



Land of Fjords & Seas of Plenty

Norway

NORDKAPP LOFOTEN TRONDHEIM WRECKS KRISTIANSAND



Nordkapp *Wild diving at Europe's top*

Text by Arnold Weisz
Translated by Peter Symes
Top side photos by Arnold Weisz and Stein Johnsen
Underwater photos by Stein Johnsen

With little regard to the abundance of awesome dive sites around the island of Magerøya, it's the diving in Nordkapp, the Northern Cape, that everybody asks for, not just for the sake of having *been there-done that* at

Diving at 71°10'21"N

The expectations were sky high when we first rolled off the Zodiac and plunged into the big blue under the towering 307m high Nordkapp plateau. The owner of Nordkapp Dykkersenter

(dive center) Hugo Salamonsen is a native from Finnmark, the northernmost region in Norway, and as is typical here, he wasn't unduly burdened by modesty. He was going to show us some *real* diving, dammit—and disappoint us, he did not.

Below the almost vertical cliffs, we descended into an indescribable wild and beautiful natural underwater world. One gully followed after another in a very varied terrain. At a depth of 17-18 meters, we couldn't feel the ocean swell

anymore, and swimming along the wall, we come across big hollows encircled by kelp forest.

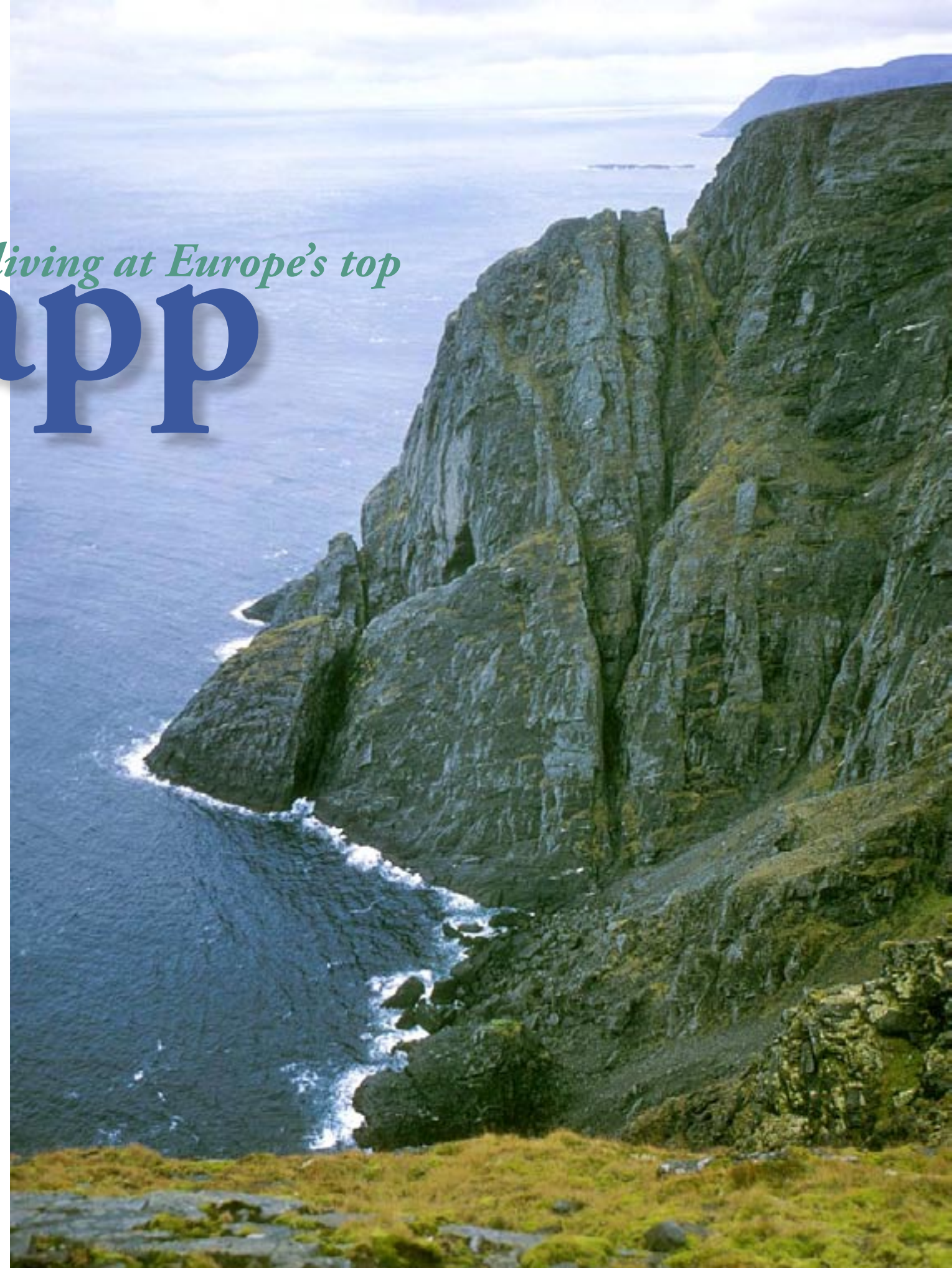


Europe's most northern point, but also because of the fantastic terrain below the vertical cliffs.

Vertical cliffs of Nordkapp, top of Europe
INSET: A hermit crab sports the latest fashion in sea anemone decor

Are you a connoisseur of nature diving and open oceans? Nordkapp is the place for you. From the town of Honningsvåg you have access to the magnificent gullies off Nordkapp, drift dives in the Magerøy Sound and cave diving in the Tufjord just to name a few.

A King crab has taken refuge under an sea anemone clinging to the steep rocky underwater cliffs of Nordkapp





Nordkapp

Our senses are constantly being bombarded here. The visibility is excellent, and above us, we see how the surf is breaking and slamming into foam as it hits the rocks. We enter a gully, where a squadron of coalfish swiftly sweep across the kelp, flying low in formation. We enter another gully moving forward in a jerky fashion as the swell above makes the water pulsate down here. Some times it is necessary to grab hold of a kelp stalk, to stay put when the current recedes outwards.

In the narrow gullies, we encounter dense beds of sea anemones. The



colourful tentacles sway with the current. Here and there, a curious squat lobster pokes its head out to see who is coming to visit. The path starts to get quite narrow, so we turn around and



is trying to hide but is given away by its rolling eyes scanning my every movement. I suddenly get goosebumps as a dark shadow in front of me moves. The beam of my torch cuts through the water like a sword and strikes a wolf fish right in the forehead. It just lies there munching on sea snails with its impressive dentures. "Bon appetite," we can't help murmuring to ourselves before we press on with our dive.

Spooky night diving

We were also able to make a couple of great night dives on this trip – which is not really possible during the high season when the midnight sun provides 24-hour daylight. Great night dives can be done only a few minutes drive from Honningsvåg, and it is absolutely worthwhile spending some hours down there one evening rather than hanging out in the pub.

Swimming around in the shallow kelp forest in the soothing darkness of the inner fjord is a unique experience. You are never quite sure what you are going to encounter next. You sweep the surroundings with the beam of your torch, and suddenly something blinks back. An enormous cod comes closer to investigate matters and see who or what is intruding in on his peaceful evening.

