



Ballito Beach; Bait ball at the Wild Coast (right). PREVIOUS PAGE: Anemones and sea urchins, Partridge Bay

The world in one country is an oft-used quote to describe South Africa and is not unwarranted. Along with dramatic scenery and a rich cultural heritage, it is a nation renowned for its diversity of ecosystems and wildlife. However, its undersea environs rival the terrestrial abundance. From northern subtropical reefs to the chilly waters of the cape, South Africa offers a wealth of marine life few nations can rival.

I had a brief introduction several years earlier, visiting Aliwal Shoal and Protea Banks in KwaZulu-Natal and the Kruger National Park [see X-RAY MAG issue #46 -ed]. The diving was unlike anything I had done before not to mention challenging. And there were sharks—lots of sharks! From that moment, I planned to make a return visit.

Sardine Run

Like an aquatic version of the Serengeti's wildebeest migration, South Africa's Sardine Run is one of the world's utmost

undersea spectacles. During the winter months from May to July, a cold south to north-flowing current develops off the east coast, moving inshore and counter to the warm Agulhas current. After spawning in the cool waters of the Agulhas Bank, millions of sardines surge up from the Cape, following the current to the Transkei and KwaZulu-Natal province. The migration fuels an explosion of life, with all manner of predators partaking in the rich bounty, including dolphins, sharks, whales and seabirds. However, this is no guaranteed event; sardine numbers vary on a yearly basis and is only considered a "run" when the shoals are

large enough to be seen at the surface.

Having seen the spectacle on nature documentaries, I was eager for an up close and personal experience. When my good friend Sonja Newlands announced she would be leading a group from the United States and invited me along, how could I refuse? Factoring in time for additional activities, the biggest challenge was narrowing the options. With Sonja's help, I decided on some Zululand game reserves and Cape Town.

After a grueling trip from Toronto to Durban via London, I arrived in the morning. A recuperation day was welcome and Sonja couldn't have chosen a nicer place. An hour's drive north of Durban, the holiday town of Ballito featured green hills cascading to golden beaches reminiscent of Sydney's northern suburbs. "The Vineyard at Ballito" was a beautiful bed-and-break-

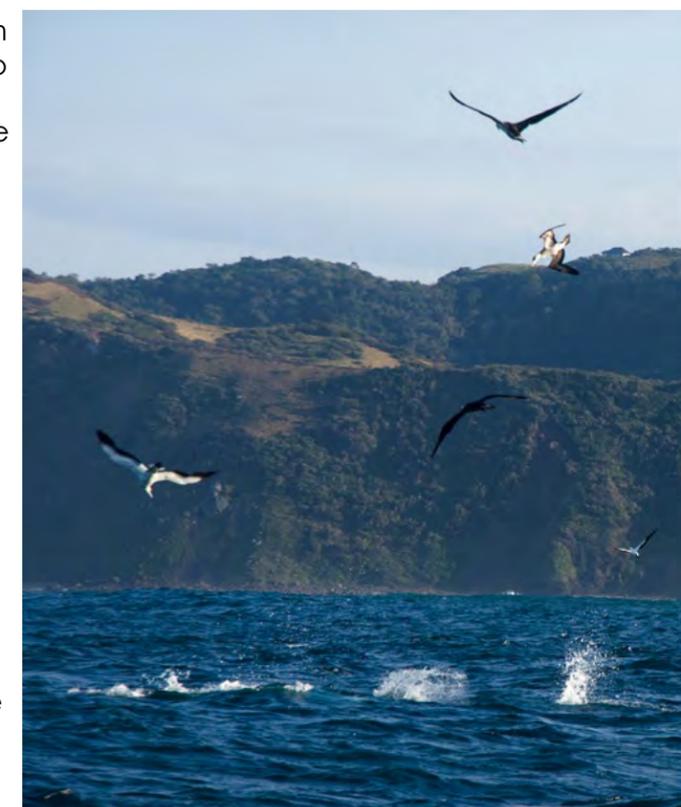
fast nestled on a hillside a short walk from the beach. For my first night, I decided to splurge with dinner and Al Pescatore, situated right across from the beach, came highly recommended.

The seafood platter was the epitome of extravagance, replete with mussels, prawns, oysters, fish and lobster. A Ballito iced tea, a concoction of ginger ale, sprite and five unknown spirits, necessitated another notch to my belt. People were very friendly, especially the owner, coming over to chat with the poor lone Canadian. If this was winter, I'll take it!

The following morning, Sonja arrived at 8:30, and it was a challenge packing all of my gear into her small car. We then headed to the airport to meet the Enfield scuba group from Connecticut. Right away, I could see it was a diverse but very nice group. With over 18 people and a ton of gear, Sonja had chartered them a bus, although two, Laura and trip leader John Langlois, rode with us.



Dinner decadence at Ballito



Fishing gannets, Wild Coast





Crashing surf (left) and the rugged landscape (above) of the Wild Coast; N'taba River Lodge (right); Wild Coast highway (center left)



ing two-laned and potholed. We soon crossed into the Eastern Cape or Transkei, which, until the early 90's, had been a separate region like Swaziland and Lesotho. Towns became fewer and further apart. The landscape was striking, with golden hills of grass dotted with numerous houses. Many were round with thatched roofs. Sonja informed us that this was deterrence against evil spirits, as they had

no corners to hide in. As the road gained elevation, the locals were bundled up in hats and heavy coats. No matter how remote, every town seemed to have a KFC.

Arriving at N'taba Lodge outside of town, we were greeted by owners Ivan and his wife, Bugs. (No, not her real name. Sonja has known her for years and *still* doesn't know it.) Situated alongside a river flanked by rugged peaks, the location was stunning. In the midst of renovations, severe floods had damaged the dining room and terrace overlooking the river four months earlier. Most of the damage was wrought by sand, but optimist Ivan regarded it as free building material.

As the mountain of gear was unloaded, we enjoyed a welcome drink. Also on hand was boat captain Ant and partner Lauren and dive guide Mike. Prior to dinner, Ant gave a briefing on what we could expect for the

ensuing week. Right away, I knew this would be no walk in the park.

By zodiac

Like most South African diving, we would journey by zodiac. Being in the middle of nowhere necessitated all gear, zodiacs included, must be brought in. With our large group, Sonja chartered two zodiacs from different operators in Umkomaas, outside of Durban. On average, we would spend six hours at sea daily, returning around 3:00. Fortunately, as the action occurs near the surface, deco issues would not be a problem. With temperatures around 15°C to 21°C, the water was warm enough for a 5mm wetsuit with boots, gloves and hood.

The sardines would not be a gigantic unbroken mass, but fragmented schools.



Ravenous for plankton, the fish converge close to shore, constrained by a preference for water temperatures of 20°C or less. Shoals may exceed 7km in length, 1.5km wide and 30m deep. To minimize chances of predation, they mass together in bait balls 10-20m in diameter. Clearly visible from the surface, they are ideal targets for bottlenose and common dolphins, Cape gannets and a range of sharks including bronze whalers, black-tips, dusky, ragged-tooth and zambezis. Even whale sharks and great whites have been observed on occasion.

Our destination was the town of Port St. John's in a region of the easterly Transkei called the Wild Coast. Here, the continental shelf plunges sharply close to shore, resulting in enormous waves and tempestuous seas. I was soon to discover the name was highly appropriate.

Travelling on the motorway, the first few hours were easy. Past Shelly Beach, the motorway ended abruptly, becom-



On the Wild Coast, diving is by zodiac





South Africa

View of the Umzimvubu River; Dolphins hunting at Sardine Run (top right); Close-up of dolphins (right)

With such a big coastline, they could be anywhere. Assisting in our endeavours were ultralights conducting air searches. Dispatched almost daily, the pilots kept in close contact with the various captains by phone. While operators generally work in tandem, there is a definite “first come, first served” protocol, as latecomers must wait until the first group is finished. With the forecast sounding favourable, everyone was raring to go.

The morning was cool and grey as I geared up for our 9:00 departure. There would be seven people per boat plus dive masters and crew; I would be with Ant, Lauren and Mike. Getting aboard necessitated a slippery descent down the muddy riverbank created by the recent flooding. Overnight, the weather took a turn for the worse, with rainy, unsettled conditions in the immediate forecast. Undaunted, we set out with a palpable sense of excitement.

Translated as “Land of the Hippos”, the Umzimvubu River has fashioned a gorge of towering 300m ramparts known as the Gates of Port St. John’s. The hippos are long gone, having been eradicated back in the 50’s. On the other hand, it could be re-named river of bull sharks, as the brackish water is an important nursery for young sharks. Definitely not a place one would care to wade across!

Getting out to sea faced some navigational challenges. Along with shallow water near the river’s mouth, offshore surf was intense, with Ant timing our exit to steer clear of the cresting waves. A second attempt was necessary, but Ant was a master, getting us through with minimal discomfort.

Binoculars raised, Ant scanned for signs, with congregations of dolphins and Cape gannets harbingers of imminent action. Right away, things looked promising. A large pod of

dolphins cruised alongside us, while a distant flock of gannets circled expectantly. We were off!

We arrived to discover an avian holding pattern; some birds were diving for fish but most lounged on the surface or circled overhead. False alarm. The radio soon crackled to life—another swim-bait ball 30 minutes away. Roaring down the coast, we discovered the other group had dived it, but we were late for the party.

With sardine action still lacking on the second day, we decided to concentrate on humpback whale encounters—and there was plenty,



with many breaching or swimming past throughout the morning. This time we would be on snorkel only. Sensing our presence, the whales would make a quick detour. I wouldn’t have thought seeing something so large would be so problematic.

At the surface, my camera and



Humpback whale breaching



ANDREY BIZYUKIN



ANDREY BIZYUKIN

South Africa

Hunting gannets at Sardine Run above (lower left) and below the water (far left); Sharks also join in the fray at Sardine Run (left)

top of one. Regrettably, we managed only one more bait ball dive, and no predators were to be seen. Although there were

nication to coordinate the assault. Their ranks perforated, the sardines regrouped in a seething panicked mass. Bronze whalers and blacktips joined the fray while Cape gannets attacked from above, zooming through the water column like feathered torpedoes. The water boiled in the onslaught.

beyond. Back at the lodge, Ivan whipped up a tasty Cape Malay/Greek fusion dish of mixed seafood in a yellow curry sauce along with BBQ ribs and vegetable curry. I hoped the next day would provide some much-needed exercise.

