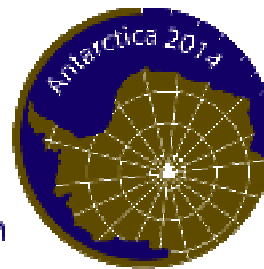


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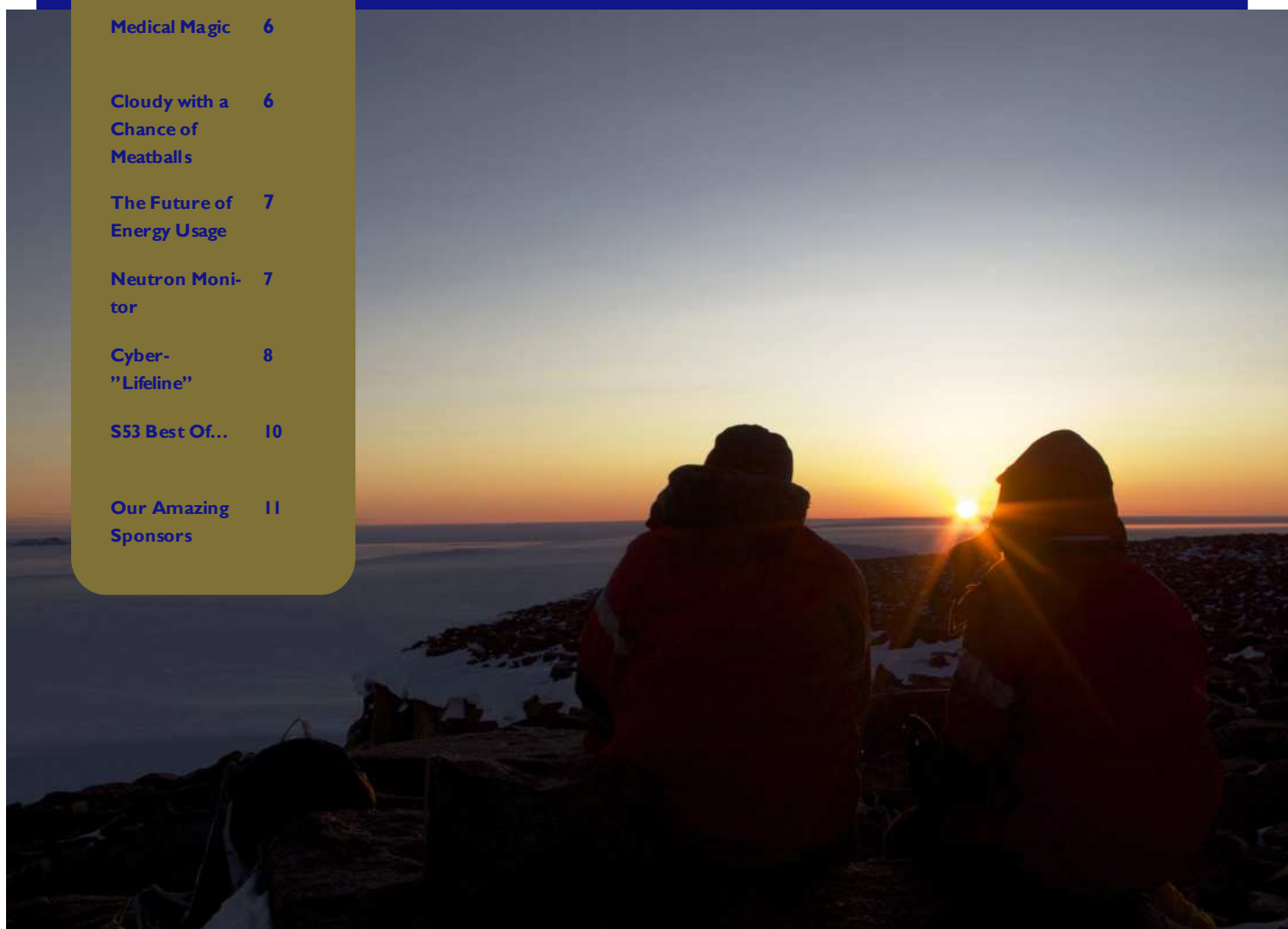
SANAE53

South African National Antarctic Expedition



NEWSLETTER #7

The Start of a New Day



The First Sunrise



“It seemed like a blessing to welcome the sun god back.”