On the light sandy bottom, a plaice

Cave diving

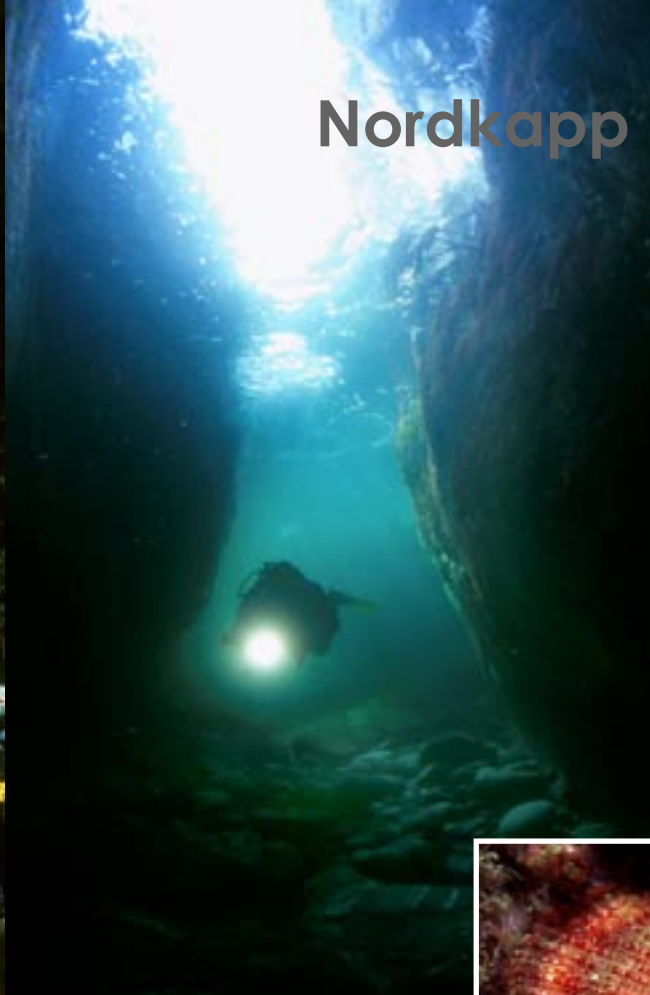
In Tufjorden, on the island of Magerøya's west side, we find a cave. At a depth of 4-5 meters, there is an opening taking one about 80 meters into the mountain. A good deal of this passage is rather narrow, so diving here should be reserved for high tide and calm seas. Otherwise, the swell would probably send you tumbling around out of control like clothes in a dryer.



The King crab rules below the waves around Nordkapp INSET: Spines of a nudibranch

CLOCKWISE FROM TOP RIGHT: Reindeer graze on the plains; A snail carries its home with it on one large foot pad; Brilliant sea anemone sways in the current

Nordkapp



The innermost parts of this cave opens up into a spacious cavern with 5-6 meters up to the ceiling and a big space of air.

This dive is not for the claustrophobic. After a while in the dark, you start wondering whether there might be a dragon lurking in the shadows while you frantically fin your way back to daylight.

The cave itself is not all that spectacular,

but the entrance and exit makes for quite an exciting and special underwater swim for those who have a propensity for this kind of adrenaline rush.

The less experienced can still get their kicks by restricting themselves to the first 10-15 meters of the entrance where there is still daylight and direct access to the open sea. In the opening to the cave, it is still possible to marvel at the polished rockface and the play of light on its surface without having to venture into the realm of absolute darkness.

And the diving outside the cave is not bad either. Lots of kelp and a very varied topography that descends into the depths as you travel into the fjord. Below the southern cliffs, the sea bed is strewn with boulders covered with dense beds of sea anemone.

Four seasons

There is no point in denying that the

weather has a great deal to say when it comes to diving around Magerøya. But it is always possible to find dive sites that are sheltered so you can dive any time

of year. Perhaps, you will have to endure a bumpy ride to the site or lashing rain or wind. According to Hugo you don't get far in these parts if you are not prepared to be flexible around your comfort requirements. It is not a place for whiners.

On the other hand, the Arctic Ocean might, all of a sudden, show off and present its most pleasant side when the sea is dead-calm, like a blue rug, while the sun shines from a deep blue sky. But be advised: bring with you clothing for all types of weather and seasons. If you are properly dressed, you will always be able to enjoy the magnificent sceneries up here—regardless of what the weather throws at you. This is Northern Norway at it's best and worst.



LEFT: Giant Sunstar graces the rocky reef under Nordkapp; INSET: Crimson tentacles of a sea anemone

CLOCKEWSIE FROM TOP LEFT INSET: Red striped shrimp on kelp; Entering the cave at Tufjorden; fish heads hang on lines for the birds to feed; INSET: Striated red scallop



Nordkapp



Nordkapp is located at the top of Europe



On top of Europe

Nordkapp rises 307 meters out of the Arctic Ocean and 200,000 tourists find their way here in order to claim that they have made it to the top of Europe. They want to experience the midnight sun from the most northern point in Europe. Well, that is what they think.

The most northern point is, in fact, Knivskjellodden, a little further to the west. However, Nordkapp is far more impressive than the little lame and boring tongue of land to the northwest.

The cliffs at Nordkapp is impressive and a must-see even though it costs a whopping NOK 185,- (about USD 30). It is still worthwhile. Aside from the astonishing view itself, there is a museum, restaurant, chapel and Omnimax movie theatre.

The 17-minute long movie is made by Ivo Caprino and gives a fantastic presentation of what Nordkapp and northern Norway have to offer above and below the surface and from the air. In addition, the film gives the viewer the unique experience of what diving off the coast of Nordkapp is like and another dimension of its natural beauty.

Nordkapp Dykkersenter

The dive center has two 24-foot Zodiac RIBs with glass fiber hulls. Both vessels are equipped

with 250 HP outboards. Even in a bigger swell, these boats have no problem travelling at speeds up to 30 knots with a group of divers on board.

Each boat takes up to 10 persons, and most trips are day trips where provisions and air are brought along for a full day's outing with 2-3 dives each. The dive center has at least 10 complete sets of rental equipment, drysuits and lamps for hire. Airfills are offered to both 200 and 300 bar. If you are missing a piece of equipment, you can probably find what you need in the well-stocked dive shop.

Are you bringing non-divers along, or do you simply want to enjoy the nature top side? Nordkapp Dykkersenter/North Cape Adventures also offers a wide variety of other activities such as deep sea rafting, ocean fishing trips, cayack tours, water-sports, bike rides, trekking, skiing and all sorts of guided trips. The center is open year round with flexible opening hours.

Getting there

The town of Honningsvåg is the biggest urban area in Nordkapp Kommune (municipality) with



Honningsvåg isn't just picturesque, it is also a working fishing port

approximately 3,500 inhabitants. The location has its own airfield and is served by the domestic airline, Widerøe. It is also connected by the famous ferry link, the *Hurtigrutan*, and a road link to the continent, which connects through a tunnel to the mainland. A multitude of accommodation is available, ranging from the spartan to the luxurious. For a town of Honningsvåg's size, there is a good deal of restaurants and night life. It is also possible to experience the cultural life and people of the coast. A little north of Honningsvåg, we find Skarsvåg—the northernmost-located fishing village in the world. For more information: www.nordkappoplevelser.no ■



CLOCKWISE FROM BOTTOM LEFT: Cod; Mussels on kelp; King crab duke it out on the sea bed; Bottom-dwelling Plaice are masters of camouflage

Lofoten Islands



Text by Arnold Weisz
Translated by Peter Symes
Photos by Stein Johnsen

ABOVE: Norway is the land of the midnight sun
RIGHT: Anglerfish with its huge gape

The Lofoten archipelago in Northern Norway is made up of majestic mountains and peaks, beaches and in particular a deep blue sea stretching as far as the eye can see. Beneath the surface we encounter a magnificent terrain with kelp forests and colourful walls covered with sea anemones. Schools of coalfish is passing overhead. On the bottom, we find anglerfish, wolf-fish, Northern Stone crabs and nudibranchs just to name a few. And we shouldn't forget the abundance of exciting shipwrecks. This is Lofoten in a nutshell.