Changing weather

Unfortunately, conditions worsened as the week unfolded. Along with a rain and brisk wind, the roller coaster swells made snorkelling a real challenge. The sardines were around—just not where we were. Nevertheless, there was always something to see. Cape gannets put on a spectacular display, plummeting at dizzying speed before striking the water like machine gun fire. A few dead individuals indicated that not all succeeded; an erroneous trajectory could easily result in a broken neck. One unfortunate member of our group did a backwards roll right on



ANDREY BIZYUKIN



the plunge. As the whales advanced, he cast me a mischievous grin. "They are going to shit themselves!" he chuckled. Moments later, snorkels muffled delighted whoops as the whales passed to within a few metres.

The next time, I opted to go and with camera clasped to chest, did a back roll in. Scanning frantically, I wheeled to dis-

cover a humpback heading right at me. At such close range, it was enormous! Then, the unthinkable happened; my camera's autofocus ceased working. With the whale's massive head filling my

viewfinder, there were no hard edges for the focus to lock on. Seconds later, it was out of range and I missed the shot. Curses!!!! Now there is a situation one doesn't confront every day: a whale too close to photograph.

An hour later, Ant spied common dolphins gathering at the surface. We finally heard the magic words: "Bait ball!" I geared up in a flash. As this was no controlled environment, we were instructed to stick close to our buddies, staying back to back in case any sharks got over inquisitive. This would be wild and woolly!

About 4m down, we found the bait ball of sardine, and it was under attack. Like sheepdogs herding a flock, common dolphins made repeated passes, striking it with precision accuracy. I was immediately aware of their high-frequency squeaking, commu-

nication to coordinate the assault. Their ranks perforated, the sardines regrouped in a seething panicked mass. Bronze whalers and blacktips joined the fray while Cape gannets attacked from above, zooming through the water column like feathered torpedoes. The water boiled in the onslaught.

Incredible!

My elation proved short-lived. My steel tank, combined with an excessive weight belt, wreaked havoc on my buoyancy. Bobbing up and down like a yo-yo, I managed a few shots before making a hasty retreat to the boat to remove some weights. The sardines were rapidly decimated—glittering scales the only indication they had existed at all. To commemorate our first bait ball, everyone was treated to a Sardine Run tradition—a green (cream soda) lollipop. I was unsettled to learn a bronze whaler had taken interest in my erratic buoyancy.

Back on land, we headed to the airstrip atop Mount Theisger for sundowners. Despite the overcast conditions, the view was magnificent, offering a clear view of the gorge and Indian Ocean

Humpback whale, Wild Coast





White rhino (left) and giraffes (right) at Hluhluwe-Umfolozi Game Reserve; Serval (far left) and cheetah (below) at Emdoneni Lodge

even allowed to pet them. The cats clearly enjoyed the attention, purring like electric motors. Without warning, one flopped over, rested its head on my foot and fell asleep.



South Africa

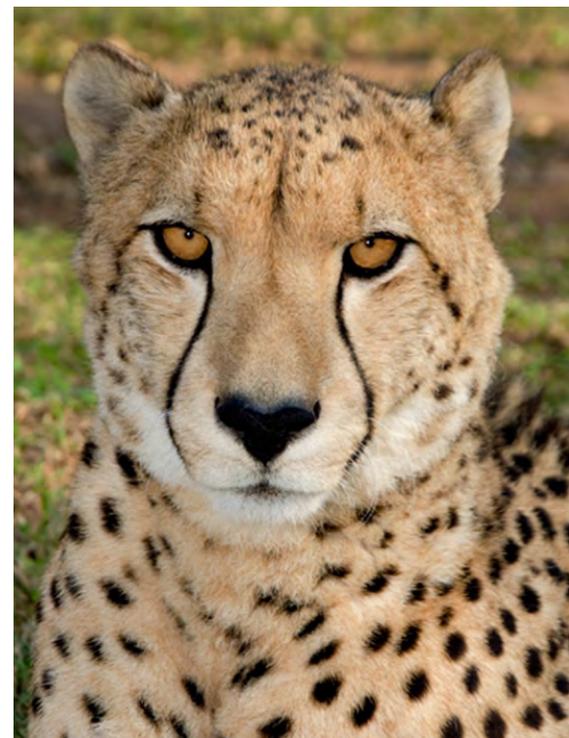
plenty of whales, we missed one notable. Measuring up to 15m, Bryde's whale is Africa's largest predator, capable of ingesting huge quantities of sardines in a single gulp. According to Ant, they have occasionally surfaced right beside the boat.

On our final morning, I nearly went out, but the prospect of a rainy, dive-free excursion didn't entice, and I opted out. Big mistake! Although no one left the zodiac, several humpbacks put on quite a show with repeated close breaches. Lesson learned: Always go! In the afternoon, everyone hiked into town

to explore the local market. We were intrigued to check out the local witch doctor until discovering the fee was \$30.00 each. Pass.

Topside activities

Before my journey to Cape Town, Sonja had arranged me a few nights at some Zululand safari lodges. After all, the very idea of visiting South Africa and not going on safari was virtually sacrilegious! Bidding the Enfield group adieu in Umkomaas, I transferred to another vehicle for the three-and-a-half-hour drive to Zululand.

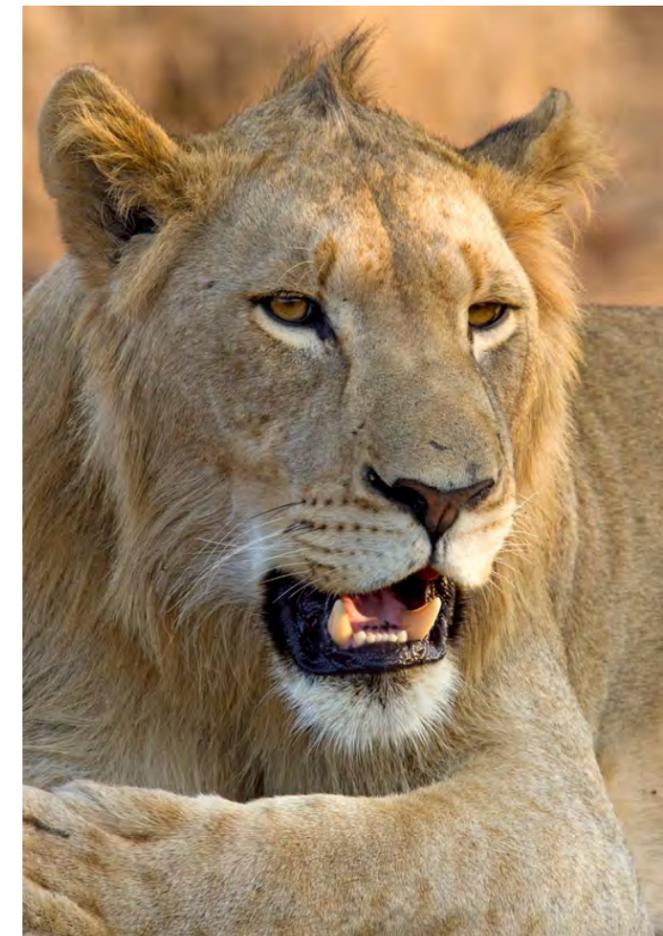


been frigid!

The next morning featured a visit to the Hluhluwe-Umfolozi Game Reserve, Kwazulu-Natal's oldest and largest game park and home to the Big Five (elephant, lion, leopard, buffalo and rhino). The park's northern sector, known as the Hluhluwe, features hilly topography with altitudes ranging from 80 to 540 metres, a far cry from the flat savannah one associates with Africa.

Although some of the big five remained elusive, white rhinos were highly visible as well as buffalo, impala, spotted hyena and plenty of giraffe. An afternoon drive at Falaza's private reserve yielded nyala, warthogs, impala, blue wildebeest and red duiker. The star attraction was the reserve's resident white rhino, a real bruiser that was the biggest I have ever seen.

Thanda. For my final overnight stop, Sonja saved the most luxurious for last. Located within a 14,000-hectare private reserve, the Thanda Safari Lodge proved to be a real stunner. Another big five reserve, this one was private, giving the feeling



Young male lion at Thanda

Emdoneni. My first stop was Emdoneni Lodge, a private lodge famous for its cat breeding program. Four species are bred at the centre including African wildcat, caracal, serval and cheetah. On a supervised tour, it was possible to enter the enclosures, allowing for some amazing photo opportunities. The highlight was the cheetahs—two brothers long habituated to people. We were

Falaza. My next stop for two nights was at the nearby Falaza Game Reserve and Spa. An afternoon excursion visited Lake St. Lucia, part of the World Heritage iSimangaliso Wetland Park. Boat cruises are popular, and we arrived in time for the day's final cruise. Crocs and hippos were the prime attractions, with copious numbers basking on the muddy riverbank. The air was nippy on the upper deck, and I was glad to have brought my fleece jacket. The poor crocs must have



Hippos at Lake St. Lucia





Main Street, Simon's Town (left); Boulder's Beach (right); Penguins of Simon's Town (below)

including a mother and calf. After a sundowner in the bush, spotlighting revealed seven more rhino wallowing joyfully in the mud alongside a waterhole. Back at camp, a glass of wine beside a rearing bonfire was a great prelude to a gourmet dinner. This was a safari with style.

Simon's Town

The next morning, I returned to Durban for the two-hour flight to Cape Town. Occupying a dramatic seaside posi-



of your own private wilderness. My room for the night proved jaw dropping. To call it a "tent" was akin to calling the Burj Khalifa a "building". With a verandah overlooking the distant hills, the airy rotunda interior featured a huge bed and ensuite bath. With only a one-night stop, it was a shame I wouldn't have

more time in it.

Despite only one afternoon game drive, it proved extraordinary. Within the first hour, we encountered two groups of lions, including a lioness and three cubs at a kill, my first in three Africa trips! In addition to impala, zebra, giraffe and buffalo, there were plenty of white rhino,



Simon's Town Harbour



entire area.

My final destination was Simon's Town, nestled alongside False Bay on the Cape Peninsula's eastern coast. An important naval base for more than two centuries, the town is rich in history, its main street flanked with charming Victorian architecture.

