

A SWIMMERS
GUIDE - WHAT TO
EXPECT & HOW
TO PREPARE



INTRODUCTION

So, you have decided to swim the iconic Robben Island to Big Bay swim. How exciting! It really is one of the greatest ocean swims you can do and the view of Table Mountain from sea level, is truly spectacular. It's a lovely bucket list swim to tick off.

However, it must not be underestimated. With the correct amount of training, I believe anyone can swim the distance. The biggest game changer of a Robben Island swim is how your body handles the cold water. (This comment is made on the assumption that you will be swimming "skins" i.e., no wetsuit). How you prepare for the cold will be the difference between success or failure. The good news is that you CAN prepare for the cold with careful attention to the following:

A.Training

B.Cold Water response and Acclimatisation

C.Nutrition

D.The Mental Game

This document is intended to guide a swimmer through some of the aspects of a Robben Island channel swim.

Please feel free to contact me directly with any questions you may have (info@swimfast.co).

I can assist you with:

- a training programme,
- freestyle technique video analysis and stroke correction,
- motivation, inspiration and
- moral support.

I am here to help you complete a successful Robben Island Crossing.



Sue Ochse 071 870 8083 info@swimfast.co



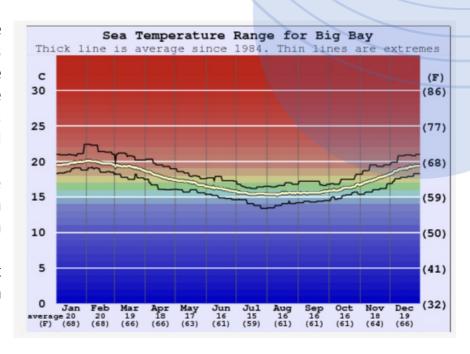
TRAINING

SETTING YOUR SWIM DATE

The first thing to do is to pin down a swim date. Depending on your physical condition and your swimming background, allow yourself plenty of time to train. Too much too soon will only result in injury and the mental pressure can be destructive. Speak to Derrick Frazer from Big Bay Events for the various swim options. You can do it as part of a group or as a solo. He will also advise you on available dates based on the predicted weather and water temperatures.

Derrick is the guru in Cape Town. Big Bay Events is his full time business and he has years of experience with assisting swimmers across the channel between Robben Island and Big Bay. In the meantime, to save you a Google search, here's a brief overview of sea temperatures. it might influence your decision on when to swim.

Please keep in mind that the weather in cape Town is fickle and the sea temperature and conditions can change from one day to the next.



"Big Bay sea water temperatures peak in the range 19 to 22°C (66 to 72°F) on around the 31st of January and are at their minimum on about the 10th of August, in the range 14 to 16°C (57 to 61°F). Big Bay sea water temperatures are maximum at the end of January...... Offshore winds cause colder deep water to replace surface water that has been warmed by the sun. Air temperature, wind-chill and sunshine should also be considered ..."

Source: www.surf-forecast.com/breaks/Big-Bay/seatemp#

Derrick will advise you closer to your booked swim date as to when exactly you will swim. Your swim can be delayed numerous times, so be sure to book a flight that you can change!

Once you know your swim date, we can put together a training programme for you. Your programme will be periodised over 3 week blocks and include working on speed, endurance and technique.



PERSONALISED TRAINING PLAN

A solid training programme with a repeated, periodised 3 week build up cycle comprising scheduled rest days, endurance sets and speed-work days, is recommended. The length of your plan will depend on your swimming background, fitness levels and the date you book for your swim.

The rule of thumb is as follows:

- swim in a week the total distance of your event. (For psychological reasons I usually add a bit);
- build up to this so that you swim the total distance for a minimum of 3 consecutive weeks leading up to your swim date;
- at least 2 swims in the 3-week period prior to your swim should be a swim of 75% of the total distance;
- it is not essential, but definitely worthwhile from a mental perspective/ to boost confidence, to swim 1 swim of the total distance in one go.

Because the water is cold, it saps a greater amount of energy from you than swimming. in warmer water. This together with the fact that you don't get a chance to rest, (you can't hang on on to the side of the boat to catch your breath and you need to feed quickly while treading water stop the cold seeping in), means you need to be swimming fit for **distance and speed**.

vithout a plan is just a wish

The fitter you are (and the more practice you get and therefore more prepared you are), the greater your ability to swim fast and hard, generating more body heat and reducing your time in the cold water.