A diver examines a stunning wall of brilliant sea anemones

Lofoten is the home of quaint unassuming little Norwegian villages





CLOCKWISE FROM LEFT:
Wolf fish bares sharp teeth
King crab displays powerful claws
A Brittle star stands out brilliantly
against the black sea bottom
Diver explores Lofaten reef



Midnight sun
Lofoten presented itself in the best possible manner when we did our crossing from Vestfjorden north of the city of Bodø to Lofoten. The sun was shining from a clear sky,

Lofoten is a collec-

tion of approximately 200 islands that stretches out into the Atlantic from Northern Norway north of the polar circle. This location makes the area unique. The coastal currents are constantly pumping fresh Atlantic water past Lofoten on their way northbound. This current, which originates in the Baltic, makes for a diverse marine life in the area. Lofoten, beneath the surface, offers steep drop-offs with walls covered with brightly coloured sea anemonea and lush forests of kelp swaying gently in the current. On the sandy white bottom, we find wolfish, cod and coalfish and the occasional anglerfish with its huge gape. We find both intense drift dives and placid lagoons, tiny nudibranchs and big seals and a huge variety of wrecks—a good deal of which resulted from the second world war—as well as steamers and freighters, fishing vessels and what not, not to mention, a passenger liner from the famous Hurtigrute —“The fast route”—the shipping service that sails up and down the length of the Norwegian coast, connecting the coastal cities from Bergen to Kirkenes near the Russian border.

the sea was calm and the view from the deck chairs on the upper deck was magnificent. Upon disembarking in Stamsund, we were greeted by Bjørn Sandnes from Aqua Lofoten dive center on Ballstad where we were to spend our first week. Cutting right to the chase, his first question was, “What



A shy Squat lobster crawls over reef corals
Diver enjoys a passage through kelp fronds



Divers prepara to dive in one of the rich islets of the Lofonet archipelago





Ogling eyes of an anglerfish may be watching you from under the kelp



Explosions of color erupt from giant colonies of sea anemone

kind of diving would you like?" Being a seasoned dive traveller, I have long since learned that the best answer to this question is "your favourite places". And, as the sea was dead calm, there were no issues in reaching any dive spot we would like. First dive was made only 10-15 minutes from Ballstad. Islets and shoals

usually makes up for a varied terrain with many hideouts for fish and other sea life. When you hover around the underwater gulleys, in the kelp forest and along the white sandy bottom, fantastic scenery and fish life surrounds you all the way throughout the dive.

From mid June to mid July there is midnight sun on Lofoten making night diving something of a misnomer. The good thing is that diving is possible 'round the clock, and it is an extraordinary experience to poke your head out of the water and up into the beautiful sunlight at 1am.

Drift dives

Lofoten can offer drift dives that can stand up to what Saltstraumen (the tidal current famous for its very fierce velocity) at Bodø has to offer. Whether you dive in the narrow sound Raftsundet or in open water at Moskstraumen, it is possibly to gain quite some speed during your dives.

Moskstraumen is known as the strongest tidal current in open water. It runs between the island of Moskeneøya in the North to the

Lofoten

uninhabited mountainous island Mosken in the south. The current is 4-5 kilometers wide and 40-60 meters deep and the area is considerably shallower than the open sea just outside. The tide fills up the Vestfjord twice a day and the difference in sea level may be as much as four meters. Right in between ebb and flow the current changes direction, and it is during these

reversals that vortices are created with a speed of up to six knots. It might sound perilous to dive in these conditions, but with a little experience and the right planning, the dives can be fantastic.

Each buddy pair is equipped with a big red surface marker bouy attached to a 30m line. This way the boat captain can always easily track each buddy pair. That being said, all there is to do is to make a back roll, descend into the big blue and enjoy the "train ride", and it does indeed feel like a train ride as you are being swept along by the current passing all sorts of underwater landscapes, shoals for other underwater creatures.

Explosion

No, not the terrorist



Divers suited up ready themselves for a Lofeton dive

attack kind of explosion. What we are referring to is a virtual explosion of brilliant colour that we experience on our dive.

It was such a delight flying by a wall along some islets in the Moskstraumen. Thousands of sea anemone covered the wall like a carpet of yellow, orange, red, pink and violet. There were so many tentacles swaying in the gentle current that we almost became afraid of getting lost between them. Between these lush fields of sea anemones there were healthy colonies of hydroids. The area also seem to be much favoured by nudibranchs who seemed more numerous that the inhabitants of Mexico City.

This dive was an good example of what the difference



Bright yellow markings on this nudibranch warns predators that it is poisonous

Sarawak - Malaysian Borneo

Miri Reef Map

Sarawak's ecological heritage is among the most distinctive in the world. Being part of the Indo-Australian Archipelago, the epicentre of marine biodiversity, the region comprises nearly 1000,000 square kilometer of coral reefs or 34 percent of the world's total, housing 600-800 reef-building coral species in the world. It is home to more than 3,000 species of fishes and the richest concentration of invertebrate species.

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THIS PAGE: Scenes from the wreck dive of the *Guðrun Gísladóttir*, which lies 37m below the surface



between a good dive and a great dive can be with a good dive lamp. Light equals colours. And it is not only along those impressive walls we find voluptuous vivid colours, but also in the kelp forest or along the boulders on the bottom, we find this seductive play of colours.

On the broad kelp leaves, the colourful nudibranchs have taken up residence. In the narrow crevices, small red fish keep a watchful eye on every movement in open water. These fish are not timid and can easily be approached by divers and will even follow a diver around when they feel like it. The squat lobster, in its bright red shell, comes across as both being shy and inquisitive at the same time.

Twilight

The terrain beneath the surface in Lofoten seems to be just as dramatic as the landscape above. Gullies, grottos and a dense kelp forest. Those who don't mind shadowy nooks and crannies and have no issues with claustrophobia will feel right at home here even with the

midnight sun shining bright above the surface. The kelp forest is a favoured refuge for a lot of fish and animal species. It is not easy to hunt prey that can hide in a dense forest.

In other places, the big boulders create exciting spaces in which to swim around. At a first glance, they appear devoid of life and somewhat sinister. But then you switch on your lamp and get your suspicions confirmed that you are indeed not alone. Not everyone needs to hide in the dark, some rely on their camouflage. With a little patience, you will soon locate angelfish, which seem to be one with the underlying rock upon which they are resting—giving away their presence only by their curious swivelling eyes protruding out from the sand. Tiny gobies also take advantage of the terrain.

Swim slowly and open your eyes. You will find yourself embedded in an underwater world teeming with life.

Wreck diving

The Icelandic trawler *Guðrun Gísladóttir*

shipwrecked in the Nappstraumen June 18, 2002. After several unsuccessful attempts to salvage her, it was decided to leave the trawler where she had come to rest.

The sea was still dead calm when we arrived, and the sun warmed us from a cloudless sky as we rolled into the water to dive the wreck. We descend along the downline to arrive at the mast of *Guðrun Gísladóttir* at 16 meters. The downline was fixed to the upper part of the bridge, so we sink slowly down along the mast.

The wreck is already covered in life, but has yet to acquire the mystique that surrounds older and more rusty wrecks. Nonetheless, this sunken trawler is still a wonderful wreck dive.

We touched bottom at 40 meters, and peered at the top of the wreck, the mast, at 16m. The wreck rests at an angle of 45 degrees to starboard on a sea floor of white sand or silt.

Another good wreck dive we enjoyed was that of the *D/S Hadsel*. This is the wreck of a local freight and passenger

Lofoten

COUNTER-CLOCKWISE FROM TOP LEFT: View of the RIB from below; Racks of drying fish; Morning on the Norwegian seas; Norwegians enjoy their beer and toast a good day of diving

vessel that ran aground upon a shoal in 1958 just north of Reine. *D/S Hadsel* leans over 50 degrees to port. It also rests on a white seabed. The depth here is 44m, but most of the wreck, including the bridge, can be found at about 37m. The aft mast reaches up to 27m. This wreck has been somewhat destroyed, but still feels like diving a whole ship. Although the deck is somewhat potholed, there are still parts of the planks left. The visibility was rather good, and we could see almost the entire wreck as we hovered past the mast where we had attached our lines. This was indeed a wonderful wreck dive, like a scene out of a Hollywood movie.

Other recommended wrecks in the area include *D/S Nordstjerna*, *D/S Mira*, *M/S Sanct Amandus*, *M/S Fram*, *M/S Hamburg*, *D/S Ramø*, *M/S Rio*, *MRS 25*, *M/S Atlas* and *M/S Stella Orion*.