My accommodation was the Quayside Hotel, situated right on the harbour. My balcony offered superb views of the harbour and rugged coastline. Plus, how can one

fault a hotel that offers a welcome glass of sherry?

That evening, I had dinner at Bertha's, a restaurant right on the water below my room. The springbok medallions with mushroom sauce were outstanding, ensuring a return visit every night at mealtime. By week's end, the entire staff knew my name.

After breakfast the next morning, a phone call from Dave prompted a change in itinerary. "May I humbly suggest we do Table Mountain today

instead of the Cape? The afternoon weather forecast calls for clear conditions, a high of 26° and no wind." As unsettled weather can thwart a visit to Table Mountain, especially during the winter months, I readily agreed to seize the moment.

My morning free, I headed for Boulders Beach, home to view some decidedly un-African wildlife: African penguins. Arriving just after 9:30, I paid for my ticket and walked in. I wondered if something was wrong, as I seemed to be the only one there.

A sheltered cove of white sand punctuated with granite boulders, Boulders Beach is part of the Table Mountain National Park. From just two breeding pairs in 1982, the penguin population has since ballooned to 3,000. To protect both penguins and the environment, a wooden boardwalk has been erected along the beach. Close observation was not an issue, with penguins often an arm's length away. Despite their comical appearance, razor-sharp beaks are capable of inflicting a nasty bite.

I photographed in contented solitude



Crossing the peninsula, we headed for Chapman's Peak drive, touted as the country's most scenic. Hugging the vertiginous cliffs of the Constantia Mountains, the 9km road was constructed by convicts between 1915 and 1922. A series of fatal accidents involving boulders prompted a four-year closure for maintenance. The road was re-opened in 2004 as a toll road, a move deemed controversial amongst local residents.

for an hour as the birds went about their business of tending chicks, preening, waddling and squabbling. Then, a busload of tourists arrived and the viewing platform was promptly overrun. It didn't last long, and peace and quiet resumed, apart from the occasional powerful bray. It was easy to see how they received the name jackass penguin.

For lunch, I opted for a favourite South African delicacy: biltong. The local version of beef jerky, the air-dried salted meat comes in many varieties. Dave recommended a shop near my hotel called Biltong and Bake. Along with the usual beef and pork, there were plenty of exotic game versions, and I selected gemsbok, ostrich and springbok. Although initially tough, all proved delicious. Take that, beef jerky! My beverage was Iron Brew, a soft drink regarded as South Africa's favourite. How can one refuse a drink billed as "rosy vanilla, fruity flavoured"? Definitely unique!



From the lookout at Noordhoek (North Corner) Village, the impressive sweep of Long Beach stretched 6km to the 30m Slangkop Lighthouse, the highest on the South African coast. Despite the chilly Atlantic temperatures, Cape Town's beaches are thronged during the summer months. Even during my winter visit, hardy souls could be seen battling the surf on body boards. The locals call them shark biscuits!

Approaching the city proper, we passed Clifton and Bantry Bay, home to some of the country's most costly real estate. Signal Hill revealed superlative views of the city, hugging the coast below and sprawling to the north and east behind Table Mountain.

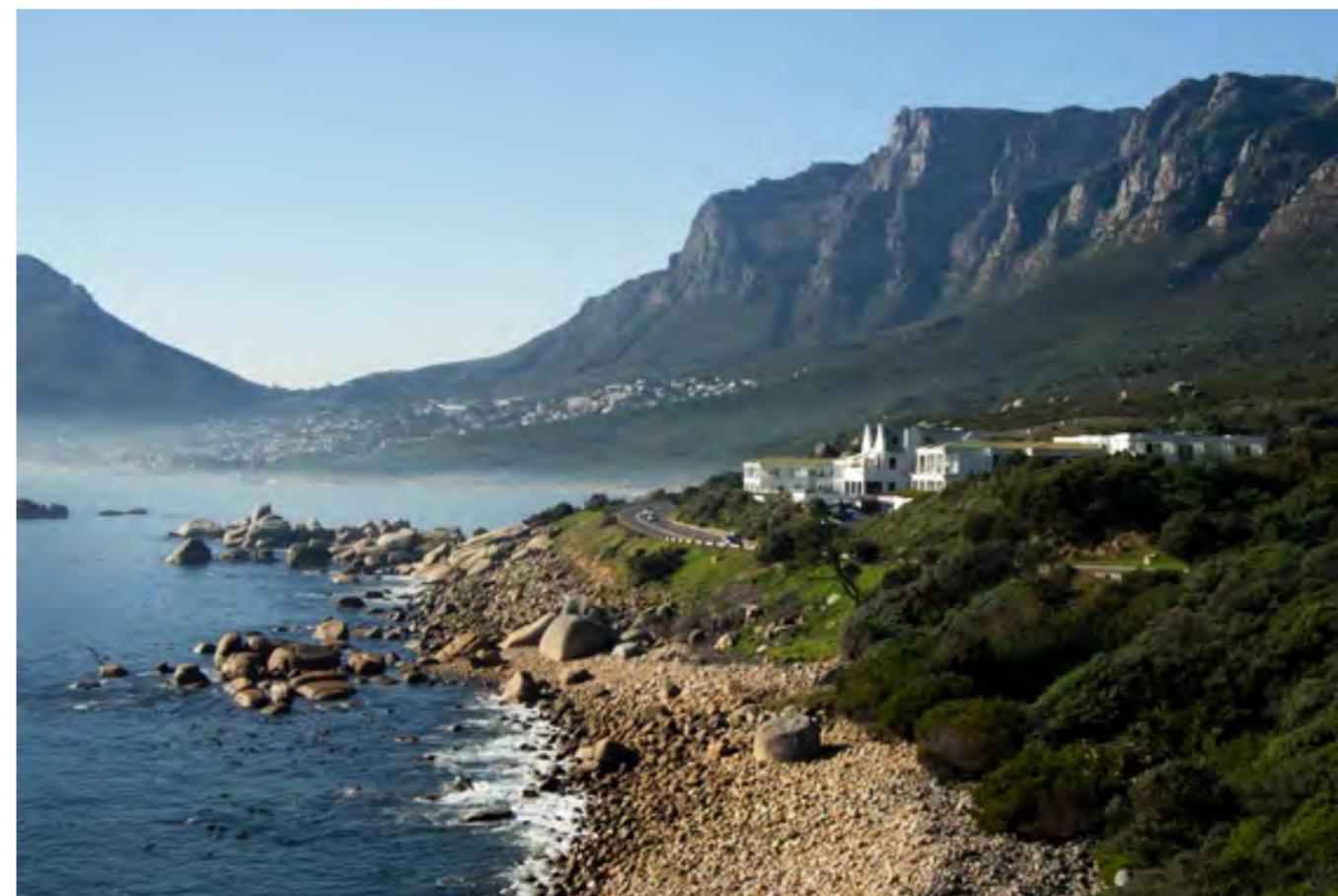
Majestic yet temperamental, Table Mountain is the city's most iconic landmark. Prior to the Cableway, the only way up involved an arduous hike of several hours. The cable car is unique as it has a 360-degree revolving floor, which allows everyone the opportunity to photograph from a couple of open windows. Not enamoured with heights, I did okay until the very last leg. Skimming a sheer rock wall provided an unwanted dose of vertigo!

A World Heritage Site, the Table Mountain National Park is part of the Cape Floristic Region, the smallest and richest of the world's

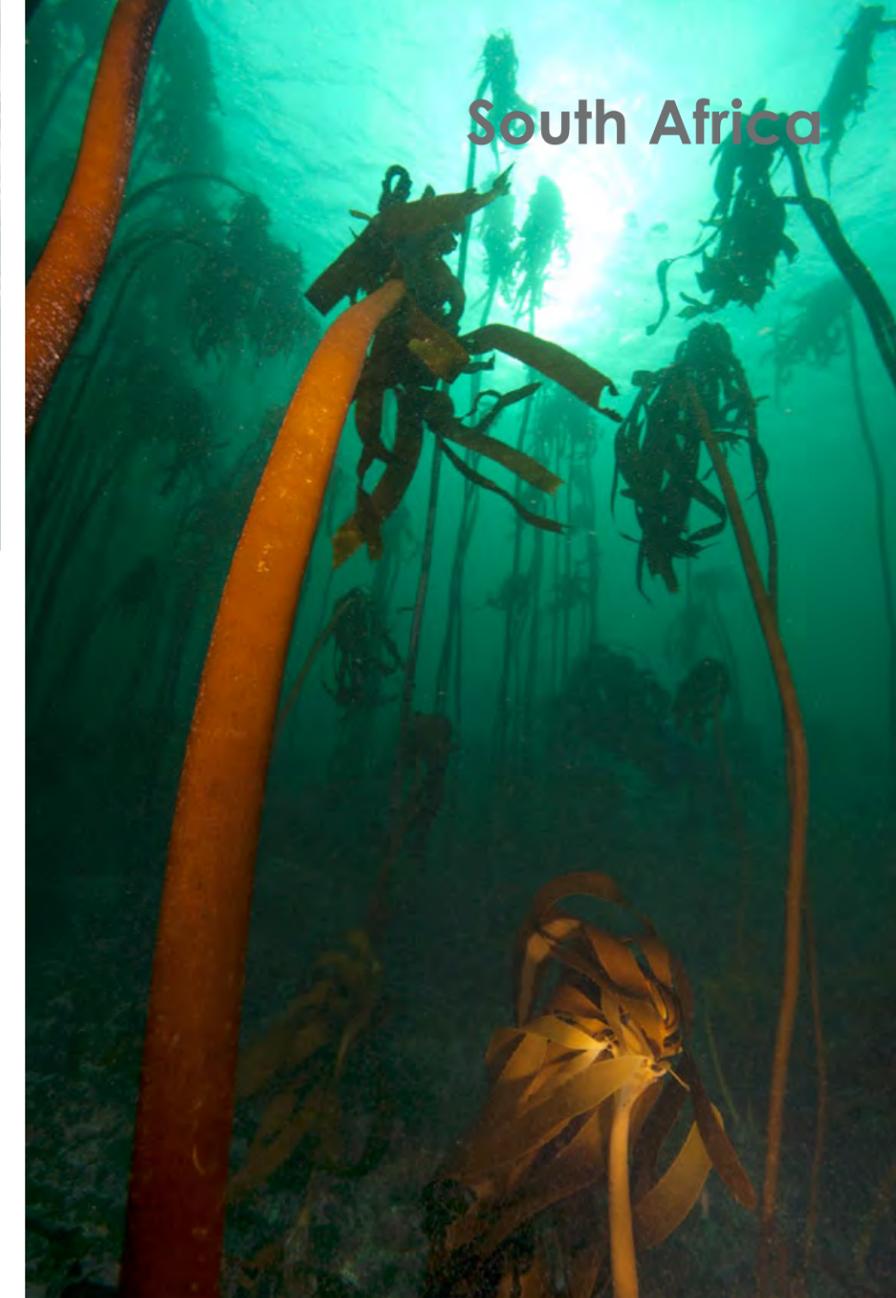
six floral kingdoms. Known as Fynbos (Fine bush), it occurs only in the Western Cape's Mediterranean-style climate. Consisting of scrubland and heath, diversity is extraordinary, with over 9,000 recognized plant species, around 6,200 of which are endemic.