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I can design a personalised training programme for you based on these principles. Send me an email info@swimfast.co.



TRAINING VENUES

The information below is aimed at Johannesburg (or other inland) based swimmers.

Sea and Open Water

Swim in the sea as often as you can! It doesn't have to always be a long swim, it can just be a dip (more about this under cold water exposure and acclimatisation). Sea swimming is very different to dam/lake or pool swimming.

Firstly, the salt water provides extra buoyancy which slightly changes your body position and hence stroke. Mostly, extra buoyancy is a good thing, but it can put strain on different muscles as your body position is altered.

Secondly, the ocean has a rhythm (swells, tidal forces etc.) unlike lakes and dams. It is good to recognise what this feels like when you are swimming so that you don't end up fighting it or being frightened of it during your crossing.

I can highly recommend the swimming camps hosted by Big Bay Events in Langebaan. Check out their website for dates and details. The information and experience are highly valuable. Talk to me if you want more high level information.

Durban is a 6 hour drive away from Johannesburg and can provide some good ocean swimming experience. I have a number of contacts there that I can put you in touch with should you decide to travel.



Sterkfontein Dam is near Harrismith, approximately 3 hours from Johannesburg. There are various options regarding accommodation and swims. Please feel free to chat with me about these. The water in the dam is fresh! 18/19 degrees in November/December, colder in the winter months, so it's a great place to train for the cold water you will encounter on a Robben Island crossing. If you have the time and money, I will strongly suggest you factor in as many trips here as you can. The scenery is fabulous, the water is spectacular, clear, turquoise in colour and there are lovely activities to keep the family busy while you swim.

The following are open water swimming venues in and around Johannesburg:

Cradle Moon is within close proximity to the norther suburbs of Johannesburg. It is a popular swim venue so you will have company pretty much anytime over a weekend. Unfortunately at times the hyacinth can be a problem. Clink on the link for details. This is my training venue of choice. Call me if you are thinking of swimming here and I can give you an idea of what the water is like and answer any questions.

Prime View is also within close proximity to the northern suburbs of Johannesburg. It is not nearly as pretty a swim venue as Cradle Moon, but it's a good alternative! Chat to other swimmers and triathletes and phone the venue to check the water quality especially after heavy rains. There are lifeguards so swimming alone is an option, just confirm with the venue what their operating hours are.

Note: Water quality is an ongoing and escalating concern when it comes to any open water body in and around Johannesburg. Try to speak to the venue owners and other swimmers to get an idea of ecoli counts, etc. I would guard against swimming immediately after the first rains of the season or after long periods of no rain where effluent, pollutants and other foreign objects get washed into the dams.

Safety in open water

I strongly advise investing in a tow float for swimming in any open water. You never know what emergency you or another swimmer may face out there far from land.

A tow float can help you in an emergency. In the UK, swimming with a tow float in open water is mandatory! I have stock of 2 different options. Let me know if you would like one info@swimfast.co.



Pool training

Pool swimming is great for setting milestones, seeing progress in speed work and getting k'ms under your belt. Depending on where you live, I can direct you to various pools or a quick Google will help. But open water swimming is an essential part of your training. The mind and body do funny things when there is no black line to follow!

To join a squad or not

This is completely up to you. If you are disciplined and motivated to do the training on your own, then you don't need to join a squad. However, if you lack discipline, then squad training is awesome! Often a bit of competition in the lane next to you can push you out of your comfort zone. It's also a good place to meet

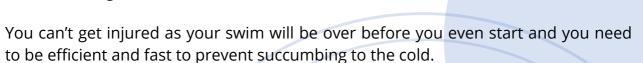
fellow swimmers and chat kit and experience!

INJURY PREVENTION

If you have the goal of swimming a Robben Island crossing, you need to be injury free to ensure you can put in the required swimming training.

Swimming Technique

The correct freestyle swimming technique is essential for 2 reasons. The first and foremost is injury prevention, the second is speed and efficiency in the water. Both are essential if you wish to train and complete a Robben Island crossing.



If you are nursing an existing injury it is absolutely essential that you iron out the cause before you embark on a Robben Island training programme.





Robben Island Info Sheet - Swimfast.co - info@swimfast.co

Whether you are a beginner or an experienced swimmer, your technique can always be improved. Very seldom do we get input into our specific swim technique and hence training is often hard work with little results or grinds to a halt with an injury of sorts. Fitness can only get you so far, solid technique is what keeps you in the water and gets you swimming faster!

