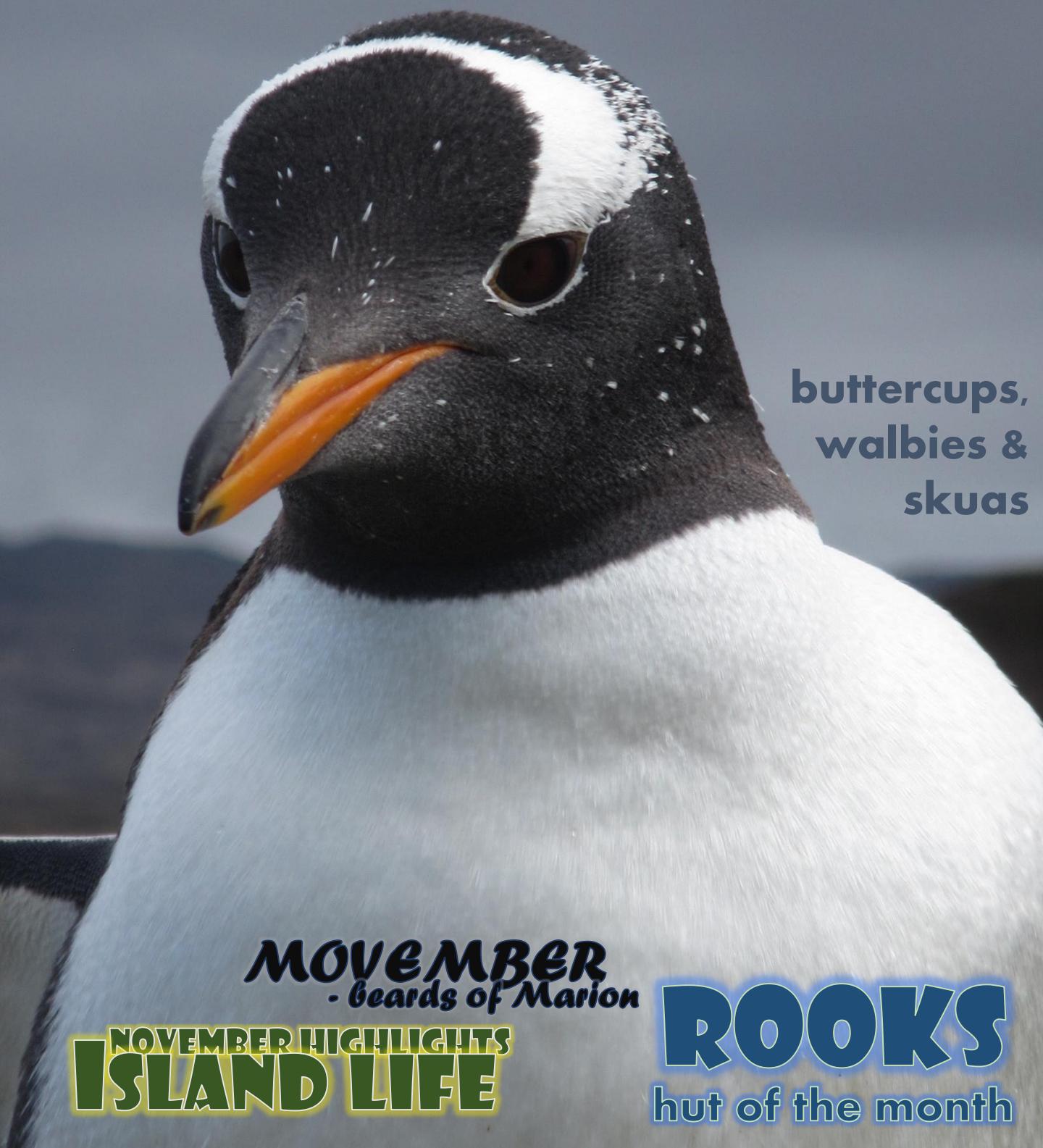


The Wanderer

NOVEMBER 2018



buttercups,
walbies &
skuas

MOVEMBER
- Beards of Marion

NOVEMBER HIGHLIGHTS
ISLAND LIFE

ROOKS
hut of the month

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COVER IMAGE:
Gentoo penguin
(Pygoscelis papua)
- Elsa van Ginkel -



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



letter from the editors



November was a month packed with excitement. Everyone was busier than ever. The field researchers ensured that the field huts were fully booked at all times, we celebrated three Marionites' birthdays, sampled multiple vegetation plots, visited wind stations, weighed elephant seal pups and Gentoo penguins and enjoyed a vast array of opportunistic killer whale sightings. The base personnel are working exceptionally hard to keep the base intact and as the festive season approaches, we are taking in every moment of island beauty...

Elsa van Ginkel
Editor

In a few years time we will cherish all these memories, without a doubt. Many thanks goes out to our loved ones out there – you guys are keeping us strong here on Marion Island. To all our readers - Enjoy the November edition!

2019 is only a few short weeks away! It is hard to believe how quickly the month of November flew past. Despite it's uncanny brevity, this month was packed with equal parts hard work and great fun. The ongoing breeding season kept the fieldworkers out of base and, back at a much quieter base, the rest of the team has been working hard to keep the ball rolling. We have had plenty of parties, movie nights, games, great meals, etc., which have kept us all happy. The summer weather has been warmer and sunnier albeit just as unpredictable and prone to rough spells every so often.