I could also discern the distant silhouette of Robben Island, famous as the set-

ting of Nelson Mandela's incarceration. Although I didn't see one, the mountain's most common mammal residents are hyraxes, locally known as dassies. Incredibly, the rodent-like animals are related to elephants. An amazing day was concluded with a spectacular sunset over Table Bay from north of the city.



CLOCKWISE: Twelve Apostles; Sunset over Table Bay; Chapman's Peak Drive; Table Mountain panorama



South Africa

Breaching great white shark (left); Fur seal at False Bay (above); Kelp forest at Miller's Point (right); Author Scott Bennett armed with camera in shark cage (lower left)



Shark diving

After nearly five days, it was finally time to get wet. I would be diving with Shark Explorers, established in 2008 by Morne Hardenberg and Stephen Swanson. With the motto "Change your perspective", the company has been committed to providing visitors a positive shark experi-

ence to counter perpetual media negativity. The Cape's waters are a mecca for sharks and a number of trips are offered to see them depending on the season. My winter arrival coincided with the big boys—the great whites! In addition, excursions would be made to dive with fur seals and to kelp forests for sevengill sharks.

Arriving at the shop, I was pleasantly surprised to see a familiar face—my friend Linda Ferwerda, who was visiting from the Netherlands. Unfortunately, Morne was still at the Sardine Run, but did meet his niece Monique. Also on hand was divemaster Ernest Salima, who hails from Malawi (my next stop after South Africa). With gear sorted, it was time to head to the jetty.

water turned out to be a balmy 15°C. I was fitted with a 5mm suit along with an outer shell. Learning my lesson from the Sardine Run, I opted for fewer weights to compensate for the steel tank. There was also another South African first. We would be on a real boat, with entry via a giant stride and a ladder to get out. Sweet!

False Bay

False Bay is one of the few places in the world where it is possible to dive with sevengill sharks. An ancient species attaining lengths of 3m and weighing up to 335kg, sevengills are normally deep water residents. Opportunistic predators, they prey on everything from rays, chimaeras and bony fishes to carrion and other sharks. They are especially formidable predators of Cape fur seals, which I was hopeful they could differentiate from wetsuit-clad divers. According to Stephen, it isn't unusual to see more than ten on one dive, and being naturally curious, chum or bait isn't necessary.

The group was big, with a number of international students from an ocean studies course participating. During the

briefing, we were told visibility can range from 6-12m, so staying in close proximity to your dive buddy was essential. As Linda would be my dive buddy, her camera set-up would make her easy to spot. All was good.

Miller's Point

The boat trip to Miller's Point was short but scenic, passing alongside the Cape Peninsula's rugged coastline. Our destination was jammed



Cow shark at Miller's Point





Silhouette of cow shark at Miller's Point; Colony of seals at Seal Island (right); Red Roman at Miller's Point (lower right)



Detail of kelp at Miller's Point

with bobbing kelp, buoyed to the surface by gas-filled bladders. The largest and fastest growing of the world's seaweeds, kelp thrives on nutrients churned up by the Cape's cold, rich waters. Having never dived such an environment, I had unhappy visions of being entwined in a tangle of stems and fronds.

With Linda ready to go, we plunged in and descended to the bottom. Entanglement concerns were promptly replaced by wonder. Shafts of light flickered from above, creating the ethereal atmosphere of an underwater cathedral. Visibility was good, with the surface clearly visible from the bottom.

With everyone assembled on a sandy patch at 18m, it didn't take long to see the sharks; they soon found us! Approximately eight appeared, some coming to within an arm's length. None showed aggression, only benign curiosity. The upturned corners of their mouths gave the appearance of a goofy smile.

After watching the sharks, we spent the

remainder of the dive exploring the kelp forest. Fronds undulated in the mild surge, while red Romans made arresting photo subjects. A member of the seabream family endemic to Southern Africa, their numbers have been severely depleted due to excessive fishing.

Unfortunately, my dive was cut short when my weight belt slid off, and I shot to the surface like a rocket. Fortunately, Linda found it, the orange weights glowing like a beacon on the sandy bottom. Someone was the recipient of a well-earned beer!

Seal Island

Surface interval completed, a short boat ride brought us to Seal Island at Partridge Point. Many of the shivering students opted out, but I couldn't wait to get back in the water. The dive would be very shallow, only 6m along the island's drop-off. Before weighing anchor, a legion of brown, whiskered heads bobbed expectantly at the surface.

"Don't worry," said Ernest with a chuckle. "They will come to you."

He wasn't kidding. Descending the wall, we were immediately besieged, and the dive proved to be one of the most memorable I have ever experienced. I surmised the seals would be moving too quickly to photograph, but was pleasantly surprised. Although many zoomed past, others came in for a closer look.

Boasting big brown eyes, their playful antics reminded me of mischievous dogs. I couldn't get over their sheer grace, gliding and pirouetting while we clumsy humans were buffeted by the relentless surge. Some were real characters; looking up from my camera's viewer, I caught one chewing on the end of



one of my strobes. The mark remains to this day.

With the relentless seal action, it was easy to overlook the reef. Very different from the tropics, the rocky walls were ablaze with colour, jam-packed with star-



MORNE HARDENBERG

fish, clams and urchins. The later proved especially photogenic with hues of lavender, yellow and orange. Marveling at the array of shapes and textures, I practically ignored the seals.

Great white shark cage diving

Finally it was time for the main event: the great white cage dive! After my 5:30 wakeup call and a quick coffee, I grabbed my housed camera and headed down to the jetty for 6:00, which was already abuzz with activity, with several operators gearing up for morning



MORNE HARDENBERG

trips. Along with eight passengers, the boat had a full crew. With Stephen at the helm, along for the ride were divemasters Ernest, Corne Ligtermoet and Nina Daniels.

Departing the jetty at 6:30, we set out for Seal Island. Situated eight nautical miles from Simon's Town harbour, it is home to 70,000 furs seals, along

with cape and bank cormorants and even a few penguins. The morning's excursion would feature three distinct segments. First, we would search the bay for predations, as the majority occurs prior to sunrise. Next, a seal decoy would be towed behind the boat to entice a breach. The final stage was the cage dive.

Arriving just after 7:00, Stephen gave a briefing on shark hunting behaviour and what to expect. After weeks of feeding at sea, the seals head for home, exhausted and highly vulnerable. This

is what the sharks are waiting for and gather in large numbers during the pre-dawn hours. The seals are unable to discern the sharks below, but are highly visible to the sharks, rocketing to the surface to snatch their unsuspecting prey.

Predations can last anywhere from seconds to several minutes. While the sharks possess the brute force, agility is the seals' trump card. On many occasions, the shark will miss its mark, with a wild chase ensuing at the surface. The seal will often outmaneuver the shark, tiring it to the point of giving up.

With multiple crewmembers on the lookout, all directions were covered for potential shark action, specifically, "porpoising" seals. With sinister motives, seabirds shadow their movements, anticipating leftovers from a potential attack. It didn't take long before the first breach. Then the second. Then the third. I lost count of how many times I heard "Predation, three

o'clock" and turned to discover it was all over.

One predation proved particularly gruesome. "Lots of blood," winced Ernest, as I quickly averted my eyes. The gulls descended in seconds, frantically snatching up blubber and undigested fish bits. Stephen estimated that approximately 50 great whites reside in False Bay. Judging from the number of predations, it appeared they were all around Seal Island.

Trolling with seal-lure

It was then time for stage two of our excursion, as Ernest prepared "Frank", a life-size seal mockup.



Fur seal at Partridge Bay; Great white shark attacking seal lure (left); Great white and cage divers (top)





Fur seal at Partridge Bay (left); Ostrich at the Cape of Good Hope (above); Smitswinkel Bay (right); Baboon (lower right)

viewpoint.

With everyone in position, Ernest lowered some hefty frozen fish chunks into the water. Another decoy was employed, this one a flat seal silhouette called "Susie." The action

commenced quickly, with the first shark appearing within minutes. "Okay, standby, standby...DOWN, DOWN!" commanded Stephen. Gulping a breath, I submerged to the window, frantically trying to position my camera. Glancing to the curtain of green, the unmistakable sil-

houette came into view—a great white.

Seeing this magnificent predator up close was mesmerizing. Swooping in gracefully, the great mouth opened wide, swallowing the bait in one gulp. At least seven individuals appeared during an hour, including one specimen over 5m long. Another got a bit rambunctious, thrashing the cage with its tail and soaking everyone on deck. Several other boats were in the vicinity; it seemed there were more than enough sharks to go around.