It's quite an experience to go through so many weeks without seeing and feeling the sunlight. There was little left of a daily routine which usually comes so naturally. That said, no one will disagree that we were all looking forward to see the first sunrise after winter.

Considering the fact that it's relatively cold on this continent, many would agree that the concept of winter feels real when there is no sun; summer when there is always sun; and two in-between seasons with sunlight ranging from 5 minutes a day to just short of 24 hours.

Our last sunset before winter was on 16 May and we expected our first sunrise on 26 July. For our final sunset, we celebrated its departure as a team in the hangar of the base. For the first sunrise,

many of us decided to be outside to welcome it back. It was not the best of days for a picnic, with a dry bulb temperature of -25 and a wind of 20 knots. In spite of these two indicators, we were able to hike to a close-by moun-

ing somewhere far from this beauty, unclear and not here. The promise of home, not alone ...

By Francois



tain to experience the first sunrise from an elevated spot. Coffee, hot chocolate and sparkling wine. It seemed like a blessing to welcome the sun god back. Seasons are changing, life returns; we are head-

My Winter in Antarctica

My first winter on an ice continent was simply an experience I will always treasure,

even though trying at times. I have never lived a day without seeing the sun, until I came to Antarctica. I had to adapt to sleeping with the sun still shining;

that alone was difficult, because the body is tired but the mind tells of a different story.

Then, just as the mind and body got used to that, winter started and the mind had to adjust to 24 hours of darkness. This was a challenge much more difficult than trying to sleep during the day: now I had to work without the sun during the day. It is basically like working night shift and trying not to doze off on the job. I still can't get

used to the long nights. I had to start using a watch to know what time it is and not to confuse day and night. But there is an upside to this long night (if only for two months): I got to experience something I only saw in movies: an aurora. That was an unforgettable sight.

By Charles



Lean, Mean, Snow-Shovelling Machines

There is more food at SANAE than ten people could hope to eat in a year! The dry store and walk-in freezer are still stocked to the ceiling, despite the valiant efforts made by most. There have been complaints of clothing shrinking in the wash and jackets not fitting as loosely as



they used to.

We burn a lot of calories outdoors during summer, but getting enough exercise can be tough during the winter months, when we are cooped up indoors. We try just



about everything to stay fit.

The one and only treadmill sees the most use by far. A new treadmill was delivered during take over, however it suffered a catastrophic breakdown due to a sus-

pected manufacturing flaw (the motor shaft broke). Fortunately the motor from the old treadmill, which had a tired running surface, could be fitted to the new treadmill to make one decent machine for indoor running. Whenever weather and workload permit, a handful of us dress up in as few layers as possible to avoid frost-bite, while still remaining mobile, and go jogging outside. It is truly invigorating.

The exercise bikes see less use. For cardio, there is also a rowing machine (purchased from the previous team), which is great, but perhaps a bit too intense for most.

Lifting weights in the gym is popular, with the sport dominated by our Met-Kassie, Christiaan. The gym also has a punching bag, pull-up bar and skipping ropes for a diversified work out.

Climbing is fun and good exercise. There is a small bouldering wall in the gym and a high climbing wall in the hangar. Keeping rope-work skills sharp is useful in case of an emergency, such as somebody falling into a crevasse and needing rescue.

Yoga is great for the body and mind. There is rumoured to be a yoga session every Sunday, however these may just be rumours.



levels.

With all these choices, we should be able to stay relatively healthy this year, without splitting seams or popping buttons.



By Patrick

Fortunately there is a compulsory exercise for everybody, in the form of "throwing smelly." This can really work up a sweat, depending on the weather, ice conditions and your rage

The Team who went up a Hill ... and Realised it was a Mountain



*"I am sure we
might even have
gotten one song
right."*

So, how can I compare thee to our winter experience at SANAE in Antarctica?