Divecenters in Lofoten include Lofotdykk, which can be found in an old sea house built in 1890 in the middle of Kabelvåg. The house has five rooms with a total of twenty beds. There is a communal daily room, showers and toilets and a fully equipped kitchen in which guests can prepare their own meals. A full range of rental equipment is offered and airfills up to 300bar. This is also the departure point for Lofotdykk's 28-foot RIB with access to a multitude of dive sites 5 to 60 minutes away. www.lofotdykk.no

Aqua Lofoten Dive Center is located in Ballstad. It offers a full range of rental equipment and fills air up to 300bar. There is also a little dive store and accommodation for up to eight guests in a cabin with kitchen. One can also find accommodation at the nearby Kræmmervik Rorbuer. www.aqualofoten.com. See: www.lofoten-tourist.no ■



Lofoten Islands of Norway



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Trondheim *Wreck Safari*

Text and photos by Nils Aukan



Trondheim is located on the central western coast of Norway

Wreck safari and adventure along the Trøndelag coast on the Moby Duck

The Norwegian coastline is long and the shipping lanes winding and challenging to navigate. Here, the misfortunes of ships have become the fortunes of discerning wreck divers. Finding these wrecks is not without challenges, however, as you need precise direction and accurate positions. Be off by a few meters and you may end up swimming in the wrong direction and never see the wreck. The difference between success and failure can be a very fine line. Enter Roy Welle, a very experienced diver who knows Trøndelag county's water like the back of his hand. He is the skipper of the local dive vessel, *Moby Duck*. It was early May when we came along for a five-day wreck safari on the liveaboard.

A diver examines the huge propeller on the M486 wreck





Trondheim



LEFT TO RIGHT: The *Moby Dick* readies for a wreck safari on the Trøndelag coast; Swedes bring aboard double twin sets; Guide Didrik Tårnesvik with Skipper Roy Well in cab



INSET ABOVE: King crab feasting upon a sea urchin

RIGHT: Chimera, or Ratfish, are ancient fish of a different age. They came into being long before sharks and other early fish and have not changed much over the millenia. Shown here, *Chimaera monstrosa*



As I embarked the *Moby Dick* in its home port of Trondheim, I was joined by six experienced technical divers from Sweden, who had been on tours with this vessel before. All the Swedish comrades came with 2x12-liter double tanks and a 7-liter oxygen sling tank for decompression. They came across very safety conscientious and were obviously quite experienced wreck divers who favoured bringing ample supplies of breathing gasses on their backs and harnesses.

The Swedes were also equipped with massive battery packs at the end of an umbilical attached to hand-mounted lamp heads. I would say that their equipment weighed in at around 60 kg's each to be added to their own weight. Negotiating a dive ladder with all this stuff calls for a fair deal of physical strength and being in good condition. As far as I was concerned, I was happy with my single 15-litre tank and air fill.

Skipper Roy Well

was joined by Didrik Tårnesvik as guide and divemaster. Didrik used to manage the renowned dive center at Hitra and had a background as a professional scallop diver. Another professional scallop diver with experience in Nitrox diving, Robert Skaanes, came along as deckhand. Didrik was photographing with a Nikon Coolpix 990 in a Ikelite-housing, so I was pleased to have a fellow photographer with whom to buddy up.

Before we could have a go at the wreck buffet, we headed for a first dive right across the fjord, at Hidrem. At this location, there is a population of the special gorgonians or sea fans, *Paramuricea placomus*, in shallow water, which in this case, means 25-30m.

If you are lucky, it is also possible to see the ancient Chimera here, or Ratfish, *Chimarea monstrosa*. Didrik and I weren't, however, so fortunate. We were swept off by an ingoing current once we passed 25m, and we found it impossible to swim back against this current.

As we tumbled around we scared the living daylights out of a poor wolf fish, who took off like a tempest when we showed up. We ascended a few meters more to find ourselves grabbed by another current which took us back to our starting point—sweet!

Meanwhile, we had managed to get a glimpse of an amazing abundance of sea life with lots of squat lobsters, hermit crabs and lots of brown sea cucumbers *Cucumaria frondosa*, as well as another species that goes under the local name of "scaly sea sausage" *Psolus squamatus*, which had white and rose tentacles sticking out of the sandy bottom.

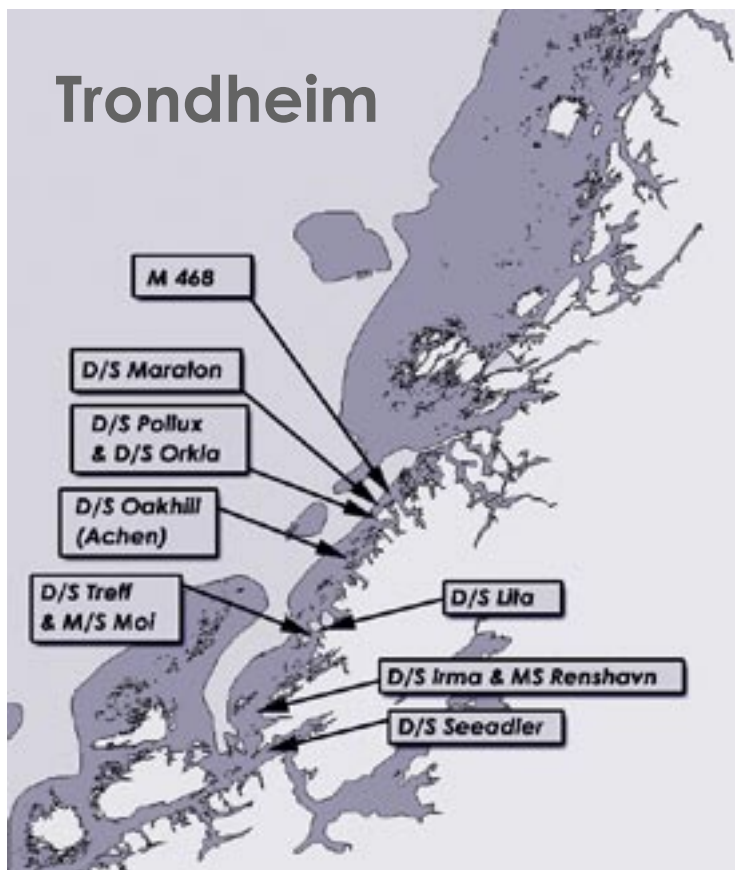
In the shallows, there were also dense colonies of the omnipresent Dead Man's Hand coral, *Alcyonium digitatum*.

As we were here during the algae bloom, the visibility was down to a moderate, though still decent, 8-10m below 20 meters, though it was only a couple of meters in the shallows.

Our Swedish friends had encountered the same currents as we did,



A Squat lobster oggles the camera with brilliant blue lined orb eyes and a bright red exoskeleton



Map of Wreck Sites on the Trøndelag Coast

but none of them saw the gorgonians on this dive.

The trip then took us further out of the Trondheim fjord, past Agdenes and into Uthaug on Ørlandet where we stopped for the night. We were then served a splendid dinner—the first of many excellent meals to follow on this trip.

The *Irma* wreck

Our first wreck was *Irma*, 3743 brt and located off Ørlandet. She was built in Sunderland, England, in 1906, and was a big vessel of no less than 350 feet. Heading south during the war fully loaded with 6400 tons of iron ore, she struck a rock just outside Djupfest-Bjugn and sank on March 14, 1944, with no loss of life. The vessel had originally come from Latvia, but was seized by the Germans during the occupation in 1940.

What remains of the wreck is found from 10 to 46m depth, but down to a depth of 25m, the wreck clearly shows signs of having the cargo of ore and metals salvaged after the war. There is not much left of the bow. The algae bloom was, unfortu-

nately, at its peak when we visited *Irma* but the wreck was clearly marked with a buoy.