Sign up for an in person (one-on-one) or online "Swimfast video analysis" session for input on your stroke to prevent injury and help you swim as efficiently as possible. See www.swimfast.co for more details.

Strength Training

Freestyle is the recommended stroke for a RI crossing. It is efficient and fast (which prevents you getting cold). Bear in mind, you cannot mix strokes during a crossing if you want your crossing recorded in the records. You have to commit

to one style.

The shoulders take the most strain with the repetitive movements required for swimming. In freestyle particular, the rotator cuff, which is a group of muscles and tendons that surround the shoulder joint, keeping the head of your upper arm bone firmly within the shallow socket of the shoulder. These muscles and tendons get injured easily.

A dryland/strength program that focuses on strengthening the rotor cuff as well as other swimming related muscles, is a good idea, especially if you are new to swimming or generally have not been very active. Strong muscles prevent injury!



Remember the rotator cuff comprises small muscles so always use low weights with high reps. The bigger muscles of your biceps, triceps and lats must also be worked. A quick Google/YouTube search can set you up with a guided gym based or home based (stretch bands etc) swimming specific workout.



The shoulders take the most strain during swimming, but the core is the key to good freestyle swimming technique; sit ups, plank etc. are all good for a strong core. A fun way to strengthen your core is the free app Plank Workout if you want to add this challenge!

Stretching

I cannot stress enough the importance of stretching! It is so often overlooked or done half-heartedly as its seen as a waste of time. Being disciplined about incorporating stretching into your training program at least twice a week (20 – 30 mins), will prevent injury and allow your body to move smoothly with the correct swimming technique. I can highly recommend the app DownDog. The yoga "Restorative" "type" is perfect for stretching. It is not an expensive app and in my opinion worth every cent!

Mix Things Up

Try and incorporate other types of exercise into your program. Don't just swim. Walk, run, cycle, Pilates, yoga strength training. or alternative form of exercise is always good to have for the days when you just can't get to a pool, either physically may be away (you holiday/business and there is no pool), or because you are injured/sick or because you are mentally fatigued and just can't face pushing yourself in the water. Other forms of exercise complement swimming to ensure your body is robust.





COLD WATER RESPONSE AND ACCLIMATISATION

As mentioned above, the biggest game changer i.e., between having a successful swim or not, is the cold water! The temperature of the water can change from one day to the next and even while you are swimming. The risk of hypothermia is real! Depending on how fast a swimmer you are, you will be spending between 2 and a half and 4 and a half hours in the water. Obviously the slower you swim, the longer the time you spend in the cold water and therefore the higher the risks of hypothermia. You cannot "will" hypothermia away! When the water is colder than your body temperature, the heat energy from your body is sucked away through the surface area of your skin. But, research has proven that you can increase your "cold tolerance" and thereby dramatically extend the length of time you can safely stay in the cold water.

Aside: As a first-time swimmer, I would not recommend you set yourself any swim time expectations. You will have a vague idea of what you think you can do but let that go. Be as well prepared as you can be and, on the day, just put your head down and swim.

Before we unpack these, it's important to be clear on 2 components to the response of human beings to cold water; gasp reflex and hypothermic reflex. Both require repeated exposure to overcome and achieve acclimatisation via adaptation.

Gasp Reflex or "Cold Water Shock"

Unfortunately it is this inbuilt human response to cold water that often results in death by drowning. It occurs when the cold receptors in your skin are all suddenly stimulated (via immersion in cold water) and



causes an involuntary gasp, followed shortly by hyperventilation, a raised heart rate and possibly a sense of panic. It's the gasp which often results in the inhalation of water which leads to drowning.

Scientific studies and regular observation of swimmers have shown that you can significantly reduce your response to cold water via repeated exposure.



The guideline is around 5 or 6 immersions over a few weeks should be sufficient. Unfortunately the adaptation is water temperature specific, meaning you can adapt to exposure to 15 degree water, but will still gasp on entering water at a lower temperature.

Hypothermic Reflex

Once you have overcome the gasp response, the next normal human defence mechanism against the cold is primarily, shivering, a hypothermic response, and your body's way of raising its core temperature. When you shiver, your muscles relax and contract. This involuntary movement warms your body. If you stay in cold water long enough, your core begins to cool. The cooler the water, the faster your core cools.