I think, a good comparison might be that of a group who sets off on a trip over a high mountain.

We went through rough seas to get to the foot of the mountain. From there, it was a very steep and treacherous climb. It took us from the exhausting "takeover phase" all the way uphill, with a lot of detours and additional tasks (like moving all the vehicles to the winter depot) - while still attending to our skivvies as well as each one's own professional tasks as dictated by their various departments.



We had to work through bad weather and over dangerous terrain, risking legs and limbs. At last, we got to the top of the mountain, only to find ourselves in total darkness, in heavy storms with parts of our hut blown to pieces. Through most of the long dark night, we could only take refuge in our hut, busying ourselves with cleaning, cooking, re-arranging, taking stock and planning for the day

ahead.

And then morning came with a feeling of great excitement. At last we had some light and could look out over the valley below and day dream about getting back to our loved

again. And, I admit that there were also some great times in the darkness of night at our hut, with creative social events being organised and some memorable parties and movie nights. We had a great



ones.

At least from here it would be downhill and the going should be easier, we thought. However, as the fog started clearing, we could see the challenges that lay ahead to get to the bottom. There is no way we can ignore the vision of the thick thorn bush we will have to go through, looming in the mist and covering the foothills at the bottom of the mountain. Yes, another takeover I am afraid, and to get us back home we still have to negotiate through tough corners and deep waters, but at least now we have something to look forward to

jamming session with the whole team trying out their hand on various musical instruments. I am sure we might even have gotten one song right.

So once again I would like to thank our music sponsor for the equipment that was given to us. I also thank all the other sponsors whose products surely made a great difference to our overwintering experience.

And to my loved one, friends and family back home: Thank you for all your support through this long, dark and lonely winter.



By Leonard

Brandon asks some questions

This month Brandon introduces a persona unknown to the outside world, but well known in the base:

Name: Girl in room B5

Favourite movie this month:
The Lego Movie

Favourite social for this month and a reason for it: The Oscar Pistorius Court Case re-enactment

Personal projects with which you are busy: Stalking A-block.

Longest time you have not showered and reason for showering again: I don't shower.

Longest time outside and why: I don't go outside.

Coldest you have been and where: Minus 15°C - That's nor-

mal for me.

How often have you worked out this month and what is your routine / what do you do at the gym: I don't gym.

Favourite drink this month and specifically in the sauna: Any blood I can get my hands on.

How many emails sent this month: I don't do that.

What are you scared will run out in the dry store: Nothing, there are always people here.

Best game / challenge / win you had this month: Stalking C-Block

What have you lost up to now? What was the most important? Having people in my room (during takeover).

If you could import and get anything delivered tomorrow, what would it be? More people.

If you could have one guest for one day, who would it be? Myself, I'd want to live again.

If you could have one guest for dinner, who would it be? What would you cook? Someone meaty; I'd cook that someone.

Funniest thing that happened to you here? Causing generator failures while everyone is sleeping.

What are you missing the least about home? Being alive.

Favourite vehicle and reason: Skidoo No. 7 - it's the coldest.

Best game / challenge / win you had this month:
"Stalking C-Block"

Skidoos - The Trusty Steeds of the Eternal Ice

I have the privilege of looking after this amazing means of transportation: We use skidoos, or snow mobiles, to transport us out here in Antarctica, as they are quick, easy and user-friendly.

We have two types of skidoos, namely the Yamaha and the Alpine. At the moment we have three Yamahas and seven Alpines here. These skidoos play an important role out here, by rendering the necessary services that need to be carried out for our daily activities. They are very popular for usage during summer. We take special care of them, as they are quite reliable both for emergency and everyday duties by the team.

But they sleep during winter: they are brought inside, as we have white-outs and strong gale-force winds. At the same time, this gives

me the opportunity to work on them and service them. The Alpines are fairly old but still operational. At the end of September, we will take them out of the hangar where they are resting, to carry out their normal duties.

May I also add, that they are perfect for these cold conditions and the maintenance on them is minimal. Skidoos, you rock!!!