As Didrik led the way, the towering side of the ship just materialised out of the plankton soup. We descended along the sloping wreck to our maximum depth of 30m where we took a series of pictures.

The wreck was totally clad in a carpet of big squirts, *Ciona intestinalis*, sporadically dotted by Deadman's Hands, which added some colour. Fish darted in and out of the holes in the wreck's steel plates. We could have gone even deeper where the wreck seemed to be more intact, but we had decided on this maximum depth.

On this big wreck, it is possible to take many different routes. The superstructure is massive, which calls for exploration and lighter penetration. On the seafloor, there were still heaps of iron ore. I lifted a few lumps, and they were clearly much heavi-

er than the average stone.

The Swedes had concluded their diving day by collecting a good bag full of scallops, which made for an exquisite scallop soup the following day.

Lita wreck

On we went to Stokksund and the wreck *Lita*, which lies at a depth of 32-39m in a sheltered area nearby an anchorage inside Stokken. The 318 brt big steamer *Lita* was built in Danzig, Germany, and she, too, perished in the second world war after hitting a nearby shoal. She sank with no cargo aboard on January 30, 1944.

In this case, the buoy and downline was attached to the port side of the wreck. The visibility was unfortunately also rather bad all the way down to this wreck, so I



A large Gorgonian fan coral greets the divers with brilliant colour

ABOVE: The *Irma* as she once was
INSET: Dive guide Didrik photographs the carpet of big squirts on the *Irma* wreck



The Minesweeper M-468 was sunk by a drifting German horn mine in 1944



Diver inspects the forward gear of the *Lita* wreck

descended with utmost caution through the algae-laden water column. I attempted to use my 16mm superwide angle and keep my strobes close, but the lack of visibility restricted the outcome of my photographic efforts. After a short swim to the midship and

back to the stern, Didrik and I decided to call it quits, whereas our Swedish friends seemed content to carry on. The spring bloom of planktonic algae, in which we were so unfortunate to arrive, was so intense in places that oxygen bubbles from their photosynthesis

made their way to the surface.

We then sailed on to Bessaker where we had a fabulous nature dive along a cliff wall. There were lots of squat lobsters, butterflyfish and yarrel's blennies. The colourful squat lobster, *Galthea strigosa*, definitely got the film rolling. With my 105mm macro, I got really close to the little bugger.

Minesweeper M-468

We reached the northernmost point of our journey at Langrøskjær lighthouse. Here lies the wreck of the German minesweeper, M-468. This M-class minesweeper had a displacement of 775 tons, a length of 62.5 meters and was built in 1942. It was escorting a German convoy from Trondheim to Bodø when it ran into a drifting German horn mine on August 12, 1944 and sank around 4:30am during an unsuccessful attempt to tow it ashore before it went down. The mine was spotted before impact, but despite a valiant effort and frantic maneuvering, it struck and exploded. The vessel capsized to the port and came to rest on the sandy bottom around 25-30m. The crew was rescued with no loss of human life.

The visibility was the best we have seen all trip, round 8-10m though the plankton near the surface cut out a great deal of the light from above.

Didrik has been here before and was once more my guide. We came down to the bottom close to the bow, which was fitted with a strange arrangement of tubes, the acoustic mine-sweeping apparatus. The bow section was resting almost upside down with the starboard stabilizing keel being on top.

We slid along the hull on our

Trondheim

way towards the stern where we came across our Swedish friends on their way back. At the boiler room the bottom plates at the starboard side was gone, and the whole ship had twisted itself in such a way that the remainder of the ship was lying on its starboard side at a 90° angle. Some of the hull plating in the bottom had been twisted outwards in the explosion. The ribs stood out like a ribcage with a wavy curvature. Obviously, the vessel has been weakened by the explosion and lost structural strength midships after which the ship collapsed and twisted itself in the 60 years that have since passed.

From the midship, the mast lies stretched out across the sandy bottom. Didrik and I took some shots here before we moved on towards the stern, where an external propeller axel, propeller and rudder came into sight. The vessel had two rudders and twin propellers. We shot our last frames and returned to the downline before our bottom time ran out.

This wreck was very exciting and, indeed, an extraordinary one. Maximum depth on this dive was 34m. The bottom time was 21 minutes.

Wrecks paraded

The same afternoon, we headed back towards Buholmråsa, and here the wrecks just line up virtually in rows. We dived the wreck *D/S Pollux*, which rests just off the lighthouse at a depth of 34m. This vessel was built in 1883 in Germany and owned by the Bergenske Dampskibsselskab (shipping company) when it was lost on November 22, 1900. The 1112



The tugboat found its resting place on its port side at 25-30 meters

brt vessel was 67m long. En route from Blyth on England to Tromsø in northern Norway with a cargo of coal, it ran aground and sank 180m southeast of Saxa without any loss of life. The salvage vessel *Sterkodder* almost succeeded in salvaging the ship a week later, but the mooring lines broke, and the pumping hoses were severed, causing the ship to sink once more. Later, the propeller was salvaged.

Skipper Roy set the

downline right on the wreck after locating it with the echo sounder. This wreck sits right on its keel and was, as such, easy to find with the echosounder once one knew where to look.

Once more, we were greeted by the algae soup in the surface, but the visibility improved as we descended. The light conditions were appalling, though, and it felt like night diving once we reached the sandy bottom

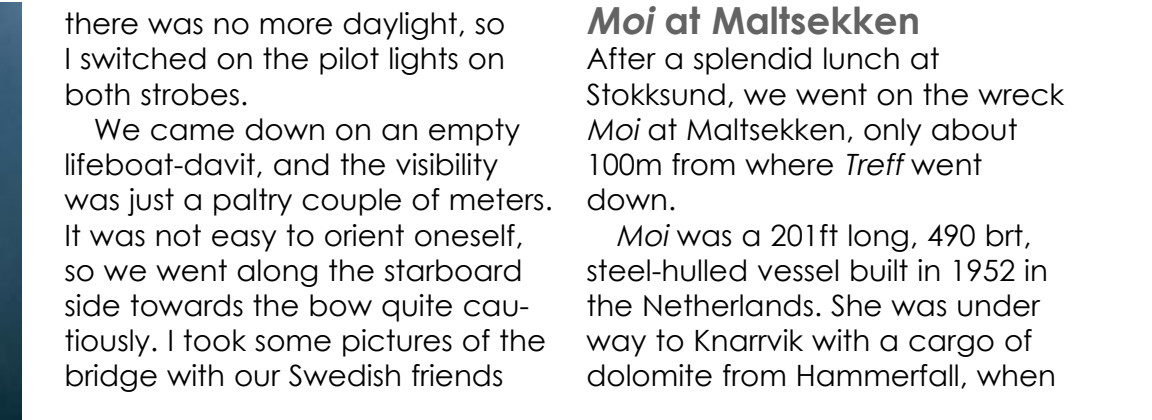
at 33m. Here, we came across a stripe of coal



The *Maraton* in all her glory

Trondheim

LEFT TO RIGHT: Girders of the *Pollux* wreck; Divers inspect the *Treff*; Doors open to the *Treff*



from the cargo, which we followed. The side of the wreck stood straight up like a dark wall nearby, and we got to the wreck at the midship level.

We followed its starboard side and went around the stern. Rudder and propeller were gone—only the axle remained. The wreck was nicely covered by Deadman's Hand corals with a sea lily taking centre stage. We took a couple of shots before moving on.

Around the boiler the deck was gone, and on top of the engine,

I saw several good subjects. Two of the masts remained erect and stood up 4-5m above the remainder of the wreck.

Once more, it was time to return to the surface, and I made my way back to yet another downline around midship. After the ritual three-minute safety stop, I was soon back on *Moby Duck*.

The *Pollux* wreck sits very nicely on the bottom, and had we had better visibility. It was obvious that we could have taken many fabulous pictures here. The wreck is now protected by the Historic

Remains Act, so it is not permitted to bring up any artefacts.