The M75 team has been in high spirits as we enter the festive season but we are missing our loved ones particularly in this time. Thank you all for your support and prayers! Enjoy our highlights from this past month!

James Burns
Co-Editor

Interview with...

THE SPACE MAN

aka SANSA Space Weather Engineer

- Liezl Pretorius



Vhuli is one of those people who you rarely see without a big smile on his face and there is always a joke on his lips, making him a well-loved team member and great fun to be around! He works strange hours, works hard, loves to party but also enjoys the solitude when heading out to do his fieldwork...all-in-all a great Marionite at heart! Keep up the good work Vhuli!!

Background

My name is Vhulani (Vhuli) Manukha, I was born in Limpopo, Sibasa. I completed matric at Mbilwi Secondary School. I completed a BSc (Hons) Degree in Electronic Engineering at UKZN and I also have a BTech Degree in Electrical Engineering. I am currently a 2nd year MSc student in Electrical Engineering.

Work description

SANSA deployed a number of different measurement systems that capture data (on the Island). This data is used by researchers around the world. I can summarise my role as the Space Weather Engineer in 3 points:

1. I maintain all measurement systems so that the best data is captured, with as few interruptions as possible. If a system is damaged, it is my sole responsibility to repair it and also ensure that all downtimes are as short as possible.
2. On a daily basis, I review data and record events of interest as well as work that has been completed.
3. It is my duty to improve and develop the systems further and also assist SANSA as far as possible in other project goals.

Best part of your job...

I am an evening person and in this job, normal working hours do not apply. While systems are operating smoothly, I have time to work on my scientific project (my MSc) and I also prefer to dedicate my night time to developing the SANSA systems further.

What do you miss most?

I miss spending time with my family in general and my daughter in particular. She is the light of my life



Favourites...

Book: Money like Water, by James Makhubela

Movie: The Pursuit of Happiness, starring Will and Jaden Smith

Food: Pap, braai meat and chakalaka

Bird: Albatross chicks, these seabirds can survive any type of bad weather conditions (be it rainy, snowy, windy-gusting wind, sunny or freezing cold temperatures). It is amazing how they just never freeze to death even when all the water supply pipes on the island are frozen. They just sit there - in one spot (nest) and wait for the parents to bring food.

Left. Vhuli's job is very technical and requires him to be on top of his game at all times!

Hardest day on the island so far...

During one of my visits to the Cosmic site, the weather suddenly changed and it became freezing cold. I was there for approximately 8 hours. It was so cold that I started to feel the pins-and-needles sensation on my finger tips.

Describe the island's weather in 3 words...

It is unpredictable!

What do you like most about base?

The building is great and very well equipped. Indoors feels like a hotel, such that at times I forget that I am on Marion Island.

Why do you like about being in the field?

It's so refreshing... but it's hard to put it in words. It's just that great feeling that comes with being out there.

Do you like the huts?

I have not yet visited any hut.

Would you have packed differently with the knowledge you have now?

"When you look good, you feel good and when you feel good, you will then enjoy your free time". Bring your best clothes, you will need them!

Any advice for future Marionites?

Are you a "business-minded" person? Buy lots of drinks, even if you do not drink, you will understand when you get here.



Above. During the annual boot toss tournament, Vhuli displayed some serious skills!



Above. A lot of maintenance goes into the smooth running of all the different systems



Above. You will almost never see Vhuli without one of his characteristic smiles!

Keep up the good work Vhuli...and keep smiling, we love it!!

November 2018

Interview with...

The Inyangas



Bongi(BK) Elsa(EG) Dineo(DM) Marike(ML)

These four formidable women make up the Botany team; Bongi and Marike focus more on species distribution, while Elsa and Dineo are studying the effect of wind patterns on plant distribution. They are hard-working, determined, strong and independent, SUPER fun-loving, always with a softness of heart and beautiful smiles. Just being around each one of them makes your day better! They've made themselves irreplaceable in our team. Keep up the good work Inyangas, we love you!

Job description

BK – I'm a field research assistant, working on the distribution of vegetation on the island.

EG – I'm actually a Botanist, also known as an 'Inyanga', which means 'herbalist' in Zulu but Dineo and I are commonly known as 'Winders'. We monitor 17 wind stations located across the island and we also conduct vegetation transects from the coast towards the interior.

DM – Collecting wind data from wind stations and vegetation data around the island.

ML – Gathering vegetation data under the project banner of "Invasions of the Sub-Antarctic." At the moment this involves estimating percentage vegetation in 3x3m plots scattered near-randomly across the island. Lots of hiking and exploration!

Best part of your job

BK – I get to explore all the areas on the island and never at the same place twice!

EG – Feeling so close to nature and exploring this island while at work...and definitely finding solutions every time Marion throws a challenge at your electronics. Expect the unexpected!

DM – Just being on this island!

ML – Hiking hiking hiking! Often to the strangest places...





Above. Marieke busy working on one of her vegetation plots



Above. Bongi enjoys helping other programmes with some of their work when her schedule allows.

What do you miss from back home?

BK – Wearing dresses and being pretty.

EG – The smiles of all my loved ones and fresh fruit... definitely apples! What I miss most from a botanist perspective – is colourful flowers and the dancing shadows of trees in a light summer breeze.

DM – Spending time with family and going to church with my friends...and shopping.

ML – This IS home :P. Okay okay... my mom, brothers, friends, herpetofauna and insect calls. Oh, and sushi!