By Raymond



Medical Magic in the Darkness and the Cold

As my team members stayed more or less healthy during winter, I devised other activities to keep us all busy:

I summed up the most important and manageable medical

skills and theory and taught them to a few enthusiastic members during three sessions.

These skills included setting up an IV line, giving an intramuscular injection, cleaning, suturing and dressing of wounds, scrubbing up and maintaining sterile technique, measuring blood glucose, blood pressure and haemoglobin and applying plaster of paris and skin traction on broken limbs.

We covered the theory of possible injuries and their treatment and how to phone

a doctor and which information to gather for such a call. I also wanted to detect any underlying medical problems and announced the mid-year medical and dental examinations. Part of this was the dental fluoride treatment, which even I have to admit, was horrible: the faintest reminder of a dentist is usually disagreeable. However, the worst for most team members must have been the absence of a full body massage from this medical examination.

By Sonja



Cloudy with a Chance of Meatballs

For approximately 9 months, the SANAE weather station was weathering the storm. It finally took a storm of epic proportions to send one of its sensors to weather heaven. If I had to predict prior to the storm which sensor it would be, I would have gambled on the wind sensor. The wind sensor is mounted on a long thin pole, and therefore very exposed to the elements, and ultimately most susceptible to breakage (and one might also speculate already halfway on its way to heaven).

However unpredictable, it turned out that the humidity sensor was the weakest link. And with the benefit of hindsight, a week-long sandblasting session with snow projectiles traveling at more than 150km/h could render any weather sensor susceptible. So I immediately and effortlessly replaced the sensor, expecting a quick fix. Unfortu-

nately, it turned out that repairs were only beginning: replacing the humidity sensor requires replacement of the temperature sensor, which was now giving faulty readings.

Rather than replacing the Temperature/Humidity sensor again, I decided to use 'fiddling with the weather computer' as an alternative remedy. The effect was a N/A or 'not applicable' display. My shocked panic at not seeing numbers was quickly displaced by a soothing calm when I realized how apathetic the weather computer was about this serious problem. Not Applicable? The weather computer said that when numbers are unavailable, they are irrelevant and unimportant. The readings were never really that important, I realized! I can have a snack, then a coffee and cigarette break, followed by a nap, and then if I

really want to, I might contemplate the problem.

While the weather computer was apathetic, I suspected the powers that be were not going to be so patient. So I ignored the misleading soothing saying of the computer, and continued fiddling – increasingly becoming worried, and increasingly feeling like I am making matters worse. Finally, out of desperation, I asked for help from our radio technician Leonard, who quickly discovered the gist of

my problem - an inability to communicate appropriately with the weather computer. And after setting up the appropriate communications, Hendrik, our Potchkassie, further refined my computer skills, to the extent of enabling me to turn 'not applicable' weather displays into meaningful weather numbers once again.

By Christiaan



The Future of Energy Usage

Want to calculate your own footprint? Have a look at the nifty calculator at www.carbonfootprint.com/calculator.aspx



One of my extramural activities while here at SANAE IV, has been to take a couple of free online courses, specifically through Coursera (www.coursera.org), which provides courses in a variety of subjects, including Humanities, Medicine, Biology, Social Sciences, Mathematics, Business, and Computer Science. One of the courses I took was the course named "Our Energy Future", which focused on how energy is produced, its positive and negative consequences, and renewable resources technologies. One assignment was to evaluate my household's carbon footprint. An interesting

question, given our rather unique "household". Because we are in an Antarctic base, our energy usage is somewhat different from your average user. First off, all our energy is derived from diesel generators, which provides the electricity and thus the lights, heating, water melting etc. Looking at our figures, it is clear that a lot of energy is spent on supplementary heating of the base and melting snow for water.