Close by, the shattered wreck of *D/S Orkla* rests at 6-20m. A green buoy was attached to the wreck when we arrived. This vessel had a tonnage of 4230 brt and was 380 feet long. It was owned by a shipping company from Kristiansund and was transporting iron ore when it foundered in 1957. The distance between *Orkla* and *Pollux* is less than 200 meters. And less than half a mile further out lies the wreck of *M/S Maraton*.

V-5706 Ostmark

Following a good nights sleep in Stokksund our next dive was on the wreck of a German sentry ship, the V-5706 or *Ostmark* on the

Nessaskjæret (Nessa Shoal) about 15 minutes from Stokksund. This 204 brt vessel was originally built as a whaler and launched under the name *Treff* in 1925. She was 110ft long and was used by the Norwegian Navy as a sentry ship until the Germans seized her in 1940. They mounted an big 76mm canon on the fore deck and equipped it with sinking mines.

Local belief has it that the Germans were drunk when they ran the ship aground on May 15, 1941, after which she slid off the shoal and sank to the bottom where she now rests at a depth of 36-46m. In 1995, Navy divers removed sinking mines and 76mm muntions from the wreck.

The algae soup somewhat turned the descent to the wreck into a night dive. Halfway down,

there was no more daylight, so I switched on the pilot lights on both strobes.

We came down on an empty lifeboat-davit, and the visibility was just a paltry couple of meters. It was not easy to orient oneself, so we went along the starboard side towards the bow quite cautiously. I took some pictures of the bridge with our Swedish friends

Moi at Maltsekken

After a splendid lunch at Stokksund, we went on the wreck *Moi* at Maltsekken, only about 100m from where *Treff* went down.

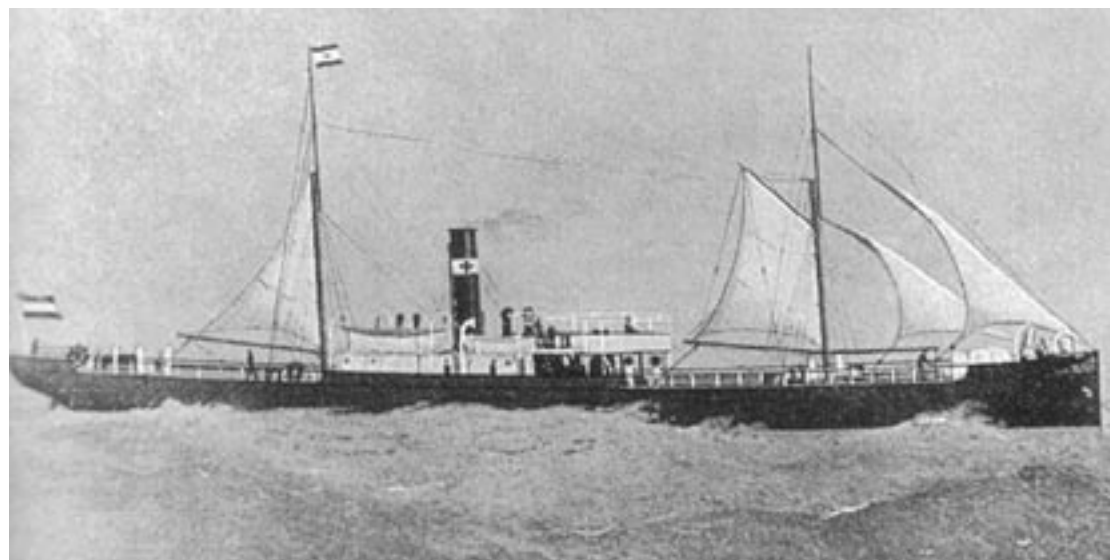
Moi was a 201ft long, 490 brt, steel-hulled vessel built in 1952 in the Netherlands. She was under way to Knarvik with a cargo of dolomite from Hammerfall, when

posing. It was my intention to continue to the bow to take some photos there, but at 40m, the bottom time runs out very fast. I managed to squeeze off one shot of the skylight as I passed it on my way back to the downline.

Maximum depth for this dive was 40.8m, and total time, including safety stop, was 19 minutes. I had 100 bars left in my 15-liter tank.

she ran aground on January 3, 1975, and went under. As the expression goes, she sank like a stone. The shoal ends in a steep drop-off, which the ship soon slid down to come to rest at 25-35m. She is now marked with a buoy.

The Swedes did their thing and went for the wreck as usual, while I opted for photographing the marine life on the slope as the visibility still left a lot to be desired.



The *Pollux*



Prehistoric face of the Rattfish

Trondheim

ing two different camera systems, one with a 16mm wide-angle lens and two 200-watt strobes, and another Nikon F-90x mounted with a 105mm macro lens and two 50-watt Ikelite strobes.

And what a dive we had! The visibility had improved dramatically, and some very special fish appeared out of the dark: Rattfish. Not just one, but several. They circled around me as my strobes fired non-stop.

The rattfish, or chimera, is a special deep water fish related to the sharks with its mouth placed on the underside making it resemble a rodent. The Rattfish lives off what it can find in the soft bottom—fish and crustaceans. In front of the dorsal fin, it has a poisonous spike, of which you need to be wary. Its eyes are big and reflective—obviously equipped with some sort of light amplification mechanism—and they are well adapted to seeing in the darkness that reigns

in deeper water.

The fish were not afraid of us and came quite close, enabling me to get a great portrait of one of them. I also managed to get two of them in the same



The Chimera or Rattfish is found in deep water

picture. How cool is that? This dive was great fun.

Just below a rockface at 25-30m, the current suddenly picked up again. Here, we found a population of the magnificent orange sea fans, *Paramuricea placomus*, and they were really impressive. These corals are unique for this location, in the Trondheim fjord, where they grow at shallower depths than seen elsewhere. Once more I started consuming film, but I struggled staying still in the current, and I soon ran out of time. I ascended into shallower waters where I saw more rattfish and many species of sea cucumbers—the common sea Cucumber, *Stichopus tremulus*, the Orange-footed Cucumber, *Cucumaria frondosa*, and the "scaly sea sausage", *Psolus squamatus*—as well as big northern stone crabs, *Lithodes maja*, cod and haddock.

I could even shoot my last frames during my safety stop where I was accompanied by lots of hermit crabs performing their mating rituals. The marine life on this location was just amazing.

Once back on the surface, we found daybreak underway and went back across the fjord to Trondheim.

In conclusion

The six Swedish divers and I enjoyed a spectacular adventure in the Norwegian undersea world. I have almost 38 years of diving experience and have seen a lot, but I have to say that especially our last dive was so different from anything else I have seen before in shipping lanes and open ocean. This was fjord diving at its best—exhibiting an astonishing