Favourites...1) book, 2) movie, 3) food and 4) animal on the island

BK – 1) ‘Angels and demons’ by Dan Brown. 2) ‘Sin City’. 3) Braai meat with JB’s rolls. 4) Rockies (Rockhopper penguins) because they look cool climbing stuff and Light-mantled Sooties because they are cute.

EG – 1) ‘Pride and Prejudice’. 2) ‘Far from the Madding Crowd’. 3) Hut burgers! 4) Antarctic Skua (*Stercorarius antarcticus*) because they seem proud and fearless – when you happen to stumble upon their nest, they certainly make their presence known :)

DM – 1) The Bible. 2) I don’t have one. 3) Samp and beans. 4) King penguins, they are the prettiest of the penguins.

ML – 1) ‘Name of the Wind’ and ‘Edward Wilson of the Antarctic’. 2) “The Guardian” (all-round awesomeness); “What’s Your Number” (silliness!); and “Lion King 1” (classic!). 3) That pilchard/sardine/fishy lunch dish. No jokes, I really like it a lot! And samp. Yumz. Oh and the brown stew. And whenever BabJabs or Mike T make dessert of any kind! Divine! 4) Just one??! The shags are phenomenally beautiful (“shagarooskis!”). Wait, so are the Tropicalis bulls. And the King penguins are just so goofy you got to love them. Man.. and killer whales because they’re friggen majestic.

Hardest day on the island so far...

BK – The 2nd day of my first round island, climbing over Karookop.

EG – Date: 3 June 2018... the day that Dineo and I almost died. We were still new at being true winders and thus the wind taught us a lesson! We basically crawled from Watertunnel to Kildalkey and in the process we were thrown to the ground - multiple times! ... And I fell on my walking stick causing it to snap in half.

DM – My first walk to Katedraal during takeover. It wasn’t just the worst day on the island, it was the worst day of my life. I thought I was going to die. It was misty, rainy and extremely windy. I was flying around like a kite.

ML – That time I got food poisoning and Mali and Liezl watched over me while I slept in the clinic bathroom (see Mali’s interview in the June Wanderer :P)

Describe Marion's weather in 3 words...

BK – Cold, windy, windy

EG – Entertaining, nervewrecking, challenging

DM – Unpredictable, wild and crazy

ML – Wind. Much. Wind.



Elsa (left) and Dineo (right) checking up on their wind stations around the island.



What do you like most about base?

BK – Watching “Survivor” in the movie room.

EG – All the friendly faces of my M75 family - everytime I get back from a Round Island!

DM – Watching “Survivor” with the team.

ML – The team! Umuntu ngumuntu ngabantu!



What do you like most about being in the field?

BK – Exploring.

EG – The solitude and the feeling of COMPLETE ISOLATION – it's just me, my thoughts and the beauty of Marion!

DM – Exploring and improving my fitness

ML – EVERYTHING! IT'S PARADISE!



Favourite hut and why...

BK – They are all kinda the same for me.

EG – Swartkops... Firstly, the brilliant sunsets that give life to the surrounding lakes during the golden hour and secondly because of the Macaroni Penguin-packed amphitheatre.

DM – Swartkops, beautiful sunsets and Amphitheatre.

ML – Mixed Pickle: the abundance of LIFE is just so evident there.

Above. Bongi and Marike often hike long distances to their vegetation sites - with *all* their equipment.

How would you have packed differently with your knowledge of island life now?

BK – I would have brought more costumes for our themed parties.

EG – I would have brought more of the small things that make you feel at home – that's actually what I miss most. And...More of my favourite clothes!

DM – Brought more comfort items.

ML – Another pair of “pantoffels” perhaps? And less stuff (other stuff..., not pantoffels!).

Advice for future Marionites...



“Don’t take yourself too seriously and forget to have fun. 13 months disappear too quickly...”
– Bongi



“Expect the unexpected and embrace every moment!”
– Dineo



“Attitude! It’s all about your attitude. If you’re not mentally strong, the island might prove to be challenging. Come with no expectations, that’s when you have the most fun, because nothing can disappoint you .”
- Elsa



“Bring extra “pantoffels” (they break), sweatpants (they tear), and things that make you laugh (comedies, books, memes, etc.) for base. Don’t plan on having decent internet. For fieldwork: bring a good attitude and harness that excitement because it’s going to be awesome (a.k.a. bring “gees”)”
- Marike



ROOKS...

Hut Stop # 5

- Elsa van Ginkel

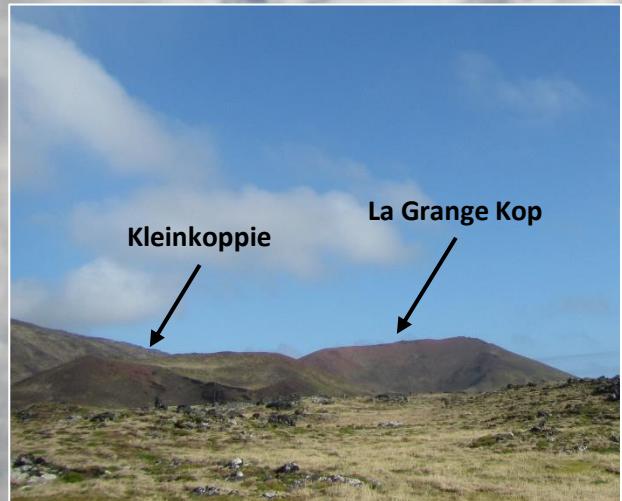
Hut of the month: Rooks

Route to Rooks

The route from Swartkops can be one of two things... it can either be *a breeze* or it can be the worst *miring* experience of your life. The decision is most definitely yours. If you happened to choose the latter option, it was probably because it was your first Round Island and you didn't know any better. The former and more appealing option is the coastal route. You won't get mired – not even once... Needless to say but this is the route that we will take. As the journey kicks off, you can see Skuinskop to the northwest of the hut and the Amphitheatre towering on the southwest. It is worth every second to check in with all the Macci's (Macaroni Penguins) at the Amphitheatre.