Our primary heating (keeping the base around 19 deg C) is from heat capture from the generators. The supplementary heating is the heaters mounted in rooms etc. When it gets below -40 deg C outside, the base can get really cold. :) But can we do better than this? Are there better ways of melting the snow? Can we improve

the insulation of the base? Maybe we should investigate the options for more energy efficient equipment and procedures at the base. An exciting option is obviously the use of renewable resources. While our days of sunlight are minimal during the winter, we have 24 hours of light during the summer months. Several Antarctic bases are also using wind turbines to supplement, and in some cases 100% power their bases. An example of this is the Belgian Antarctic base with zero emissions - <http://www.theguardian.com/world/2013/jul/25/antarctic-research-stations-exposed> (the base shown in this article's picture) Given our unique location and our responsibility to preserve it, I believe we can do a lot towards reducing our impact while furthering science on this beautiful continent.

Neutron Monitor



The Centre for Space Research of the North-West University operates and maintains 5 neutron monitors, located at Potchefstroom, Tsumeb, Hermanus and two at SANAE. Each year, the university sends an overwintering team member to SANAE. He is known as the "PotchKassie", and that would be me. My main responsibility is to make sure that the monitors count the neutrons correctly.

The monitor consists of four main components:

Reflector: The outer shell of the monitor. Low energy neutrons cannot penetrate this material, but are not absorbed by it. Thus environmental, non-cosmic ray induced neutrons, are kept out of the monitor and low energy neutrons gener-

ated within the monitor are kept in. **Multiplier:** The producer is normally lead, and by weight it is the major component of a neutron monitor. Fast neutrons that get through the reflector, interact with the lead to produce, on average, about 10 much lower energy neutrons. This both amplifies the cosmic signal and produces neutrons that cannot easily escape the reflector.

Moderator: This slows down the neutrons further, which makes them more likely to be detected.

Counter Tube: This is the heart of a neutron monitor. After very slow neutrons are generated by the reflector, producer and moderator, they encounter Boron trifluoride TF3 nuclei, which is a

very toxic, colourless gas, in the counter tube and cause it to disintegrate. This nuclear reaction produces energetic charged particles that ionise gas in the tube, producing an electrical signal. Here are two neutron monitors. One consists of 6 tubes with a lead multiplier. The second monitor has 4 counter tubes with wax as filler instead of a multiplier. On average, the count rate of the wax monitor count is 10 times less than that of the lead monitor.

These monitors are extremely heavy, the lead neutron monitor weighs about 40 tons.

By Hendrika.k.a. PK

THE CYBER-"LIFELINE" (Or is it "LOVE-LINE"?)

By Lise Mann

The ship left.
BBM's flooded the network.
Whatsapp's squashed in-between
Then... it stopped!!
For a day or two
nothing, but my own thoughts of you!

Then: The first BBM!!
Or was it a whatsapp, I don't know,
all I remember was
Joy in abundance, and relief to show.
Facebook also joined in real soon
with photo's and pictures "over the moon!"
As loved one who had to stay behind
This was my "lifeline",
my heart, my mind...
I panicked together, laughed with you,
felt the relief when the Agulhas eventually arrived too!

Take-over had its own challenges:
The cyber-network was slow
and between all your work and busy bodies around the base
I had my own thoughts, worries and feelings to cope.
In every message I received from you
was this annoying, "analysing" side of mine too:
Who is he with? What's he doing now?
Good Lord, please let him be fine, and faithful somehow!

Never one day without a cyber-message of some kind,
and if there was a delay, I nearly lost my mind!
Only calming words like "I love you" or "Miss you so much"
could comfort my heart, give me hope and that "personal touch"..
Never before I considered how important it could be
having a functioning cyber-network,
and modern, technical communication system between you and me!

THE CYBER-"LIFELINE" (Or is it "LOVE-LINE"?)

(Continued from previous page)

When the ship left the few of you on the Antarctic behind
and routine changed eventually into a sort of "overwintering" kind,
so did the messages, gradually, and with careful ease
slow down, got shorter, exchange of insignificances starting to cease,
because what's the point in reporting on all the petty things anyway,
when you are having your own stress and problems so far, far away!

As the months pass by, a more relaxed kind of "mode"
is settling in, also in the cyber-communication-code.

The fear of missing out on a message or two
makes place for a confident, careful trust in you.
Acceptance of circumstances seem to get easier now,
compared to the restlessness of a month, two or three ago.
Taking over is a comforting proud of you on my part,
like a soft layer of peace, growing around my heart.