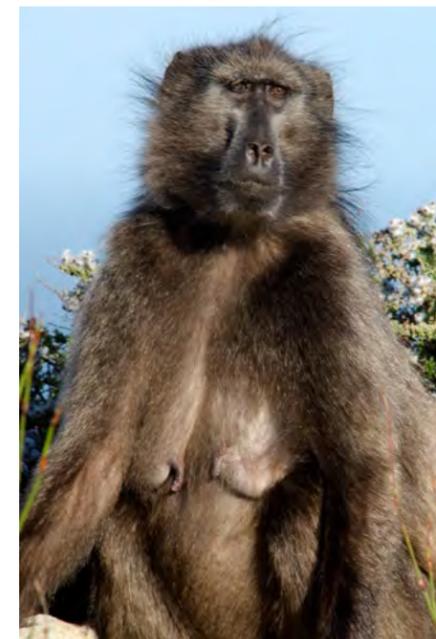
Cape of Good Hope

Unfortunately, a second trip for the following morning was cancelled due to rough conditions. Dave arrived after lunch, and we headed for the Cape of Good Hope. Famous as Africa's southernmost point and the convergence of Atlantic and Indian Oceans, in reality, it's neither. The actual meeting point fluctuates according to ocean currents, which doesn't actually happen at the Cape. As for the continent's southernmost point, that honour belongs to Cape Agulhas, a peninsula some 150 kilometers to the southeast. Just don't tell the tourist literature.

Wending curvaceously, the road

offered frequent lookouts, providing stupendous views. The beauty also bore an ominous side; a large sign emphatically proclaimed "DANGER: BABOONS." Large and aggressive, chacma baboons are a real problem in the area, attacking people and even breaking into homes causing extensive damage. Further down the road, we encountered a "baboon squad" trying to frighten some off a property by firing blanks. After that, I was afraid to get out of the car for the rest of the morning.

From the graceful sweep of Smitswinkel Bay, the road turned inland, entering the Cape National Park. Stopping to pay the entry fee, a sign announced closing



Essentially, we would troll with a seal-sized lure. "Come on Frank, give us joy!" enthused Steven. With Stephen, Ernest, Come and Nina on the lookout, all directions were covered for potential shark action. Somehow, I couldn't imagine the seals echoing his enthusiasm.

At 9am, the guys started chumming with fish oil to lure in the sharks. The moment of truth had finally arrived. It was cage time. Donning wetsuit, boots, gloves and hood, I was perplexed as to not only where the cage would be positioned but also how I would actually get in. I soon had my answer. The cage was suspended from the vessel's side, and we would step down like on a ladder. It was a lot narrower than expected, holding four people lengthwise, with barely enough room to turn around. No scuba was involved; with heads and shoulders above the water line, a window below the surface provided an unobstructed



Tourists visit the Cape of Good Hope

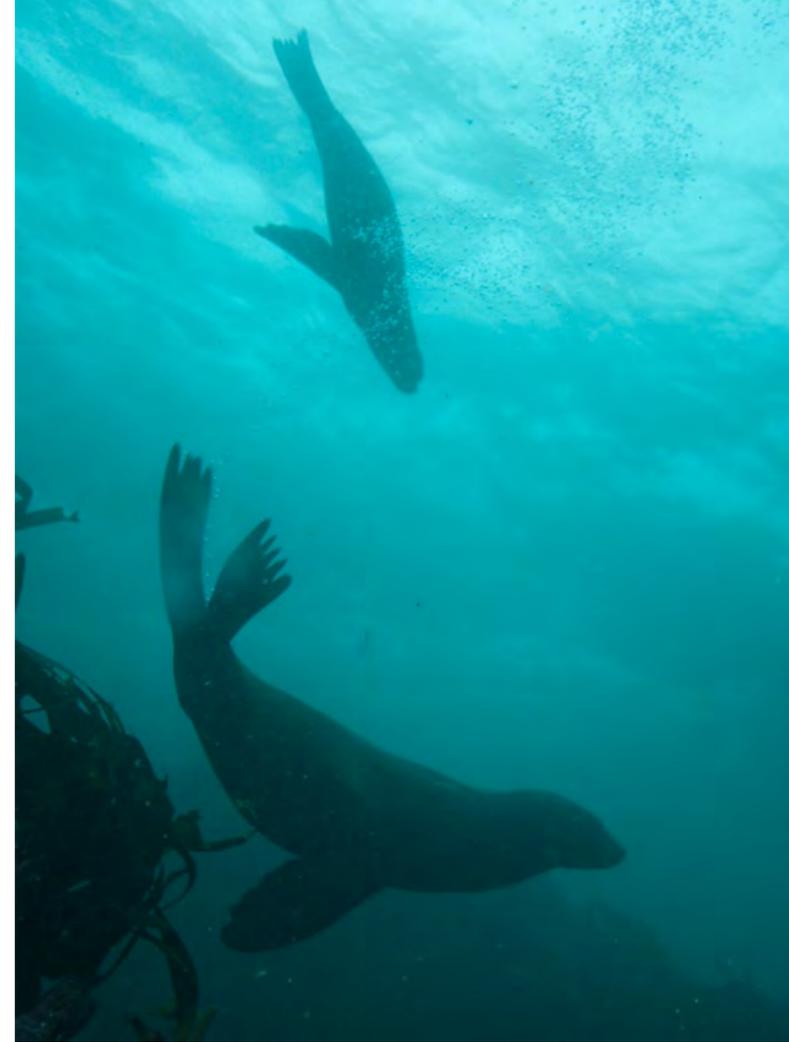


time was 17:54. Not 18:00, but 17:54? Windswept and carpeted by Fynbos vegetation, the landscape was stark yet beautiful. An eland bolted across the road, while along the coast, we encountered all four of the park's ostriches.

Normally associated with dry savanna, the birds made for an incongruous sight along the seashore. Seeing one relieve itself was practically awe-inspiring; the sheer force appeared capable of shattering a car windshield. Stopping for a photo at the

Cape of Good Hope, the wind actually knocked me off balance.

With daylight waning, our final stop was Cape Point Lighthouse. Not wanting to hike up in the wind (coupled with a dose of laziness), I opted for the funicular.



LEFT TO RIGHT: Detail of colourful reef at Partridge Bay; Cape Point lighthouse; Fur seals at Partridge Bay

Painfully slow, the ascent was further impeded by the driver-in-training that stopped short of the platform, resulting in a 15-minute wait. With extreme irony, I noticed the tram's name was "Flying Dutchman." From the look-out, the views were spectacular and winds even stronger. With surf pounding below, the "Cape of Storms" certainly lived up to its name.

More seals, sharks and kelp

During my final days in Simon's Town, I managed additional seal and kelp dives along with a second shark trip that proved even more thrilling. Conditions were rougher, testing everyone's seasickness threshold. I was okay, but one poor woman vomited for the entire trip. This time I finally witnessed a full breach where the shark caught a seal. Despite having seen footage on BBC's *Planet Earth*, nothing quite prepared me for witnessing the event in person. The sheer force displayed as the sharks erupted from the surface was mind-boggling.

Stephen counted 15 predations and five fatalities. I must admit, watching the proceedings left me with decidedly mixed feelings. Although observing predations was an incredible experience, one can't help but sympathize with the seals. It was definitely exhilarating to see one escape.

Describing the experience to friends

back home on Facebook, it was always the same question. "Was it scary?" Not at all. Pure exhilaration was a more apt description, with participants on both excursions utterly thrilled by their close-up encounters. Shark Explorers means to transform peoples' perception of these amazing creatures and seeing them up close in the wild is just the ticket.

Afterthoughts

During my 19 days in South Africa, the wealth of different experiences proved exhilarating. When it comes to the Sardine Run, fair weather divers beware. Truly nature in the raw, it was hard work; each evening, I could feel muscles I didn't know I had. Like anything in nature, nothing is guaranteed, with rain and rough conditions making for uncomfortable days out. However, that tantalizing glimpse of action was enough to whet my appetite for more. With so much more to explore, both under and over the water, I will definitely be back. It is the world in one country, indeed. ■

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fact file

South Africa



SOURCES: U.S. CIA WORLD FACTBOOK, XE.COM

History In 1652, Dutch traders landed at the southern tip of what is now South Africa. They established a re-supply station here at this point on the spice route to the Far East from the Netherlands. It eventually became the city of Cape Town. In 1806, the British seized the Cape of Good Hope, compelling many Dutch settlers (the Boers) to move north to establish their own republics. Diamonds and gold were discovered in 1867 and 1886 respectively, spurring immigration and wealth. As a result, subjugation of the native inhabitants intensified. British encroachments

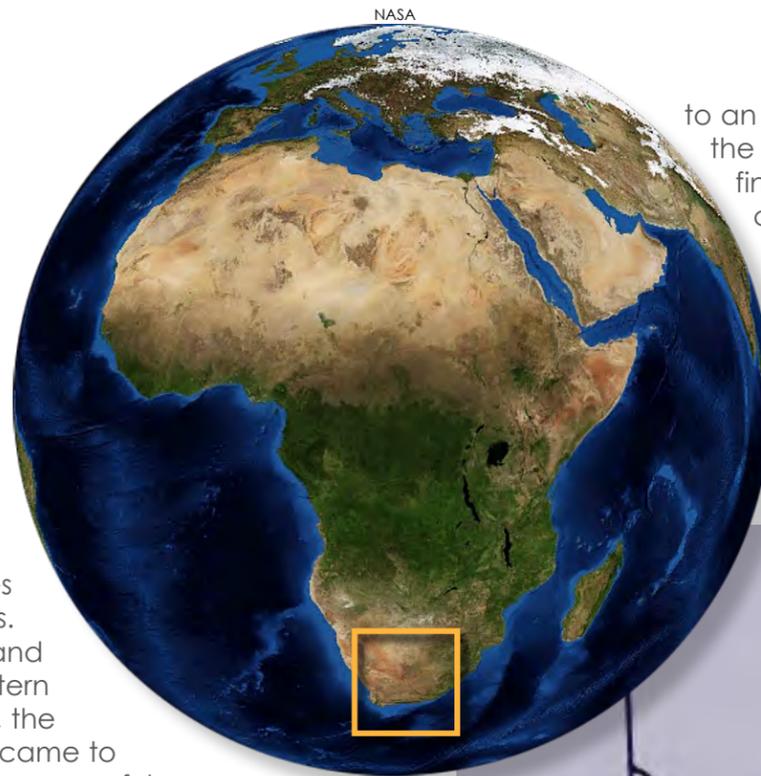
were resisted by the Boers, but they were eventually defeated in the Boer War, which took place from 1899 to 1902. But in 1910 the Boers, or Afrikaners as they came to be known, ruled together with the British under the Union of South Africa, which in 1961 became a republic after a referendum by white voters. A policy of apartheid (segregation) was instituted by the elected National Party in 1948. This policy favored the white minority over the black majority. Opposition to apartheid was led by the African National Congress (ANC) of which Nelson Mandela was a leader who was

imprisoned for decades for his political activities. After years of conflict and boycotts by some Western nations and institutions, the ruling party eventually came to the table to negotiate a peaceful transition to majority rule. The end of apartheid came in 1994, when the first multi-racial elections were held, ushering in majority rule under a government led by the ANC. The country still struggles with apartheid-era imbalances in education, health and decent housing. Infighting in the ANC has led to abrupt changes in leadership. Government: republic. Capital: Pretoria

Geography Located in Southern Africa, the country occupies the southern tip of the African continent. Terrain is comprised of a vast plateau in the interior, surrounded by rugged hills and narrow coastal plain. Coastline: 2,798km. Lowest point: Atlantic Ocean 0m. Highest point: Njesuthi 3,408m.