Scientific evidence points to a physical acclimatisation response in cold water swimmers. The term used is "insulative-hypothermic adaptation" as cold swimmers shut down the blood vessels close to the skin more quickly and don't shiver until they reach a novel deep body temperature. As a result, they cool more slowly and hence delay the onset of shivering. The adaptation is not specific to the water temperature but to the temperature your core drops to.

The good news is that we can train both mentally and physically to adapt and reduce these cold water responses so that we can better cope with the cold water.

The secret to overcoming the gasp and hyperthermic reflex i.e. adapting/ acclimatising to swimming in cold water, is exposure.

EXPOSURE

Get into cold water as often as possible. Just swim in it, often – at least once a week, and preferably two or three times a week, gradually extending the time that you stay in the water. Get out if you are not comfortable, and don't set time goals for staying in the water.

Your body/muscles and mind perform differently when exposed to cold water. You need to know how you respond and how you will react, during and after swimming in cold water.



You need to get comfortable with being uncomfortable but also know your limits. You will be amazed at how your body adapts. You will notice over time that your "gasp reflex" almost disappears and that the "hypothermic reflex", will also dramatically reduce. You begin to look forward to the "body on fire" feeling you get while swimming and the euphoria, post the shivering, after swimming.

How, when and where

For inland dwellers, access to cold water is difficult. In summer, pool and open water temperatures rise well above the 15 degrees you Robben Island swim is likely to be at. Therefore, I recommend acclimatising though the Johannesburg winter.

Outside pools and open water (Cradle Moon) dropped to 9 degrees this last winter in Jhb. Spending a minute or 2 in this temperature water will ultimately reduce the "gasp reflex". As the water starts to warm up, you can then swim for longer and start reducing the "hypothermic reflex".

As mentioned above, Sterkfontein Dam has cooler water all year round so this is also an option.

It is not necessary to swim when it is very cold, but swimming in 14/15 degree water will give you great confidence for your crossing which could drop to 12 degrees. (Derrick Frazer generally does not take inland based swimmers in water below 15 degrees unless they wear a wet suit.)

Cold showers and Ice baths

The jury is out on the benefits of cold showers and/or ice baths.

Here's my take... cold showers and ice baths help with your "gasp reflex" but unless you stay in the water for over an hour, it does little for acclimatisation to the "hypothermic reflex". The bath prevents movement which would be your body's natural response to generating heat and preventing the shivers or hypothermic reflex. If you want to toughen up your mind, then throwing ice into a bath will be a great test, but otherwise I would save myself from that torture!



(Google "Wim Hoff method" for more information on how to control your breathing i.e. countering the "gasp refelx".)

There is NO SUBSTITUTE for SWIMMING IN COLD WATER

The only way to get your body acclimatised to cold water is to swim in it. Slowly increase the duration of time you spend fully immersed and swimming, in cold water. In this way you will learn to control your "gasp reflex" and your "hypothermic reflex" will be delayed.

Never swim alone in cold water as your body responds differently every time. Expect for your bones to ache and for shivers to set in. Get out before you start to shiver too much. Warm up slowly! DO NOT HAVE A HOT SHOWER!

Recent research has confirmed that the best way to warm up is slowly and from the inside out. Get your wet costume off as quickly as possible and layer up with clothes, including a beanie and gloves. Hug a hot water bottle and sip hot drinks. Get comfortable with being uncomfortable. It is pointless swimming in water lower than 13 degrees. It's unnecessary and truly painful. Trust me!

The good news is that cold water adaptation / acclimatisation is retained for a significant period of time. Studies have shown that we retain 50% of acquired adaption to exposure to "cold water responses" over a 14 month period. Anecdotal evidence suggests that acclimatisation may also be retained from one season to the next and that it may even strengthen over a number of years of continuous swimming.



Physical composition - does size matter?

The process of heat loss is fundamentally driven by some basic laws of physics; Heat flows from warmer objects to cooler ones. A larger object takes longer to cool down than a small one of the same type. You can slow the process through insulative barriers (such as a wetsuit or clothing) but you can't stop it. Large people stay warm for longer than small people, simply because they have more mass.



Body fat (measured by skin fold thickness) provides an insulative layer and body shape matters too, specifically your surface area to volume ratio. A shorter, rounder figure is better suited to the cold than a tall lanky one of the same weight.

Body fat

So, should we try and change our body size and shape in the quest for buying us time in cold water?