And then, suddenly...

I realise what matters most:

Not the cyber-messages, pictures or statuses we post
It's what we believe inside ourselves, while alone,
that forms our fears, anxiousness...
or, if you let it.. growing, slowly... nourishing it carefully...
deepens into a warm kind of consciousness...
strengthened by sweet thoughts of what we hope or imagine...

That's called LIFE!

Some, however, call it LOVE...

S53 Best Of ...

- Quote of the Month “What are we? S55?” - Charles
- Song of the Month Everything is awesome - Lego Movie
- Movie of the Month Ten - Starring Bo Derek
- Meals of the Month Butter Chicken - Brandon
 Bunny Chow - Cornelia
 Lasagna - Christiaan
- Success of the Month Christiaan - Revamping the Library

WEATHER STATISTICS 16 AUGUST – 15 SEPTEMBER 2014

	Maximum	Minimum	Average
Pressure (hPa)	901.0 (24 th Aug)	865.8 (18 th Aug)	884.5
Temperature (°C)	-7.1 (25 th Aug)	-34.2 (14 th Sept)	-21.2
Humidity	100% (21 st Aug)	25% (14 th Sept)	69%
Wind gust (m/s)	49.5 (26 th Aug)		

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Gear

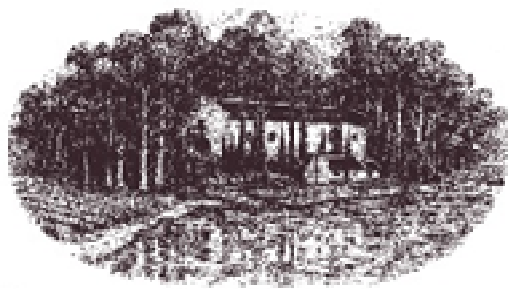


CityROCK
Mountain Mail Order
Climbing Gym & Gear Shop

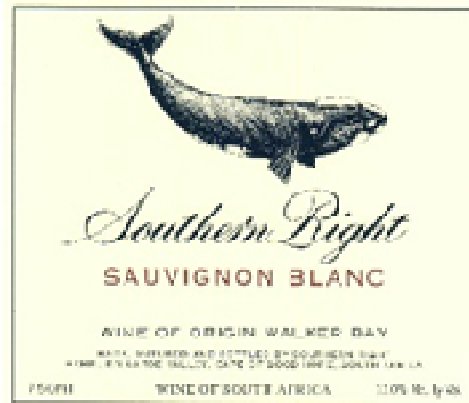


**AWESOME
TOOLS**

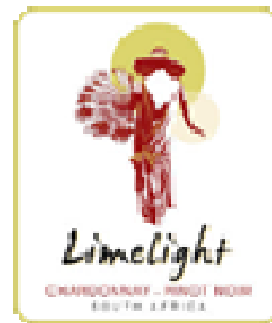
Wine



HAMILTON RUSSELL VINEYARDS



SEVEN OAKS WINE



THE WINEGUILD OF SOUTH AFRICA

CREATION

Creating Wines of Distinction



NEETHLINGSHOF
ESTATE

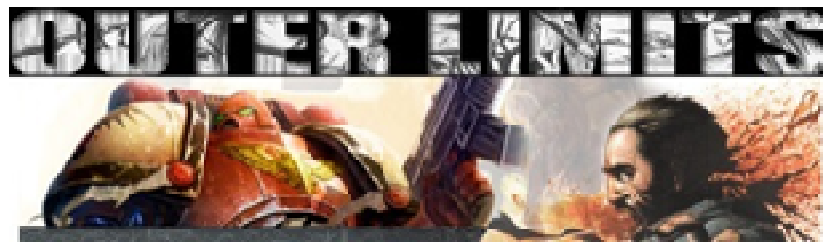
MAN  VINTNERS



ROBERTSON - SOUTH AFRICA
THUNDERCHILD
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"In aid of humanity"



Various



VAN RYN'S

COLLECTION
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