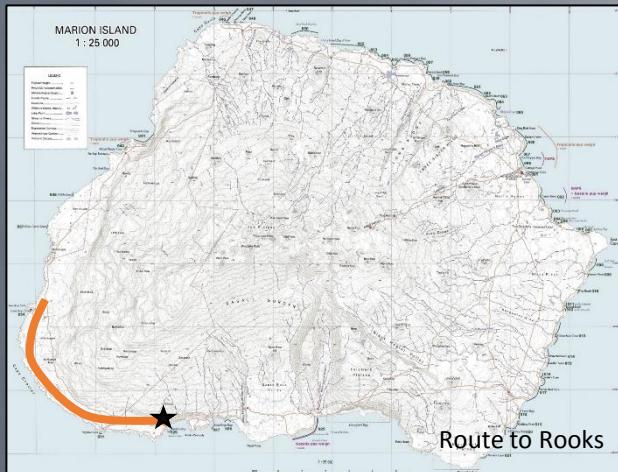


The view from Amphitheatre

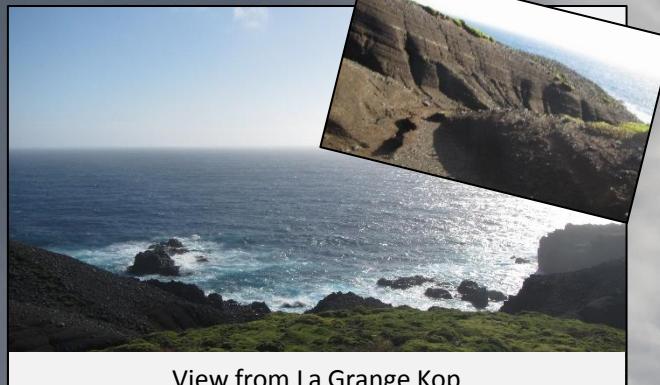


As we proceed all along the coastline, walking over long stretches of *Cotula plumosa* and *Crassula moschata*, you'll pass Kleinkoppie on your left and then head towards La Grange Kop, which you can either pass inland or more coastally. If you do feel adventurous and the mist is not encroaching your visibility, you could head more inland to summit Miskop and Verdwalkop but we are going to stick to the coast for now.

Rooks: Hut of the Month:



The southwest-facing slope of La Grange Kop consists of a fine black lava which then gradually transforms into the black lava rubble that leads to the well-known *toffee lava* - where you'll be enchanted by the little Southern Rockhopper Penguins found everywhere in the rock crevices.



View from La Grange Kop



Southern Rockhopper Penguin in toffee lava

After this fascinating section of Marion Island, it is not too long before you reach the Rooks Hut. Just before you reach your destination, another exciting bird species that you might spot, is the Kerguelen Tern which will definitely make the final 500m worth the while. You'll only see the hut when you are about 20m away from it and it tends to catch you by surprise if it's the first time you stumble upon this hut.

Welcome to Rooks!



Kerguelen Tern (*Sterna virgata*)

The Hut

Rooks is the most neglected hut when it comes to visitors. The hut is situated right next to a ridge, which is painted with Sooty (Sooty albatross) nests during breeding season and the ominous calls they produce will keep you on your toes. Rooks and Katedraal have the same hut design which has only one living area as compared to all the other huts which consists of the living area and a boot room.



The Rooks Hut

Rooks: Hut of the Month:



Sooty Albatross (*Phoebetria fusca*)



Rooks Cave

Water

The river is located south of the hut and there is always some kind of pool from which you can collect drinking water.



Hut Recipe

Sweet Corn Fritters

Ingredients:

- 1 tin sweetcorn
- pinch of salt
- 2 cups self-rising flour
- 1 tsp vinegar

Methods:

1. Mix all ingredients together and add some milk to the dough, if necessary.
2. Brown both sides over low heat (The fritters are ready when you tap them and a hollow sound is produced).

Sights to see!

- Rooks Cave
- Rooks Bay
- Rooks Peninsula



Rooks Bay

Work in the area:

There is no specific work around the hut but the Sealers often visit Rooks Peninsula for seal work, and the O & C birders also do monthly counts all along the coast...



MISSION MASCARIN

Summiting the highest peak

- Marike Louw

"I'm not sure about this anymore, Elsa."

The only visual certainties in the world at that moment were each other and the two-metre area of ground surrounding us; everything else was lost in a thick white haze. Our GPS assured us that we were amongst the hills at the centre of the island, but the last visible feature we had seen that morning, Katedraal hut, was swallowed up moments after we stepped away from it.

We walked on. Blindly. Heavy-hearted at the thought of giving up on our mission.



Marike and Elsa set out for their adventure early in the morning from Katedraal Hut.

Our mission?

The highest peak on the island. Mascarin.