Climate Primarily semiarid, South African climate is subtropical along the east coast, with sunshine during the day and cool nights.

Environmental issues Extensive water conservation and control measures are required due



RIGHT: Global map with location of South Africa. LOWER RIGHT: Map of South Africa, BOTTOM LEFT: Fur seal in Partridge Bay

to the country's lack of important lakes and major rivers. Demand for water is outpacing supply. Other challenges include pollution of rivers due to urban discharge and agricultural runoff, acid rain due to air pollution, desertification and soil erosion.

Economy

A middle-income, emerging market, rich in its supply of natural resources, South Africa has well-developed sectors in finance, law, communications, energy and transportation as well as the 15th largest stock market in the world. Despite the country's modern infrastructure, which supports efficient goods distribution to major urban centers, there are obstacles that slow economic growth. In 2007, aging electrical plants led

to an electricity crisis and slowed the economy. Then the global financial crisis hit, reducing commodity prices and world demand. In 2009, GDP fell almost 2% but has since recovered. Current challenges include poverty, inequality and unemployment at nearly 25 percent of the work force. However, improvements

Currency Rand (ZAR)
Exchange rates: 1EUR=15.14ZAR, 1USD=11,16ZAR, 1GBP=18.41ZAR, 1AUD=9.80ZAR, 1SGD=8.75ZAR

Population 48,601,098 (July 2013 est.) Ethnic groups: black African 79%, white 9.6%, mixed 8.9%, Indian/Asian 2.5% (2001 census). Religions: Protestant 36.6% (Zionist Christian 11.1%, Pentecostal/Charismatic 8.2%, Methodist 6.8%, Dutch Reformed 6.7%, Anglican 3.8%), Catholic 7.1%, Muslim 1.5%, other Christian religions 36% (2001 census). Internet users: 4.42 million (2009)

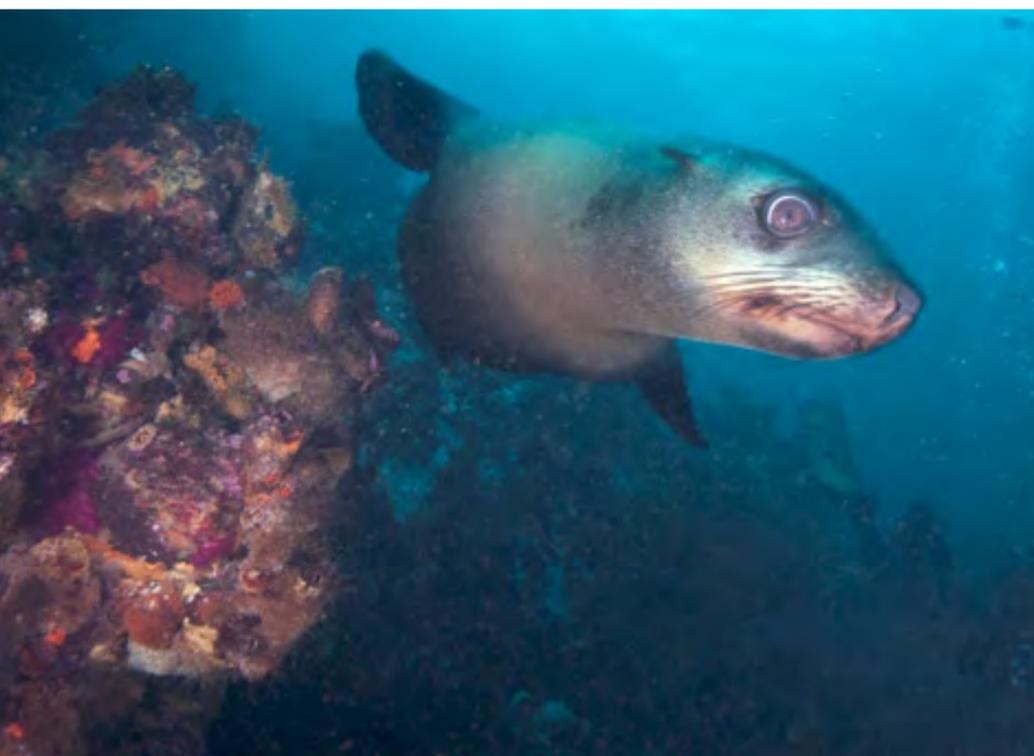
Language Official languages include: IsiZulu 23.82%, IsiXhosa 17.64%, Afrikaans 13.35%, Sepedi 9.39%, English 8.2%, Setswana 8.2%, Sesotho 7.93%, Xitsonga 4.44%, siSwati 2.66%, Tshivenda 2.28%, and isiNdebele 1.59% (2001 census)

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A diver carefully enters the admirals quarters on the *Mars*. In this space the most vicious and desperate fight occurred while surrounded by raging flames from the incinerating fires

Mars the Magnificent

16th Century Swedish Warship

Text by Veronica Palm, Project Leader, Västerviks Museum
Translation by Millis Keegan
Photos by Carl Douglas, Ingemar Lundgren, Richard Lundgren, Thomasz Stachura, Mattias Vendlegård

The Swedish warship *Mars*, otherwise known as *Makalös* (peerless), sank in a sea battle during the Northern Seven Years War in 1564. For many years, there were attempts to find the vessel in order to salvage the wreckage, but none were successful. Then, in the summer of 2011, the Västervik-based dive team, Ocean Discovery, located a large wreck at a depth of 75 meters just east of Öland. This wreck was eventually identified as the *Mars*. The discovery made headlines in the national and international press and generated great interest in the scientific community.

The discovery of *Mars* has not only lifted the city of Västervik to prominence as the base of an internationally reknown dive team but has also contributed a very exciting and important part to the history of the region—a history that the state is now in a position to

research and highlight. During the 16th and 17th centuries, Västervik had one of the most significant naval and commercial ship-

yards in which many of the great ships of the era were built and launched. With so much focus and attention now on *Mars*—one

of the greatest archaeological finds from this period—there is also the opportunity to highlight the region's historical importance

as seen from both a local and national perspective.

Västervik Museum has been entrusted with developing an

exhibition project on *Mars*, acting as the principal arena for mediation of new research findings that emerge in connection with



THOMASZ STACHURA





MATTIAS VENDLEGÅRD

Diver measures the end of one of over 120 cannons on board *Mars*

Battle of Öland in 1564; Two of over 220,000 silver coins found on *Mars* (lower right)

from the *Mars*: two bronze cannons, a gun carriage and timbers from the wreck itself, a large number of photographs, a unique photo mosaic of the wreck site and a 30-minute long film about the wreck and the surveys. In the exhibition, the *Mars* is presented together with previously known and excavated wrecks from the same era found in the Baltic Sea, such as the merchant ship *Ringaren* (1530) which sank just north of Västervik and the warships *Kraveln* (1525) and *Elefanten* (1563).

The research provides new insight into the formative period of Sweden's history as a nation-state. They also shed further light on the way this process played out and in

upper classes from different parts of Sweden. Most of the crew were drafted sailors from all over the kingdom. Several of them came from Västervik.

The Nordic war of 1563 erupted between Sweden and an alliance of Denmark, Lübeck and Poland during the years 1563-1570. Several conflicts took place at sea, but there were also battles held inland and also in Västervik where evidence still can be found of the destruction wrought by Danish forces. On 30 May 1564, the Swedes led a naval attack with *Mars* under the leadership of Admiral Jacob Bagge. They clashed with the Danish-Lübeck fleet off the northern tip of Öland, a battle which ended with the defeat of Sweden and the ship's destruc-

tion. To the depths the *Mars* sank, with more than 700 crewmen and several hundred Danes.

Current knowledge of the 1500s is limited. *Mars* will therefore—in addition to providing facts about the warship, its design and assembly—also make a major contribution to the research of 16th century Sweden. The ongoing find-



Mars

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the *Mars* project over the coming years. Efforts to produce films, exhibitions and publications on *Mars* and its contemporaries have begun. Through generous contributions from Sparbanksstiftelsen Tjust district and Västervik, as well as the efforts of scientists from the MARIS maritime archaeology research institute at Södertörn University and the Swedish National Defence College, several divers and maritime companies, and the Swedish Maritime Museum, the first exhibition project was implemented in 2012.

The research team has only begun uncovering the true facts about the *Mars*. The first archaeological surveys on the wreck site were carried out in 2012 and 2013, and the results are now on display at Västerviks Museum. Here you can see the first salvaged items

doing so, reveal not only the ship's principal role in European state building, but more generally as both manifestation and agent of social change. The condition of the wrecks also emphasize their violent demise and the chaotic environment on board during the battles.

History

Mars was built at Björkenäs shipyard, north of Kalmar, and launched in 1563. She was a ship of the era, with a displacement figure estimated at 1,800 tonnes, almost 600 tons more than the warship *Vasa*. *Mars* was about 50 meters long and about 13 meters wide, equipped with at least 120 cannons of various types. The ship had a crew of nearly 700 men on board and included representatives of both the lower and



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Most of the cannons were cast in bronze, which, at the time, was a very precious metal

ings will gradually document how the crew, officers and senior management of the ship lived on board, and what tools, equipment and personal effects they used. It was also during this time period that guns and other weapons were being developed using iron and bronze. On *Mars* and the wreck site, old and new weapons technology can be found. To date, it is the largest source of knowledge on guns used in the 1500s, as there are only a handful available on land today.