Anecdotal evidence suggests a carrying a little extra weight helps protect a swimmer against the cold, but theoretical number crunching suggests piling on the pounds could slow your swim by a similar amount. So, is it worth it? From personal experience, swimming "fat" was definitely easier for me than swimming "lean". It's up to you. Consult a dietician or do your own research on how to gain fat in a healthy way. Don't just fatten up on junk food as this could make you sick and your body weak.

Brown fat

There is a theory that repeated exposure to cold water can increase "brown fat" in our bodies.

Brown fat acts as a built-in thermal wetsuit with its insulating properties. It contains many more mitochondria than white fat. These mitochondria are the "engines" in brown fat that burn calories to produce heat and are activated when the body is exposed to cold conditions.

Unfortunately, we don't yet have the tools to empirically measure the effects of brown fat, but current research evidence suggests that it's not likely to be a big factor in keeping the cold out. Brown fat only makes up a very small percentage of our total fat, and any heat it does produce is likely to be swamped by metabolic heat generated by our muscles as we exercise or shiver.



Fitness is Key

While you may not be able to fully control the physics of heat loss based on your size and fat composition, your fitness is fully in your control.



Your body loses heat to the water via your skin, but your body also generates heat through movement/exercise. A fitter person can maintain a higher level of energy expenditure (and hence more heat production) than a less fit person. When your rate of heat production matches the rate of heat loss, your body temperature will be stable. Whether fitness is more important than acclimatisation isn't clear, but they are both more relevant than size and skin fold thickness.

To get fit you need to have a training plan that includes building endurance and speed to cover both the distance you need to swim and to ensure you don't succumb to the cold.

Nutrition

When you ingest food or liquid, your bodies metabolic rate increases and in so doing generates body heat. Practice what you will consume on your swim and notice the effect of different foods on your metabolic rate.

Your attitude

The mental game is probably the toughest part of adapting to the cold. Swimming an endurance event in cold water is said to be 90% in your head. Get your head/ you attitude right and all you need to do is swim one stroke at a time!

Every training swim you do in cold water or on a cold, overcast, raining day is preparation for your event. Every cold shower is an opportunity to check yourself mentally. You need to get comfortable with being uncomfortable. See more under "the mental game" below.



Swimming in cold water is incredibly invigorating! There have been studies showing that it is hugely beneficially to the bodies anti-aging process as well as mental well- being. Maybe these point alone will help to convince you it's all worthwhile!



NUTRITION

Your body needs fuel to perform. Here are a few basic principles that you can think about and try to incorporate into your eating:

- you need to eat today for your session tomorrow. This is particularly important when you are doing big back-to-back sessions, either on the same day, i.e.,morning and evening, or two consecutive days of big distances;
- carbohydrates and fats give you fuel for the short term;
- protein and fat give you fuel over a longer period of time and helps build muscle/prevent injury;
- hydration is key to keeping electrolytes in balance
- fats can be good and bad. Know which is which and consume only the good ones!

So, in practice this would look something like this.

- For short sessions, have a meal that includes a good mix of protein and carbs
- For long or high intensity sessions bump up the carbs and even have some carbs to eat during the session. Banana or a shake of sorts, but still include some protein.
- Post any session eat protein within the hour
- After every session drink to rehydrate. Use an electrolyte replacement.

Mix things up and practice everything. Your body metabolises differently in a horizontal position and while bacon eggs pre a run may work well for you; it may not be the same before a swim.



You want to know exactly how your body is going to react to the food you give it before and during a swim. Make notes on how you feel and write down a "food plan of action" for the days leading up to your event. Know what you will have for dinner the night before, know what you will eat for breakfast and snack on the boat (or not) and what you will consume during the swim.



Try to include warm tea (with or without milk and or sugar or honey) during workouts in cold water and see how this makes you feel.

Practice feeding quickly. Your support team will throw you your pre-prepared food/drink while you tread water. The minute you stop swimming you will feel the cold. Every second you spend treading water makes it harder to get going again as your muscles start to cool down, so make the food/liquid choices easy to consume. Depending on your speed, the feeding plan during your swim usually looks something like this: 1st feed after 45 mins and then every 30 mins. Know exactly what those feeds will be.