Trudge, trudge, trudge. Mist, mist, mist. Beneath our boots, black volcanic rock morphed into red scoria rock. We felt the ground slope upwards. Trudge, trudge, trudge, mist, mist, mist, and - a sliver of blue pierced the mist above us like a dagger. A few more steps and we surfaced from an ethereal ocean of white onto a red island that marked the top of a hill. It was Bald Peak, and we were startled by the dizzyingly vast open sky. Warm sunshine kissed our faces with life-giving warmth.

And there stretched a line of hills! And there was Mascarin among them!

We descended into the mist again, but we had seen what we needed to see, and we had been injected with vigour.



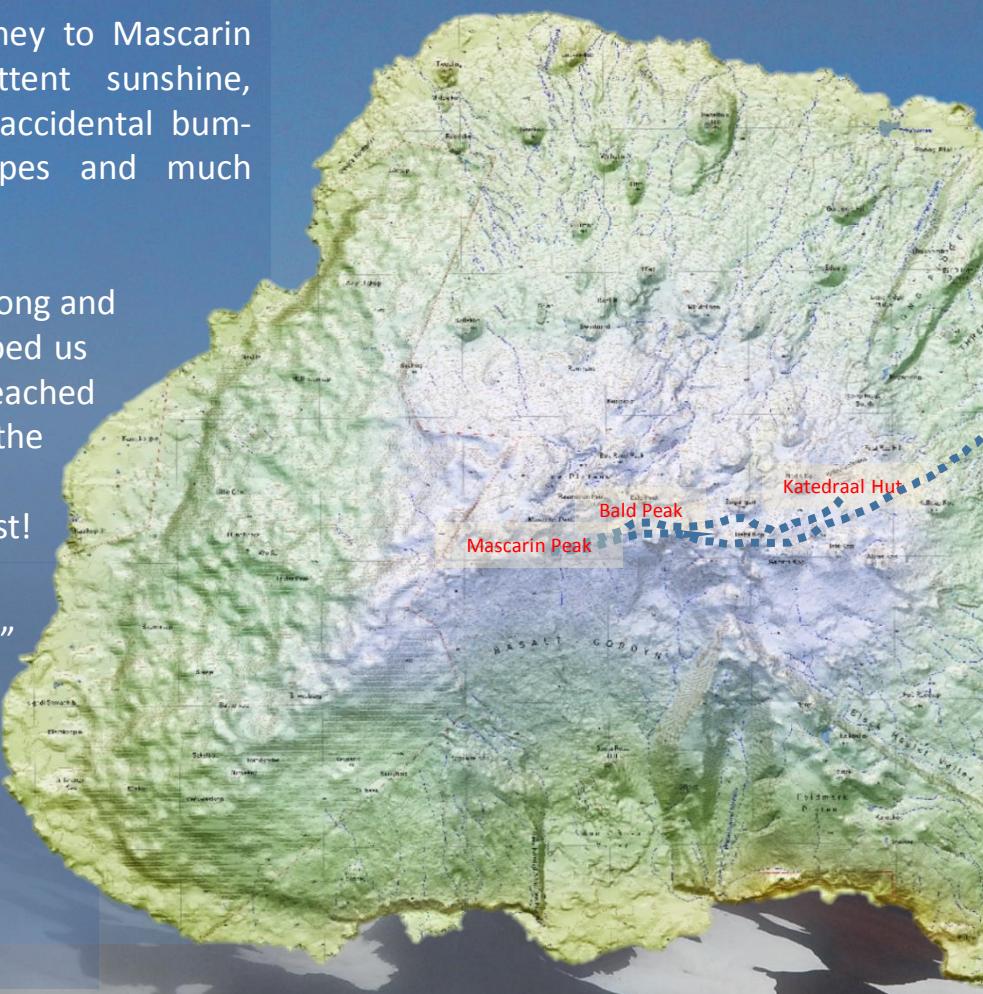
On Bald Peak! Finally we see the light!

The remainder of our journey to Mascarin was paved with intermittent sunshine, mesmerizingly shiny rocks, accidental bumble-slides down snow-ice slopes and much merriment.

As we tackled a particularly long and steep slope, the mist enveloped us thickly again but we finally reached a pile of stones that marked the tippy top of this hill and the end of the climb. And the mist!

"This is..." Elsa checked the GPS "...oh... this is Mascarin!" We stared at each other in amazement and let out whoops of joy. We were on top of the world!

Wow! We gawked and admired and oo'd and aa'd.



We could even see Boot Rock jutting impressively out from the sea to the north and we were amazed at how close this familiar feature seemed from the top of the world! And we were thrilled with the unusual view of our neighbouring island too.

Mission accomplished. A good day and one to be readily repeated for further exploration!

PICK OF PICS

“Hey there, little one...”



Brown Skua chick
(Stercorarius antarcticus)

Charlotte Heijnis

“No Entry!”



Brown Skuas
(Stercorarius antarcticus)

Elsa van Ginkel

'A mini Giant...'



Liezl Pretorius

Northern Giant Petrel chick
(Macronectes halli)

Family Outing



Elsa van Ginkel

Wandering Albatross
(Diomedea exulans)

ROCKSTAR...



**Southern
Rockhopper
Penguin**
*(Eudyptes
chrysocome)*

Respect!



Elephant seal Bull
(Mirounga leonina)

Experience the Natives

species of the month...

