of Repetto's Hill and basically in line with Storm Petrel Bay.



Repetto's hut, as seen from the interior's side.

Repetto's to Cape Davis

Heading west, the walk between Repetto's and Cape Davis, is short and pleasant. It takes between one and one and a half hours, occasionally even less. The main landmark visible during this stretch, is 'Boot Rock'. A spectacular black lava outcrop off the north coast of the island. Cape Davis field hut is situated at the foot of Lou-se-Kop. This hut is occasionally packed by field researchers, when the *sealers* have their pup-weighs at Sealer's Beach, about 20 minutes' walk from the hut. Pup-weighing is always loaded with excitement.



Bootrock and Bomkop, as seen from Cape Davis hut.

Cape Davis to Mixed Pickle

Most field researchers will argue whether the *Azorella*-walk (the stretch between Cape Davis and Mixed Pickle) or the Karookop-walk (the stretch between Kildalkey hut and Watertunnel hut), is the worst. Personally, the Azo-route takes the prize. I can't really fathom exactly why? You know how long this hike will take you, and by this time of the expedition, you also know exactly what awaits you during these three to four cruel hours (it's a slip-and-slide mess, through big valleys and over small hills. It is filled with unsure footing and the potential to seriously lose your humour – you have been warned!). At least, when you take the typical route, you know the precise number of hours you'll have to keep your composure for, but for Birder Lucy, she also needs to go through Devil's Footprint frequently (when you walk more coastal between Tweeling Kop and Azorella Kop), which adds four to five hours to the typical walking time. I have a lot of respect for her - doing that at least once a month, takes a lot of courage!

As you leave the Cape Davis hut, you feel a bit melancholic but you push towards the southwest, towards Rondekop or Bomkop, nonetheless. *C'est la vie! Such is life.* The walk towards Rondekop is still manageable, it's only after this hill that your mood really hits rock bottom and the miserable hours of slippery vegetation starts. Two hours of this uncertainty and the mood lightens again. Welcome to Azorella Kop (not that you often have the privilege to see the top of this hill – it is usually clouded in thick mist). You can usually already see the speck of Mixed Pickle hut from this point, although it is just teasing you. You still have at least an hour of walking left (*Surprise!*). After Azorella Kop, the slopes ease a substantial amount and as long as you 'just keep walking', you will reach Mixed Pickle hut, composed and ready for whatever lies ahead next on your list of 'things-to-do'. Occasionally, as I have mentioned, you lose your humour somewhere between the slippery slopes and the misty 'soft-subtle-soaker'; after which you just need to spend at least half an hour inside the hut with the heater on, to regain your composure... That's MixPix for you. Mixed Pickle Cove and Triegaardt Bay are both worth a visit when you spend time at Mixed Pickle. The *sealers* and *birders* can tell you interesting tales about these areas, as they often spend time here. As an ecologist/botanist, my work takes me to a range of places but more often towards the interior, than to the coast.

At night, the shrill sounds of fur seals and White-chinned Petrels, 'sing' you to sleep.



Mixed Pickle hut.

Mixed Pickle to Swartkops

The inland route between Mixed Pickle and Swartkops hut, is my favourite section by far. It is short and sweet, heading towards the south and about two hours on a slow day. If you are only heading to Swartkops, you can take your time and just take in every detail of the surrounding area. This region is absolutely spectacular, there is a ridge of gargantuan black cliffs, all the way past Kampkoppie and towards Kaalkoppie. Near Kampkoppie hill, the most recent lava flows are still visible and Kaalkoppie is something ‘out of this world’. It solely consists of black lava ash and currently, hundreds of Macaroni penguins have made this area their home for the breeding season. After Kaalkoppie, an inviting plain of *Cotula*-fields awaits you. This coastal vegetation, dominated by *Cotula plumosa* (nowadays known as *Leptinella plumosa*), gives off a sweet honey-like smell and vaguely resembles carrot leaves; and when you walk on these thick layers of *Cotula*, the stems *crunch* underneath your boots, or at least that’s what it sounds like. These plains are also dotted with the new Wandering Albatross arrivals, as well as the few remaining juveniles (the majority of these Wandering Albatross juveniles have now fledged and their absence are definitely felt). They are the visible sign of change and that our time on this superb island is slowly running out. The circle of life continues... Underneath the bright-green vegetation of these *Cotula* plains, less conspicuous feathered inhabitants also make their existence. Thousands of burrows from all the burrowing bird species can also be found in this region.