The discovery of the *Mars* wreck has brought to the fore not only research on the wreck itself, life onboard and the crew, but also the naval art of the period and its history—something that is particularly important for Västervik, which has historically been a major shipbuild-





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Cannon still sits in its carriage. To the right are rolls of lead, stacked. The lead was used for hull repairs but also for casting ammunition for muskets and small caliber cannons; Diver exits the admirals quarters on *Mars* (top)



Mars

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On *Mars*' starboard side, the hull lists towards the seabed. Cannons still point out through their portholes; Cannon ball (below) made of stone most likely used in back-loaded iron cannons

received substantial orders for repairs and rigging of ships.

Vision

The Central Baltic region has a vast and yet relatively unexplored heritage. MARIS, the centre for maritime archeological research at Södertörn University in Sweden, has recently started a major research project called *Ships at War: An Archaeological and Historical Study of Early-Modern Maritime Battlefields in the Baltic*, which includes the warship *Mars*, Baltic maritime heritage in general, and

the emergence of the Swedish naval fleet.

The research presented in this project will need to be disseminated through various channels to researchers, students and professionals and to schools and the general public. Västervik is a convenient central location to build the field competencies for this research through collaboration with MARIS. The city can thus become a center for maritime archeology in the central Baltic Sea area, providing research vessels, technical divers and adequate facilities to impart knowl-

edge and research findings to the general public and to schools.

A platform for major activities in the future can be established by having different partners and institutions come together to develop the themes of the research projects, which over the years have been important elements in Västervik Museum's historical mission and the Västervik region's local history.

Findings can be channelled through a modern visual museum of marine archeology and maritime



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ing and seafaring town. The reconstruction of the city in the 1540s was primarily due to the establishment of the shipyard and dry dock on Slottsholmen by Gustav Vasa [the King of Sweden from 1523 to 1560 –ed.]. It was in this shipyard that most of the fleet he created was built. But it was under King Erik XIV (1560- 1568) that the city established itself as one of the leading naval yards in the Kingdom of Sweden. In the 1560s, three of the Swedish Navy's largest ships were built at Västervik shipyard—the *St. Christopher*, *Tantheijen* and *Mars*' successor, *Neptune* (later named the *Red Dragon*).

The building trend continued into the 1570s when the Swedish Navy launched its biggest project yet—*Smalands Lion*, at 1,100 tons. According to the ship lists, a variety of vessels were completed over the following decades in Västervik, which during the early 1600s was one of two sites for the building of large ships in the Kingdom of Sweden. The shipyard also





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Revolutionary mosaic of *Mars* (left) built from 640 individual photos; Various vessels (above) were used on the project, all with different objectives and capacities; One of the mid-size cannons (lower left) being recovered using the A-frame apparatus of the RS *Triad*



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history publications. This may then increase visibility for the Västervik region resulting in the growth of employment in the city of Västervik and the surrounding community.

The development of exhibitions on 16th and 17th century Swedish maritime history is creating something that is lacking in the country today. Västervik Museum will partner with other museums in the country that specialize in maritime history, such as the Vasa Museum and the Maritime Museum in Stockholm, the Kalmar County Museum and the Naval Museum in Karlskrona.

The project

The exhibition—*Mars the Magnificent: Maritime History During the 16th Century*—is an ongoing project that will evolve during the years, conveying

knowledge about *Mars*, its present and future research, as well as Västervik shipyard and 17th century Sweden from a maritime perspective. The exhibition project will highlight the national importance of the *Mars* discovery as its base and widen out to both the Baltic perspective and the region's history.

The 2012 exhibition focused on *Mars* with themes about the ship—the battle, the wreck, and the find. Based on current research, the 2012 exhibition told the story of the ship, the Nordic Seven Years War and the Battle of the northern tip of Öland, as well as the story of the *Mars* wreck, its sensational discovery and important source of knowledge it represents. The exhibition was comprised of text and image banners, underwater films and slides. It was illustrated with finds salvaged from

the wreck site and shipping details from structurally similar wrecks of the same era.

Produced exclusively for this exhibition was also a hefty 20-minute-long documentary that was presented in a newly built showroom. The exhibition project had its own unique logo and was inaugurated on 8 July 2012.

In 2013 the exhibition was expanded and moved from the small showroom to the museum's main exhibition hall covering about 400 square meters, supplemented with the additional items and wrecks from the same period. The aforementioned themes surrounding the warship *Mars* will remain but will be updated as new findings emerge.

At the time of the 2012 exhibition, the archaeological documentation of *Mars*' hull had just begun. During the summers of 2012 and 2013, new dives were conducted documenting the wreck further through underwater

footage, photographs and measurements. Meanwhile, archival research continued.

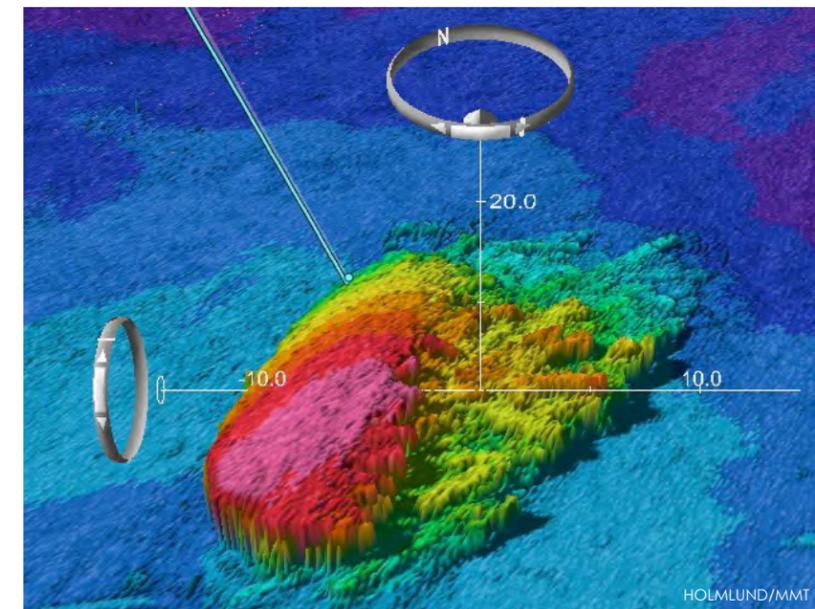
The potential source of knowledge from the *Mars* wreck is immense, and in time, we will learn more about the sinking of the ship and what life was like on board a large warship in the 1500s.

The *Mars* wreck site

The wreck site is vast and complex, extending up to 500 meters beyond the hull itself. Cannon balls, pieces of rope and masts as well as personal artifacts and skeletal remains reveal the brutality of the events sur-

rounding the sinking of the *Mars*. The wreck is in good condition, and both sides of the ship are almost completely intact. In many places, the cannons are still visible in their gun ports.

The documentation of the wreck is complex due to its depth at 75m and requires great exper-



HOLMLUND/MMT

Multi-beam sonar image of the *Mars* wreck site



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Cannons were documented and measured, providing important data for artillery expert and scientist Ingvar Sjöblom; Professor Johan Rönnby and project leader Richard Lundgren check detailed computer analysis of recovered coins (below)

tise and technical skill in diving. In order to document the wreck, divers are employing a new and revolutionary technology. Among other things, they devised a new method for documenting the site with digital photography, from which 3D projections of various

kinds can be developed, thanks to high resolution images.

Divers from different teams and Ocean Discovery have already logged hundreds of hours underwater in order to photograph the wreck site. Over 600 still images have been merged into a single summary screen where one can see the wreck site in its entirety. This mosaic is unique and is one of the central pieces in the exhibition, printed on 10x5m large canvas. Västervik Museum is the first to demonstrate this

unique mosaic technique in an exhibition.

Each dive also generated a large photo and video. Two documentary films have been produced and are presented in the showroom. Parts of the extensive photo documentation are shown on screens and iPads in the exhibition hall, alongside underwater film and ROV-footage. The material will be updated as the documentation of the wreck is completed and additional findings come to light, made by the two collaborating dive groups working on the site. Västervik Museum will also present some of the research findings from the MARIS project.

This year we can also display artifacts salvaged from the ship, which were not at all part of this year's plan at the beginning, but have now presented viewers a great opportunity. In 2012, three



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silver coins dated to 1562 were salvaged from *Mars*, which after scanning can now be exhibited in the security booth for public viewing. The coins are unique, and there are only a few like them in the world. In addition, objects such as salvaged ship parts and two cannons will be on display in a specially built pool inside the 400-square-meter exhibition hall. This display will be complemented by objects from wrecks of the same era as well as salvaged wreckage from, for example, structurally similar vessels.



CARL DOUGLAS

Included in the exhibition on *Mars* and the Baltic area's marine history and underwater world is a newly built and extended portion of the merchant vessel *Ringaren*. *Ringaren* sank north of Västervik in the 1550s and was investigated archaeologically in the 1970s through a project led by Tjustbygdens cultural association. Today it is represented by a model and salvaged items in a small exhibition in the museum's maritime hall. Last but not least, the city of Västervik, the Västervik shipyard and local history have been researched and featured in

the 2013 exhibition.

In conjunction with the exhibition, several lectures are presented by divers and leading researchers in marine archeology and maritime history, which will be further developed in the coming years to include a conference on marine archaeology. The exhibition will be a great asset in the museum's efforts to bring Swedish history to life, especially for children and young people, and further its investment in educational experiences, particularly for schoolchildren in the Västervik community.

The future

For the third year of the project, there are already several concepts developing



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beyond the completion of data collection and images. These include a model of the warship *Mars* at a scale of 1:10; a 3D studio where one can view the wreckage from different angles on a big screen or explore it on one's own via an iPad; a new film about the wreck and other archaeological objects in the Baltic Sea; displays of preserved artefacts salvaged from the wreckage; a display of a salvaged cannon and its preservation process; and finally, a ready, developed teacher lesson plan program that can

be applied and used in conjunction with the 2014 exhibition.