...from *King of the Castle...*

to

Wanderer of the South

- in a few short months -

- Monica Leitner

You don't have to be a bird fanatic to appreciate the magnificence of a Wandering albatross. Fully grown adults have the longest wing span of any bird (approximately 3 m) and live for over 50 years. Seeing these beauties soar across the Southern Ocean with minimal effort, sometimes for hours on end without a single wing beat, is a sight that never ceases to amaze.



Albatross chick on his muddy nest - at Goney Plain monitoring colony

The progress and antics of the chicks growing up around base (some being lovingly named of course, e.g. *Sir Fluffsalot*) have often been the topic of discussion and provided much entertainment over a cup of coffee as we watch them from the dining hall. They have braved snow, wind and rain (and there has been a lot of that...) from the safety of their mud castle nests and often had entertaining chats with team members passing by in the field.



Parent arrived back to feed chick

We have been so fortunate here on Marion - not only to see these albatrosses regularly, but also witness the wonderful transformation of albatross chicks from little white fluff balls (the size of a volleyball) to the fully grown, sleek black beauties eagerly practicing to take to the skies – and this in a time period of seven months. Few people will ever get to see and follow this process so intimately and it is something that many of us hold dear.

Experience the Natives



Now they leave their nests and explore their surroundings, sometimes visiting neighbouring chicks or ambling up a hill to stretch their wings. A favourite sight is to watch them desperately flapping and hopping, followed by ultimate shock and panic when they actually manage to take off for a brief period of time. Those with more experience, manage to hover above the ground for a few minutes at a time and receive much cheering from onlookers.



Juvenile vs. Adult

It is remarkable to think that in a few years' time, our M75 feathered friends will lose their dark feathers to become increasingly white with age, meet their life partners and return to start their own family to share with a future Marion overwintering team.



Above and Below: Interactions between male and female Wandering albatross (*Diomedea exulans*)



We will certainly miss our little guys as they take to the skies in the coming weeks, but wish them well on their life journey across the ocean where they spend the majority of their lives - to see sights and places we can only dream of. How special to share this short, but spectacular time with you all.

The Antarctic Buttercup

- Elsa van Ginkel



Ranunculus biternatus, also known as the Antarctic buttercup - a native species to Marion Island, is a small low-growing herb from the family *Ranunculaceae*. It has characteristic leaves - divided into three subdivided pointy lobes. The flowers are a bright yellow and they exude a strong scent and the fruits are green to bright red in colour. *R. biternatus* varies in height (2 - 10 cm) and is usually abundant along the coast, on the edges of lakes, within wet mires and in small numbers in other habitats.

This plant is widely distributed and can be found here on Marion Island, as well as Prince Edward Island, Crozet, Kerguelen, Heard, South Georgia, Macquarie, Amsterdam Island, the Falkland Islands and South America.

The Sub-Antarctic Skua

- Oyena "Oyster" Masiko -

Scientific name: *Stercorarius antarcticus (S. lönbergi)*

The Sub-Antarctic Skua (also known as the Brown Skua) is the heaviest species of the *Stercorariidae* family, which for some reason I always liken to Hawks...the Hawks of the Sub-Antarctic. Sub-Antarctic Skuas range as far north as the subtropics.

This thick-set bird is an opportunistic scavenger and predator, showing no sympathy to other seabirds, their eggs or their young. They do also feed on carrion, faeces and fish (often through kleptoparasitism – which refers to parasitism by theft). I once watched a Brown Skua swallow an entire prion and honestly, at that stage I could not decide whether these birds are the heroes or the villains in my story.

Watching them forage over penguin colonies is pretty insane though. You see them standing on the side-lines playing guard and ever-so-often they will hover above the nests and when the opportunity presents itself, drop to the ground and snatch the egg or chick in a split second.

Experience the Natives



At this very moment, they are incubating their eggs (which are ovoid and dark-green with irregular dark brown spots) but we should start seeing their chicks soon...



Brown Skua with Boot Rock in the background

They are estimated to reach sexual maturity around the age of 8 years, with their breeding season starting from late October. This is when they start returning to their breeding grounds. An important thing to note is that during this period, they are EXTREMELY territorial. Seriously, you could be walking an entire 10m away from their nest and they will “attack” you by flying straight for your head with their claws stretched out.



Territorial behaviour



Skuas next to a small pond

For interest: There is an interesting read I found on Skuas, a paper published in 2016 suggesting that Skuas can in fact recognize individual human beings (Lee, W.Y., Han, Y.D., Lee, S. *et al.* (2016) Antarctic Skuas recognize individual humans. *Anim Cogn* 19: 861).

MUS MUSCULUS...

MARION SCOURGE

At some point (or multiple points) in the early 1800s, some stowaway house mice arrived on Marion Island with sealers and survived. Surely not that bad... Nope, very, very bad!

House mice are breeding machines. On Marion, mice live 13+ months and breed predominantly from October to April or May after which there is a sharp decline in temperature and food availability. On average, females produce seven litters of 7.2 pups during the breeding season. The gestation period is 26 days and pups are weaned after some 21 days, after which females are ready to mate. New-born males reach sexual maturity at around two months and females at four.

- Charlotte Heijnis

Conservatively, this could mean that in one breeding season a single female could produce 29 (four litters) to 50 (seven litters) pups. If a third of these are female (there being more males than females on Marion throughout the year) and half of these are able to breed once, it is possible that in a single breeding season one adult female could produce a total of 60 to 110 pups.

With no predators, the original stowaways planted a seed which bloomed and has now blossomed into a full-fledged invasion some two hundred years later.