Cotula plumosa

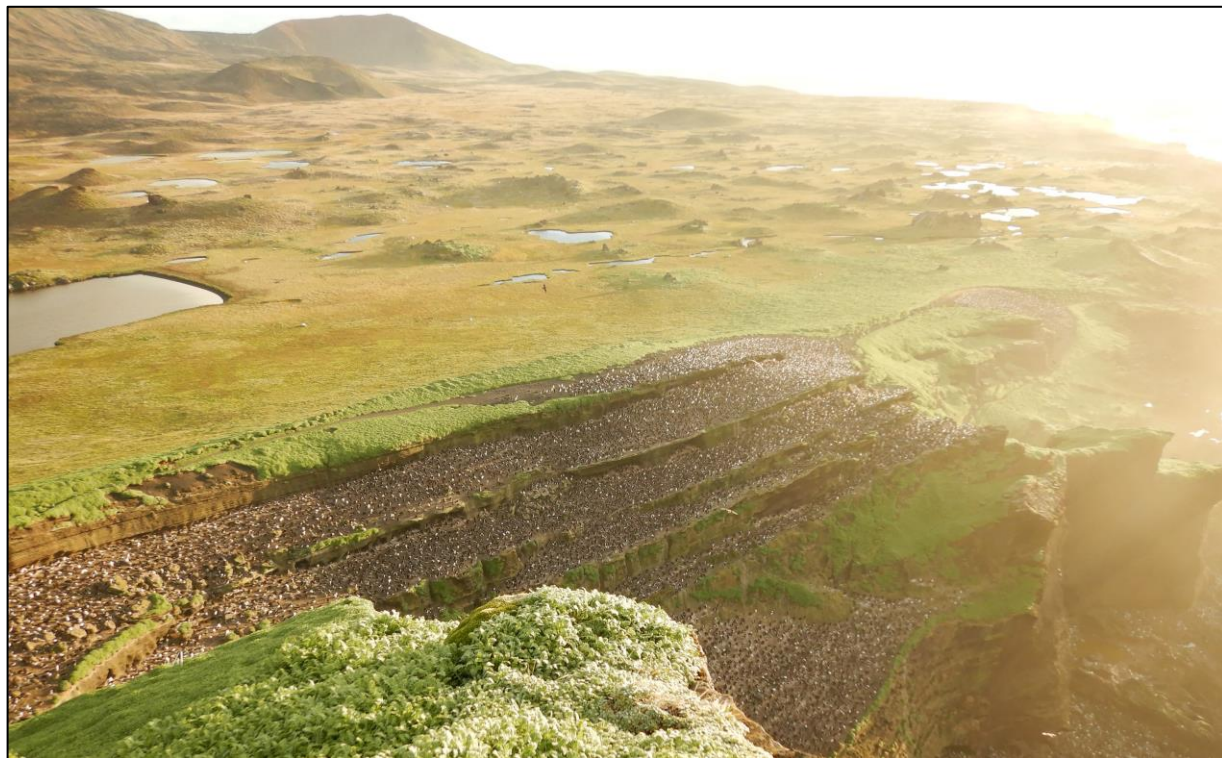


Macaroni Penguins

Swartkops field hut is probably my favourite field hut; not because of the hut itself but definitely due to the location thereof. This area, between us field researchers, is known as the ‘Chinese tea garden’, due to its many lakes of varying sizes. When the sun falls upon these lakes at just the right angle, at dusk, the reflections are absolutely spectacular to behold. I’ve never seen anything like it!

Swartkops is also known for the Amphitheatre. The largest region on the island that houses Macaroni penguins. Thousands and thousands of Macaroni penguins are symmetrically placed on multiple terrasses, near Swartkop Point (Birder Lucy describes their perfect spacing as if they have magnetic forces between them, causing all of them to space themselves at exact distances from each other). The Amphitheatre is a dynamic environment, with Brown Skuas and Giant Petrels continuously circling or greedily waiting on the perimeter of the colony – preying on penguin eggs or chicks. On this island, it’s constantly a battle for life or death. The sound the colony emits, as heard from Swartkops hut, resembles the sound of a large bee hive.

Additionally, other fascinating scenes across the island at the moment, include the Brown skua chicks as well as the fast-growing giant petrel chicks that can be found around every nook and cranny.