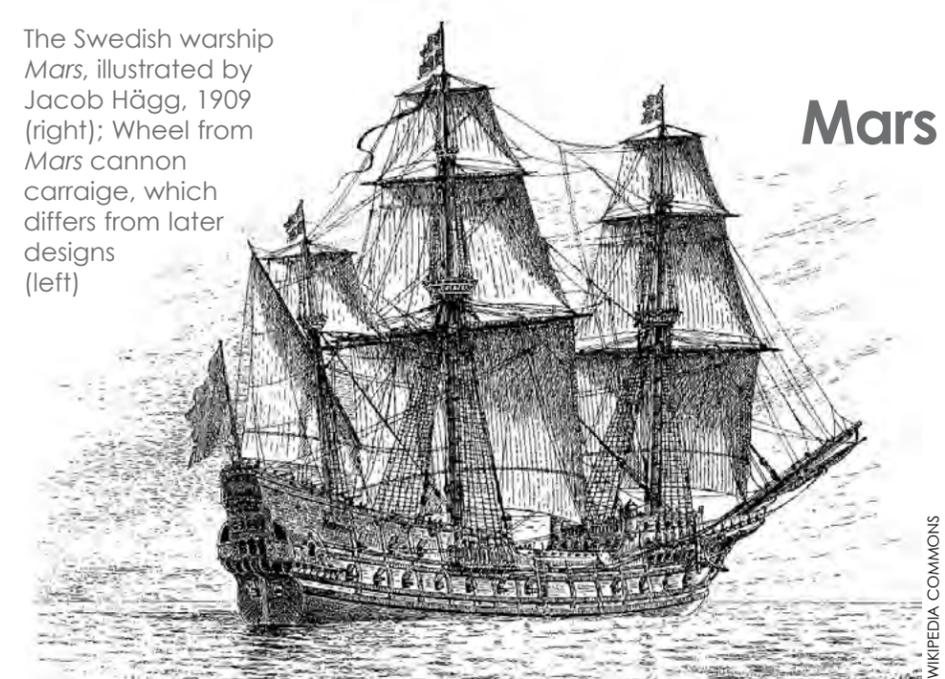
By using new digital visualization techniques to create 360-degree views, the visitor will be able to have an interactive experience of the wreck and get an idea of what it's like to be there. In this method, still photographs are taken in a circular sequence and then processed, or "sewn together", by computer so that



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Cannons onboard *Mars* were all individually cast. They were all uniquely ornamented. The handles, or dolphins, all have different motifs, in this case a sea monster; Professor Johan Rönby (left) inspects silver coins recovered by Jarrod Jablonski, Fredrik Skogh, Liam Allen and Richard Lundgren; Cooking pot illustrates life onboard (top left)

The Swedish warship *Mars*, illustrated by Jacob Hägg, 1909 (right); Wheel from *Mars* cannon carriage, which differs from later designs (left)



Mars

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a visitor using an iPad as a controller can turn full circle within the 360-degree panorama. Spectators will also see the image projected on a big screen TV. Objects in the panorama can also be made clickable so the visitor can get more information in the form of text or video.

This technology already exists, and the exhibition of the *Erik Nordevall* wreck in Vättern has a demonstration of the technology. Dialog with the Visualization Centre in Norrköping has already started regarding the development of digital visualization of the *Mars* wreck for the 2014 exhibition. The center is a leader in visualization technology in Northern Europe. Through the collaboration, we can recreate the warship *Mars* as it once appeared and present the ship and the battle in spectacular fashion via 3D technology viewed in a spherical room, for instance, in future exhibitions.

In addition to a model of the warship *Mars*, the future exhibition plan also includes a built-up section of the *Mars* gun deck and admirals salon at 1:1 scale. There will be cannons placed here, and visitors can check out the gun ports where a naval battle will be projected on a large screen using realistic computer graphics. With added sound and smoke effects, it could prove to be a powerful experience, all based on the findings and objects recovered in dives on the incomparable *Mars*. ■



Richard Lundgren

The Man from Mars

Text by Michael Menduno
Photos by Ingemar Lundgren

You could say that Richard Lundgren's destiny was cast when his parents took the precocious, then eight-year-old Swedish schoolboy to visit the Vasa Museum in Stockholm. The young Lundgren walked the oak decks of the 69m (226ft) long, 17th century Swedish warship *Vasa*, which has been painstakingly reconstructed following its salvage in 1961. Enthralled by the experience, Lundgren vowed that one day he would find Sweden's most famous shipwreck—*Mars the Magnificent*—King Erik XIV's warship that was lost in battle in 1564 in the Southeast Baltic Sea.

True to his word, and remarkably, more than 30 years later Lundgren and his team from Ocean Discovery, Lundgren's not-for-profit organization, discovered the shipwreck in May 2011, 447 years to the month from its sinking. It may prove to be one of the most significant maritime discoveries in history. Equally remarkable: though finding the *Mars* surely represents a career pinnacle, 44-year-old Lundgren and company have discovered more than 120

shipwrecks in the Baltic Sea since the late 90's, arguably making him one of the most prolific shipwreck explorers of our times.

Lundgren began his diving career working as a commercial diver for his father in 1986 at age 16, less than a decade after first surveying the *Vasa*. He later joined the Swedish military. Then in 1995, Lundgren took the plunge as the emerging technical diving revolution swept Europe and founded the first Scandinavian tech diving group, Baltic Sea Divers. That was the year he began his search for the *Mars* in earnest. Two years later he joined the Woodville Karst Plains Project (WKPP), in North Florida, which in addition to world-class cave exploration served to develop and refine training, equipment and operational standards during the early days of tech diving.

In 1997, Lundgren was a project leader and cameraman in one of the early expeditions to the HMHS *Britannic* and again in 1999. His video was later aired on National Geographic, the BBC, The History and Discovery channels. He also worked on the BBC series, *Journey To The Bottom of Sea*, where he filmed Britain's M1 Experimental Submarine in the English Channel, and in 2000, led a search to locate Spanish gold galleons in the Florida Keys using side-scan sonar. All the while, Lundgren and his team kept finding shipwrecks in the frigid dark waters of the southeastern Baltic Sea. Did I mention that LUNDGREN FOUND THE MARS?

In 2012, the intrepid explorer was inducted into the prestigious Explorers Club for his achievements,

and was awarded EUROTEK's most coveted "Diver of the Year" at their traditional gala dinner. A beaming, tuxedoed Lundgren took the stage, thanked the audience, and then thanked and gave the credit to his team.

Lundgren is a founding member of the Global Underwater Explorers (GUE) and was one of its first instructors. In addition to his active teaching practice, he currently serves on GUE's advisory council and is their point man for their closed circuit rebreather program, which is under development. The tall muscular blond is also funny, gracious and one of the most amicable people that you could meet.

Recently, I caught up with Lundgren during one of his frequent trips to Florida and asked him about life on *Mars*.

MM: Now that you and your team have found the Mars, do you have an ongoing role in its study and excavation?

RL: Yes, I share the role as project leader together with Professor Johan Ronnby. We are heavily involved in the research and scientific efforts together with MARIS, the research arm of the Sodertorn University in Stockholm supported by the National Defense College.

MM: What are the next steps for the project?

RL: In 2014, *Mars* will represent the largest marine archeological project in the world, with more than 60 participants, including more than ten

Richard Lundgren



Lundgren pre-breathing his rebreather before a dive (left) and preparing for a video shoot with Red Epic camera (below)

eration between my company Ocean Discovery and MARIS.

MM: Last time we talked, you mentioned the possibility of doing a Mars documentary. Is that still in the works?

RL: The first documentary movie will air in 2015. Reenactments will be shot this year and more underwater video. The giant screen 3D production is in the works together with a prominent U.S. production company.

MM: Has the discovery made a splash at home in Sweden?

RL: Yes, the first museum exhibition has opened in Vastervik with great success, and work is underway on a Mars-themed amusement park and much, much more.

MM: Are there any take away lessons that you have drawn from the Mars project?

from the Mars project?

RL: That cooperation is the key to success and that nothing is impossible!

MM: Are you planning any new exploration projects?

RL: One of the most important projects we are planning this year is linked to the Mars project. On the first day of the naval battle in 1564, Mars sank one of the opposing armadas admiral's ship. This was probably the first time in history a warship actually sank another using artillery alone. Even though this casualty of war is probably smaller than Mars, it would still add to our knowledge of what actual occurred during the battle if we can find it. Since the ship didn't burn and explode, the wreck may actually be found in near perfect condition on the seabed.

GUE is also planning several exploratory projects during the year in the Bahamas, Azores and in the Mediterranean. 2014 will be the year of global exploration for us.

MM: What would you say are the biggest challenges in being an explorer?

RL: Finding time to prepare and participate in all the fantastic opportunities that present themselves and to make the most of them. I'm, for one, not interested in just diving a target; I always want to know more!



MM: I see from Facebook that you are spending a lot of time in Florida. What else are you doing these days?

RL: Yes, I created a closed circuit rebreather (CCR) class for Global Underwater Explorers that we are beta testing. The class is based on five years of testing and getting input from many other users and manufacturers. GUE has not yet made the

Lundgren

decision to go with CCR, but we are well prepared if we do.

MM: How many GUE members have been through the training?

RL: So far the entire training counsel and many senior instructors have been through the program in addition to some GUE divers. To date close to 50 people have been through the program.

MM: Have you gotten any insights or lessons re: CCR safety as a result?

RL: We have, so far, been pleasantly surprised about how well the units tested performed. There have actually been very few glitches. I have found that some individuals work better with complex technologies than others. Everyone can learn, but for some, it's easier. This has been a challenge we've worked to overcome in designing the classes.

It's hard to say too much about the safety of the units. Most of the incidents we've seen find their roots in poor practices and user errors. The GUE system is particularly good at addressing these types of issues, so we hope to help future rebreather divers become more safe.

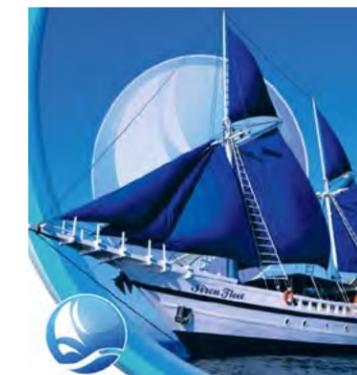
MM: Are rebreathers the future for deep (tech) diving?

RL: Rebreathers will definitely play a vital role in the future of tech diving and exploration!

MM: I hear that you are on a diet and working out like crazy. What's going on with that?

RL: It's my secret diet. I eat less and work out more! [Lundgren chuckles]

Actually, it's pretty basic. I've stopped eating foods that aren't healthy, reduced my intake and started doing daily two-hour workouts. This year will be challenging for me, and I'm preparing for it! ■



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