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corals in Trondheimsfjord

king crabs in Jardfjord
maelstrom in Bodø
trimix expeditions

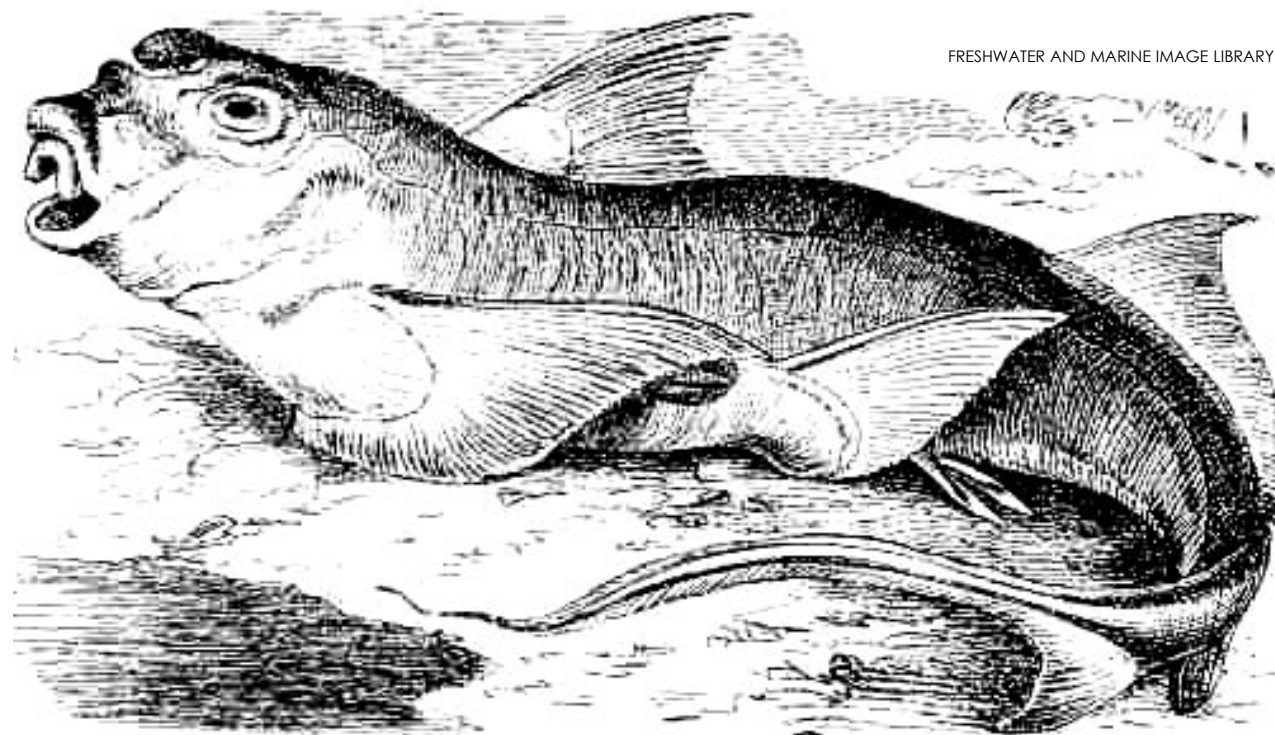
biodiversity and some of the best diving I have experienced in Norway.

The various wreck dives were also great. In particular, I fancied the dive on *M-468*. It had the drama and aura of war history. I was able to overview the ship, which was of a manageable size. All sections of the vessel were clearly recognizable, not just a chaotic pile of iron junk, which some of the shallower wrecks turn into soon enough.

However, the visibility left a lot to be desired, but that was due to the season. It is rarely good to go at the time we went, in May, when the plankton bloom

usually lasts for 2-3 weeks. Unfortunately, it cannot be predicted accurately. This year, it started early due an increase in the amount of sun. Usually, the visibility is decent below the algae, and once you go down to 10, 15 or perhaps even 25m, it clears up.

Diving 2-3 times a day can be quite taxing, but when you are accommodated so well aboard such a nice boat, which takes you effortlessly from site to site while you are being fed excellent meals, how can it be anything but good? ■



Chimaera monstrosa

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Kristiansand

Text by Arnold Weisz
Translated by Peter Symes
Photos by Stein Johnsen

Southern idyl with an Italian twist

Facing the busy shipping lanes of Skagerrak and being a communications link to the continent, Kristiansand, with its rugged coastline, is a ship graveyard peppered with exciting dive sites all of which can be reached in less than 20 minutes by boat.

Nothing beats local knowlegde. So, what options did we have other than to contact the Italian, Carlo Golfetto, who runs the dive operation, One Ocean, in Korsvik Marina a little outside the town of Kristiansand. The dive center is perfectly located for diving the region's most famous wreck the giant *MV Seattle*, which rests on a slope only 400m from the dive center. Other great wrecks are located very close by as well, within 10 minutes boat ride,

at decent depths between 15 to 30m. And the Italian presence here, however unlikely, just ads to the equation. Carlos' hearty laughter and his good command of English, with the unmistakable Italian accent, guarantees a couple of very entertaining days. The spirits aboard his dive boats were always high, and that is the way a dive vacation should be.

Advanced diving

We began with the biggest wreck and deepest dive—one of the best wreck dives I ever had in Norway. *MV Seattle* is not only in relative good shape, but it is also huge—a whopping 140m. The only downside is that a big part of it lies quite deep.

We did one dive on the shallowest part starting at the stern, from 23m on downwards. This was already very cool, but the remainder of the wreck beckoned me to venture further down along the sloping deck and quite

significant depths. There were two bouys on the wreck. One is tied to the stern.

From a depth of about 15m, it was possible to get a decent overview of this impressive wreck even before we could grab onto the rail. Reaching a maximum depth of 33m, we had ourselves a decent tour of the rear area of this massive wreck.

Even though the steel plates have buckled where the ship broke its back settling on the seabed in 1945, it is still in a fairly good condition. Big openings make it possible to penetrate parts of the wreck without having to embark on advanced penetration projects.

Even divers who don't call themselves die-hard wreck divers, yours truly included, think this dive is magical. The sheer size surely plays its part. Since the wreck sits straight up, it is not an issue navigating this one and find one's way back to the downline.

THIS PAGE: Divers explore the eerie architecture of the giant wreck, *MV Seattle*





Kristiansand



You like'a da pásta, eh?

As we break the dead calm surface and poke our faces back up into the sunshine, we are greeted by a wonderful smell of food. Straight back to the dive boat it is, and getting out of the dive equipment can't happen soon enough as Carlos has one of his lovely pasta dishes ready and waiting— steamy hot and yummy. A 40-minute dive laden with excitement and experiences surely works up a solid appetite, and followed by Carlos' pasta with tomato sauce and parmesan, diving and dining make for a highly recommended and memorable combination. I can think of worse ways of passing time while getting rid of some nitrogen.

The boat is already slowly heading for the next dive site. Hot coffee and tea is also served while we get under way and our tanks exchanged for full ones. The next dive site will be another wreck, the *Tom B*.

Since the sea is dead calm and this wreck lies in a exposed location by the open sea, it is a window of opportunity not to be missed.

Two out of three parts of the wreck are almost flat but the visibility is really good, and there is plenty of marine life in and around the wreck. Different species of the colourful wrasses dart in and out. On the white sandy bottom, several flatfish try out their camouflage and cover themselves with sand when we shine our torches at them.

In a shadowy cranny on the wreck a lumpsucker is guarding his nest of eggs. He doesn't fancy disturbances, but his curiosity seems to get the better of him, and he ventures out to eyeball these bubbling intruders. He ends up posing willingly for the photographers.

A little school of pollacks sails by but take off quickly once they establish that we are not all that exciting after all. Our computers now urge us to move towards shallower water, so we venture up into the kelp belt.

Here and there we see nudibranchs and crabs but, quite disappointingly, not a single lobster regardless of the fact that the terrain offers lots of suitable crevices and hideouts.

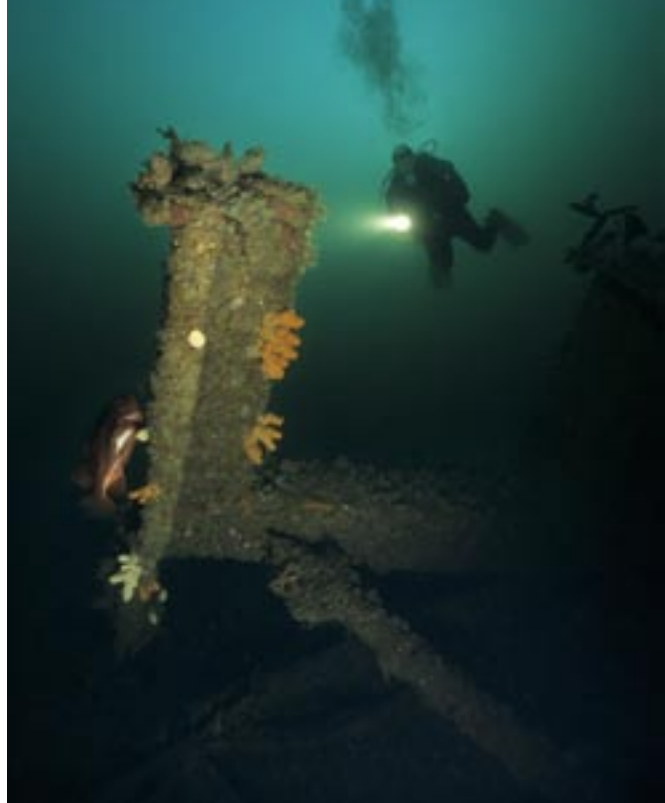
Ooops... now the the computer has

begun beeping. Even with a maximum depth at this site of not more than 23m, we have now become saturated with nitrogen and are obliged to end our dive despite having both appetite and air for more.