The Amphitheatre at Swartkops.

Swartkops to Rooks

Now that we are half way around the island, it is time to head home again, we'll be heading southeast. The next section, from Swartkops to Rooks, is a fairly enjoyable walk (although some of the other field researchers might disagree on this point, especially if they have to work coastal). This section, walking mostly inland, can take up to four hours but the weather is also a deciding factor for the level of joy that this stretch has to offer. If you have had to walk this section mostly in bad weather, you can't find yourself to enjoy this stretch too much. However, this region fascinates me, as it includes the 'toffee lava' section, that houses large numbers of Southern Rockhopper Penguins during this time of the year. Every ditch, cavity or depression in this crumbled black lava region, contains some feathered friends, with their funny-looking yellow feather tufts above their eyes (strongly resembling the Einstein-look). The last black lava section, after the 'toffee lava' region but before you arrive at Rooks, always have some Antarctic or Sub-Antarctic

terns within it; who occasionally dive-bomb you unexpectedly, should you by accident enter their nesting site.

Rooks hut's scenery is lovely. It is one of the oldest huts on the island, with the same layout as the Katedraal hut. The large coastal caves and the stunning views towards Rooks Peninsula are definitely highlights.



Brown Skua chick (left). Sooty Albatross on its nest, near Rooks hut (right).



Southern Giant Petrel and chick (left). The view towards Rooks Peninsula, as seen from the Rooks area (right).



Passing through the Toffee lava with Birder Lucy.

Rooks to Grey-headed

Another short and agreeable walk, is the route taking you from Rooks to Grey-headed hut. Heading east, it takes between an hour to an hour and a half, unless your work takes you to Rooks Peninsula. *Rooks Pen* (as it is often referred to), is a beautiful region to visit, it's just the climb up that extremely steep slope to get back to the top of the ridge again, that makes you contemplate your life decisions.

Grey-headed is a beauty in itself. The newest hut, a striking orange, situated in the Santa Rosa Valley, is sheltered from most weather phenomena from the west by Grey-headed Ridge. A Ridge filled with scattered colonies of Grey-headed Albatross. A magnificent sight to witness! Towards the east, the Santa Rosa Valley stretches towards Gazella Plains, close to where Watertunnel hut is situated. Good Hope Bay, where *sealers* spend a lot of time due to their work, also has remains from 'Sealers' from the olden days – a large rock shelter near the coast. I always feel that for a split second, I've had a glimpse of the past, when I visit these almost sacred places. I wonder what it might have been like many decades ago... just you and the elements and no certainty as to when the ship will return to collect you from this desolate place?



Lenticular clouds, typically found on the stretch between Rooks and Grey-headed.

On a clear day, Mascarin Peak (the highest peak on the island, at 1231 m above sea level), can be seen from Grey-headed hut. This hut also has a few more luxuries than the other huts, with more 'head-space' for the top-bunk occupants as well as extra lighting (not the traditional candles).



Grey-headed hut.



Grey-headed Ridge, filled with hundreds of Grey-headed Albatross.

Grey-headed to Watertunnel

Still heading east, the walk between Grey-headed and Watertunnel, is probably the shortest walk between huts. The inland route takes an hour or less and the scenery is beautiful, you walk through the Santa Rosa Valley, on a well-trodden path (unless heavy snow fell overnight, which makes this path slightly more challenging), and then past Gazella Plains, after which you climb the Devil's Staircase to reach your destination, situated next to the Watertunnel stream. Watertunnel field hut has a beautiful view towards the coast but when you shift your view towards the highlands, you spot the monstrous mountain that awaits you the following day. About 1.5 km towards the interior, an interesting water feature can also be found, should you be in the mood for a detour after a long day.



Gazella Plains



Old sign-post from the years of the Cat-hunters, situated in the Santa Rosa Valley.



As you approach Karookop (should it be a clear day), you can get a glimpse of Crawford Bay.