Mus musculus – Marion Scourge

In 1949, in an attempt to control the mouse population, five domestic cats were brought to live at the meteorological station. Twenty six years later, in 1975, the descended feral cat population grew to an estimated size of some 2,200 cats which were wreaking havoc on the smaller sea bird nesting populations rather than controlling the numbers of the rather more mobile and therefore difficult to catch mice.

Following introduction of feline pan leukopenia virus in 1977, the population was reduced to around 600 cats by 1982. After this - trapping, baiting and a directed hunting programme were implemented. In July 1991 the last cat was trapped and the Island was declared cat free. The slight mitigating effect (in 1978 only 16% of the cats' stomach contents contained 4.4% mice by volume) of the cats was effectively removed by the virus and the mouse invasion geared up.



A mouse path emphasized by the snow

Now, mice live everywhere, where there is some vegetation, no matter how sparse and well-defined burrow systems can clearly be seen. At the coast, they are found amongst boulders and pebbles right up to the water line and at altitude in the polar deserts they occur above 1,000 m – one dead mouse was even found on the top of Bald Peak at some 1,162m.

Actual mice densities depend on the vegetation type and vary seasonally with numbers peaking in late summer and declining substantially during the cold winter months.



Mouse path within *Blechnum penna-marina*

In 2006, it was estimated that maximum densities in April-May range from about 150 mice/ha up to about 300+ mice/ha in biotic beach areas home to large numbers of seals and sea birds. There is evidence that the peak summer densities are growing across all habitats and mice are being found at higher elevations than before.



Mouse burrow in *Cotula plumosa* – coastal vegetation

The effects of this invasion are both direct and indirect.

Directly, mice are omnivorous and Marion's mice feed on just about everything on offer, depending on seasonal availability.

Mus musculus - Marion Scourge

Their diet includes plant materials (especially seeds), invertebrates (including weevils, earthworms, moths and spiders), molluscs and more recently - flesh eaten off live sea bird chicks in nests. The decrease in invertebrate biomass over the last 40 years (figure 1) has been attributed to mice predation.

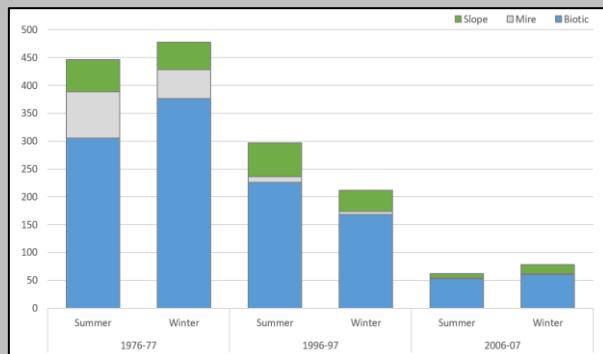


Figure 1: Visualization of the decrease in invertebrate biomass over the last 40 years.

This drop in insect numbers has produced knock-on effects on other species and ecosystem functioning as the growing mice population switched diets. Mice have switched prey species from the flightless moth which is just about extinct, to weevils despite a preference for larger insects. Their diets now contain relatively more plant materials and predation on nesting live albatross (Grey-headed and Sooty) and petrel chicks, has increased significantly.

Knock-on ecosystem effects include species-specific and landscape level effects. A good example of the former is that the Island's only land-bound sea bird, the Lesser Sheathbill (or Paddy), now forages mostly along the coast eating predominantly sea weed and intertidal organisms instead of foraging inland on invertebrates during the winter months.

It is thought that this dietary shift has lowered body weight and adversely affected clutch size leading to decreased population numbers. At a landscape level, mice burrow into the cushion plant, *Azorella selago* - a keystone species - damaging and sometimes completely destroying individual plants.



Mouse damage to a cushion plant, *Azorella selago*

In addition to being instrumental to peat formation on the Island, these slow-growing plants serve as nurse plants for many epiphytic species and shelter for many invertebrate species.

The mouse problem has been a hot topic of debate for the last fifteen years or so, with researchers generally agreeing that some sort of eradication programme is necessary. Currently, the feasibility of launching an island-wide aerial toxic pellet baiting project is under discussion.

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My favourite piece of equipment...



My favourite equipment is the GPS - a beacon of light when mist starts playing mind games and you start confusing hills on the way back home...

- Bongekile Kuhlase (#Botanist)

I love the steamer because it makes my cooking easy and it preserves the fibre, colour and flavour of vegetables. It also retains the vitamins and minerals and cleaning it is relatively easy.

- Jabulani Thabede (#Chef)



My stick (aka *My Precious*). This humble, absolutely essential piece of general field equipment has, thus far, saved me from being thrown across black lava in gale force winds, tripping over my own feet, slipping down cliffs, bitten by grumpy seals and by angry birds. It has helped me escape sucking mires and waist-deep snow drifts. *My Precious* was a wonderful gift. I adore my hard, trusty dependable length of wood.

- Charlotte Heijnis (#ECO)

... beards of Marion...

- James Burns

It's time for another update on the beards of Marion. Well past the halfway mark and the beards are looking majestic! It is near impossible to imagine what we'd look like without them and the photos from our days in Cape Town before we departed, are quite unrecognisable. It is fascinating to observe how the different beards are growing - the diverse range of sizes, shapes and colours are quite impressive. The size and shape factors go hand in hand, with the full bodied, thick variety contrasting nicely with the longer but less dense goatee style.