High energy "gu" or gels are a very last resort. I do not recommend the use of them as they spike your energy, which means, once you start to consume them you need to continue to consume one every 20 minutes to avoid the very big energy slump the occurs afterwards. If you have planned your pre-swim and during swim nutrition properly, you will not need to rely on these. They often cause intestinal discomfort too, which you really don't want if you are swimming.

I would advise you consult with a registered nutritional practitioner if you have

problems with fuelling correctly.

THE MENTAL GAME

Get focused! You have made a decision to tick off this bucket list swim. Now apply your mind to preparing yourself for it. Your body will react physically; numb fingers, chattering jaw, ice cream headache, the feeling of deep, cold in your bones, shivers and shakes and more. These physical "symptoms" can be very disconcerting and scary. That's why you need to practice in cold water as much as possible so that you know how your body will react, get familiar with it.



Then, get your mind in control. Many of these symptoms will ease with repeated exposure to cold water, but it is important that you recognise them, view them objectively as physical symptoms and make up your mind that they won't bother you or get in your way. No negative thinking is allowed. You can comment that "the water was not as tropical as you were hoping!" but don't feed your mind with "it's freezing cold." You can trick your mind! While in the cold water, work on your mind. Tell yourself you can tolerate it. Start to build a mental barrier against any negative thinking. Don't let the cold enter.



Every time you are uncomfortable in any way physically; hot, cold, too tight clothes, headache, hungry etc, can be used as mental preparation. You need to get really comfortable with being uncomfortable.

You need to find what works for you. Everyone will have their own psychological tool box of resource. Remember, the reality is that the body does not want to be in the cold, it is programmed to make you feel the need to get out quickly. It will never be comfortable in the true sense of the word, but the mind can be conditioned to help you get through a coldwater swim. So, train it and work on controlling you mind while in it.

Note: Having said all this, you must acknowledge that hypothermia is a real thing. It is tremendously uncomfortable and requires medical intervention. Find your limits slowly. Never swim alone in cold water, even in a pool.

NEED INSPIRATION?

In the book I compiled, "One Stroke at a Time" (read more under the eBook tab), open water swimmers share their stories. Many give insights into the mental techniques they used to overcome the cold and fatigue during their marathon swims.

"One Stroke at a Time" compiled by Sue Ochse is available in ebook format via Amazon or on the Swimfast.co website. A hard copy is available in South Africa only (R300 plus R80 for delivery anywhere in SA or you can collect from me in Bryanston).



THE SWIM ITS SELF

Closer to the date of your swim we can chat about what you will need to take with you on the boat, your supporters etc. Prepare yourself for a possible roller coaster of emotions. Sometimes a swim can be schedule for the next day and you go to sleep feeling ready, only to wake up with the wind howling and the swim postponed. It's very emotional. Also don't have any preconceived ideas about conditions on the day. It could be very misty, raining or if you are really lucky, a beautiful sunshiny day!



The secret to peace of mind is knowing you have done the hard work; the training, the acclimatisation and your nutrition is well practiced.

I'M HERE TO SUPPORT YOU!

I'm here to help you with your training and to prepare you for a successful swim. Please feel free to get in touch. I'm always happy to chat.

I offer the following services.

- Swimfast one-on-one video analysis session This is a 90 minute face to face session where I video and unpack your technique to improve your speed and efficiency in the water and prevent injury.
- Swimfast online You take your own video and send it to me for analysis. I reply with a
 full report and drills you need to do to address the top 3 areas holding your swimming
 back.
- Robben Island coaching plan I support you with a training plan and all the advice and guidance you need for a Robben Island Crossing over the 3 months leading up to your crossing.
- Training Plan I can provide you with a once off, high level training plan.

I am here to help you complete a successful Robben Island Crossing.



Sue Ochse 071 870 8083 info@swimfast.co



OTHER RESOURCES

- CLDSA https://www.cldsa.co.za/ lots of interesting facts and figures on the website. If you
 want your swim recognised/recorded in the record books, you will need to become a
 member of the Cape Long Distance Swimming Association.
- Big Bay Events www.bigbayevents.co.za and Derrick Frazer derrick@bigbayevents.co.za to book your swim date or any swim camps. He has a wealth of advice and information of local conditions and is easy to chat too.
- "One Stroke at a Time" for open water stories many of which refer to Robben Island crossings as well as the mental side of handling the cold and fatigue. Ebook at www.simfast.co or hardcopy from me at sue@swimfast.co.za
- http://www.swimfast.co.za/ for swim technique analysis
- sue@swimfast.co.za to order a tow float