Watertunnel to Kildalkey

By this time, you might be having dreams of getting to base but that will require hours and hours of walking, and first we have to take a detour to Kildalkey hut before base becomes a reality. This walk from Watertunnel to Kildalkey hut, is not for the weak-minded. It can take up to four hours and we will be heading northeast. The first treacherous climb, is towards Rooi Kasteel; but then follows the true challenge. As I've previously mentioned, the Karookop stretch can be either a blessing or a curse. Some field researchers see this Karookop section as their worst nemesis on this sub-Antarctic Island. The feeling of dislike generally increases with the wind speed. In gale force winds, this region becomes a race with death... as the positioning of Karookop and Snok hill, creates a wind funnel that forces you to the ground repeatedly, at a disheartening rate. *Enough said.* After Karookop, you aim for Johnny's Hill, after which you find your way towards Kildalkey hut. There isn't always a clear path visible. Kildalkey Bay, near the hut, at the foot of Green Hill, houses thousands of King Penguins. This coastal area is always a treat to see. Again, the *birders* and *sealers* spend many hours in these coastal regions each month.



Kildalkey hut.

Kildalkey to Base

The home-stretch... we are heading north and it will take us between two to three hours. At this stage, you can already hear the shower calling your name. I usually walk inland during this last stretch and it takes me past Mesrug hill, then over the Soft Plume River, over the Kerguelen Rise and finally over Stony Ridge, near the foot of Fred's Hill. On a clear day, base is already visible in the distance, from Stony Ridge but miraculously, still an hour and a half away. This final hike feels like an eternity and takes you past Tom, Dick and Harry hills; and then through Nellie's Humps, after which you finally arrive at base.

'Welcome back to base. You survived!'

Water and electricity supply at the huts...

We use candles for lighting in most of the huts.



The hut-life.

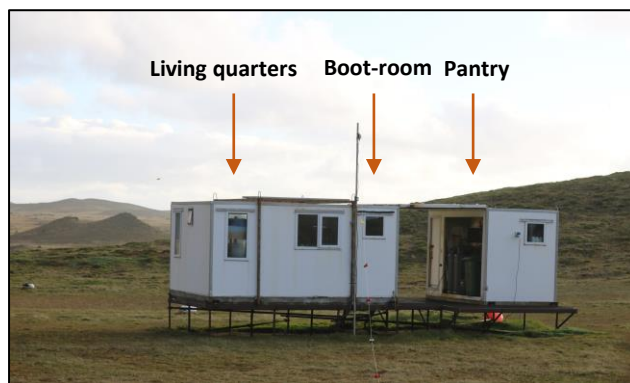
Water is generally collected from your nearest river, except at Swartkops, where we collect water from the closest lake to the hut. Katedraal is entirely a different story when it comes to water...

The 'typical' layout of a field hut

The general layout of a field hut, consists of two compartments: a separate pantry room and then the living quarters section. The gas cylinders are stored outside under a small roof section that connects the pantry compartment to the main living area. This section connecting the pantry to the living area, also share a section of catwalk.

The living quarters consist of a boot or drying room and then next to it, a 2-in-1 kitchen and sleeping area. Each hut has two bunk beds but in dire situations (ask take-over Watertunnel hut restock team from 2022), can also house up to eight occupants.

The huts at Katedraal and Rooks, are the oldest huts. They slightly differ from all the newest huts as they do not have a specific boot or drying room, which makes drying your clothing a bit tricky because inherently you also create a sauna for yourself when you try to dry your clothes.



Hut layout (Swartkops).

I hope you enjoyed this trip around the island with me!



m79ers

Weather

for the brave

- by Sikhwari Thendo, Tshitavhe Tanganedzani and Faltein Siphesihle

SAWS Weather Stats: October-November 2022

		OCTOBER	NOVEMBER
TEMPERATURE	MIN	-0.2 °C	-1.9 °C
	MAX	12.8 °C	16.6 °C
	AVERAGE	5.8 °C	6.5 °C
	AVERAGE LOW	2.6 °C	2.4 °C
	AVERAGE HIGH	8.8 °C	9.8 °C
PRESSURE	MIN	987.4 hPa	986.6 hPa
	MAX	1027.2 hPa	1027.4 hPa
	AVERAGE	1004.9 hPa	1009.0 hPa
RAIN	TOTAL	183.6 mm	72.2 mm
	DAYS WITH RAIN	26 days	18 days
	DAYS WITH RAIN > 1mm	18 days	13 days
	MAX IN 24 HOURS	44 mm	13.4 mm
WIND	MAX	110.16 km/h	110.16 km/h
	DIRECTION	Southwest	Northwest
SUNSHINE	TOTAL	122.4 hours	140.6 hours
HUMIDITY	AVERAGE	78 %	76 %



South African
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