We have found that the colour of our beards, interestingly enough, are not necessarily the same as your hair colour. If one looks closely, it is not uncommon to find some ginger mixed into the fray with black and brown. The changes are probably more noticeable to you back home so, without further delay, here are the latest snaps of the magnificent *beards of Marion*:



Stephan Keys



Mike Taunyane



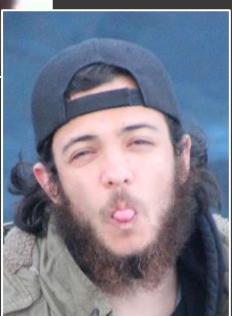
Sean Morar



James Burns



Mike Voysey



THE MONTH OF MOVEMBER!

I
Moustache
you
a
question...



Elsa van Ginkel



Liezl Pretorius



Taste of the Island life



Liezl Pretorius



Elsa van Ginkel



Marike Louw

Elsa van Ginkel



November 2018

28

NOVEMBER BIRTHDAYS



Vhuli's Halloween Party





Mike V's Hut Birthday Surprise and ...



... Trading night





Charlotte's Birthday



togas & tasty treats



ROCKING YOUR FIELD GEAR

...we're sexy and we know it...

...The Thermal Chronicles...

- Liezl Pretorius

Although we wear it underneath most of our other clothes, this little stretchy number forms a pivotal part of our daily dressing rituals. It is relatively tight-fitting (almost like a second skin) and thus provides an additional layer of warmth to any outfit, without too much added bulk ...which is great as you can then layer up with your other field clothes without feeling stuffy ... And because it is made of stretchy material it is generally very flexible and comfortable, allowing you to climb, bend, jump, stretch, catch a seal or bird, dig into a bird burrow, etc. ...basically get into any weird position that your job might require without exposing too much of your skin to the cold! It also dries relatively quickly; a bonus on Marion as you constantly get wet either from rain or sweating. All-in-all, it is a great and very handy piece of clothing!



James feeling strong in his thermals despite an icy wind blowing over base!

What's up with this Weather?

... wind speed and direction...

- James Burns

We are fast approaching the end of the year and, although we have been bombarded with stories from home of summer holidays and spectacular beach trips, we are still on Marion in the roaring forties and it's been rather chilly. We have been getting a lot more sunshine and warm(er) weather but the wind still makes it feel cooler and this has tricked many Marionites into various states of sunburn. As I'm sure you've noticed, the wind on Marion is by far the biggest factor affecting all aspects of island life and this month we'll be looking at how we are measuring this.



Above: the wind mast with anchoring cables
Left: the RM Young wind sensor

An important thing to know when considering the wind on Marion, is the relevance of the island's physical location. I mentioned that we are in the 'roaring forties' which refers to the latitude region between 40 and 50 degrees South, which is where we are. This belt circumnavigates Antarctica and, because it is largely unbroken by any major land masses, the wind is infamous for pumping strongly and uninterrupted across the Southern Ocean bringing all manner of cold fronts and other extreme weather phenomena.

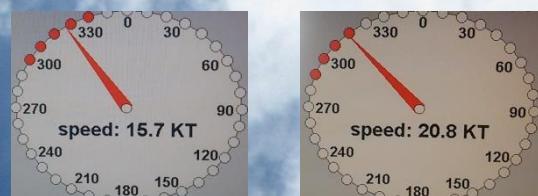
As part of our weather operations here on Marion, we report both wind speed and direction. This is accomplished through use of a wind sensor which is part of our automatic weather station. The sensor is fixed to the top of an 8m mast situated a little way from base so that it isn't sheltered or impacted by any buildings. The mast, which can be lowered and raised at will, is held upright by a bolt at its base. It is also anchored on all four sides by cables at three levels to keep the mast from bending excessively.

What's up with this Weather?

The sensor itself is not unlike a windmill and rotates freely to face directly into the wind with the aid of a tail-flap. The sensor is connected to the mast in such a way that South is fixed and the direction that the windmill faces can easily be determined relative to this. Direction is recorded as degrees from North (i.e. 90 is East, 180 is South, etc.) For those of you who might not know, wind direction is reported as the direction *from* which it is coming. For example, the most common wind we experience here is a 'North-Wester' and comes from a north-westerly direction (around 340 degrees).

The propeller, which is always facing into the wind, is connected to a shaft which spins inside the mechanism allowing wind speed to be determined.

Naturally, the faster the propeller is spinning, the stronger the wind is blowing. Wind speed is reported in a number of different ways. The most common unit is m/s, which people are more familiar with. For meteorologists however, the unit we use is knots. A knot is approximately 2 m/s and is also the unit of speed for ships.



For most of us here on Marion, the wind is the key determining factor of when we go outside to do work and when we most definitely should *knot*!

SAWS MONTHLY WEATHER STATS – November 2018

TEMP	MIN	MAX	AVERAGE	AVERAGE LOW	AVERAGE HIGH
	-0.1°C	14.2°C	6.5°C	3.5°C	9.5°C
PRESSURE	MIN	MAX	AVERAGE	HUMIDITY	AVERAGE
	990.2hPa	1024.1hPa	1008.5hPa		82%
RAIN	TOTAL	DAYS WITH RAIN (>1mm)		MAX IN 24 HOURS	
	80.2mm	21 (16)		11.2mm (20 th)	
WIND	MAX	DIRECTION	SUNSHINE	TOTAL	
	117km/h	W		133.0 HOURS	



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