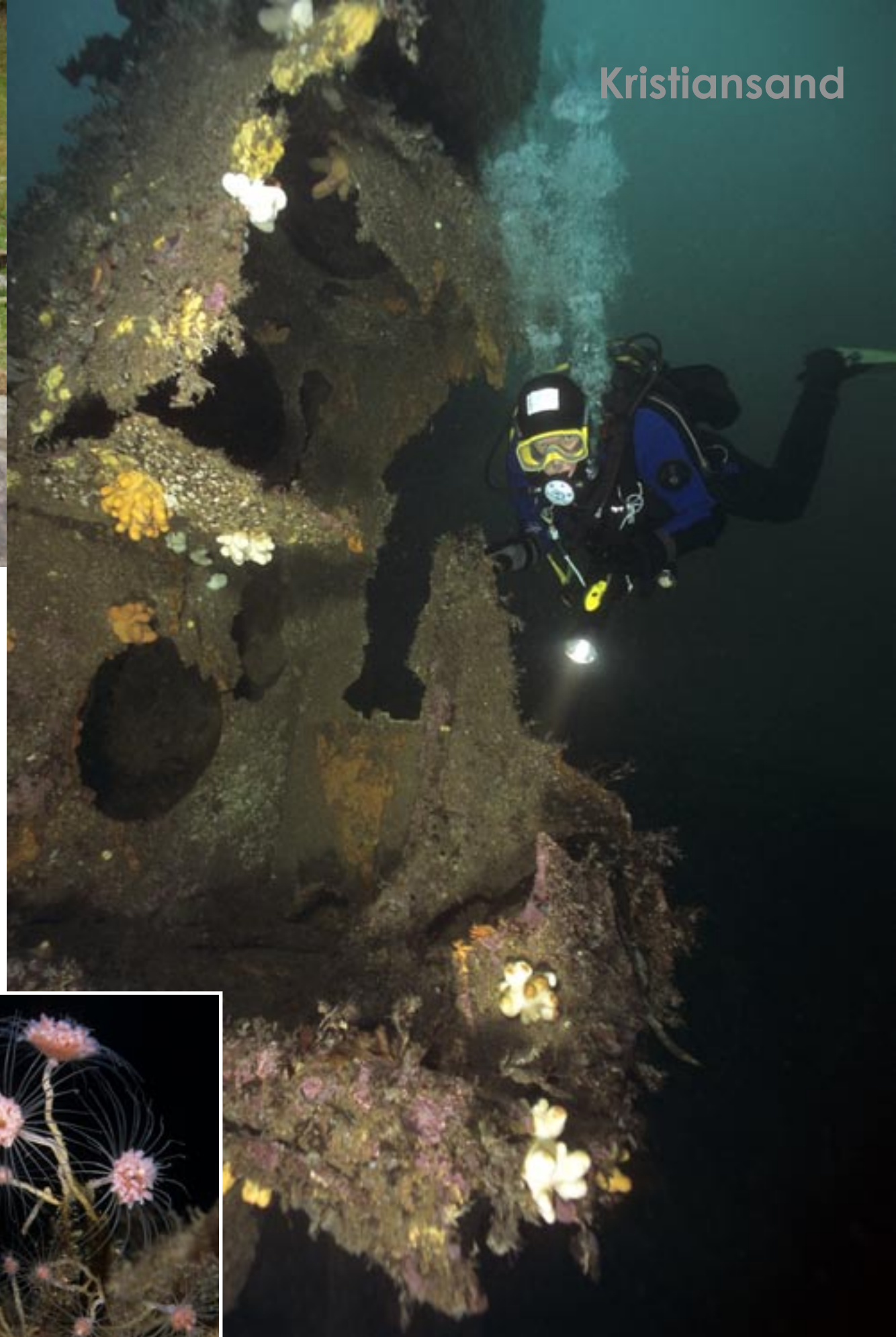
More rusty steel

Some of the best dive sites in the region are found just outside Kristiansand and on the outside of Topdalsfjorden. We did an impressive nature dive on the southeastern side of Grønningen Lighthouse. This dive site wasn't exactly pristine nature. We knew from the onset that we would see a lot of wreck diving on a trip to Kristiansand, but the fact that we couldn't escape finding some rusty steel on all of our dives is not exaggerated. On the other hand, the prolific fish life seemed to treasure all the remains of the shipwrecks that lie strewn over vast areas on this region.

We call this site a nature dive now, because the remaining debris cannot be called shipwrecks anymore and are in the process of becoming integrated into the natural habitat. The varied topo-



CLICKWISE FROM BOTTOM LEFT: Italian as he is, Captain Carlos prepares a delicious pasta dinner for the divers which is ready for them when the emerge from the wreck; Delicate soft coral blooms on a branch of sea grass like a flower; Divers explore the wreck of the *MV Seattle*



ABOVE: A cozy fire with a hot meal and hot coffee is just the thing between dives
LEFT: Large red starfish can be found on the rocky landscape under Kristiansand

graphy in combination with all the hide-outs created by the rusted twisted metal acts like a magnet for the local wildlife. They might be of the free swimming sort, or crawl along the bottom.

The bottom is quite varied and a lot of the cliff walls carry unmistakable marks from the ice age. The glacier ice scoured out fine arching furrows in the bedrock. It almost looks like it has been done by machinery.

The city wrecks

Surprisingly, one of the most positive wreck dive experiences we did was close to town. Initially, a quick glance at the map had done little to convince us that it would be a good wreck dive. We envisioned bad visibility and plains of bare mud, but Carlos insisted.

"The city wrecks" as he called them, are actually a splendid place for beginners' wreck dive training and penetration techniques. A maximum depth of 17m in combination with small and sizeable wrecks, four to be exact, makes for

a splendid training ground and a good site for a dive outing.

The wrecks, which have not been identified, lie in the harbour at Lund in Kristiansand. And if you haven't got enough of wrecks just yet, it is possible to continue diving on several more just by swimming off the jetty outside the dive center.

Just jump in and swim across the little sound. This can even be done under water since the depth is not more than 8-10m. Here, you will find the wreck of an old fishing boat at a depth of about 10m. But there are so many others. You can also find the remains of a German war plane, a Dornier, and the minesweeper M-426.

In between the dives, Carlos has several good sites where divers can go ashore and relax between dives. During summer time, it is tempting to just have a siesta and tan in this archipelagian idyl. In the cooler months, a campfire and hot drinks is another way to have a cozy break.

The king's city

Kristiansand is Norway's fifth largest city with around 75,000 inhabitants. The city was founded in 1641 by the Danish-Norwegian king Christian IV. During the summer, the city clearly comes to life. "Sun, summer and sørlandet" (which means 'Sun, summer and the county') is a popular figure of speech around these parts, and for many Norwegians, Kristiansand is the town for summer. Kristiansand can get about 2000 hours of sunshine a year.

The boating season is another popular aspect of living here that most of the Kristiansanders look forward to during cold and murky winters. The city can boast about having the largest marina in the country. Close by, one can also find the new fish-



Delicate polyps spread out their arms to collect nutrients suspended in the current

ABOVE: Great wrecks can be found right in the city of Kristiansand



Kristiansand

The One Ocean dive boat, ProDykk, loaded with eager divers heads to a local dive site. INSET RIGHT: Captain Carlos does air fills overnight so your tanks are ready the next day



ing pier which is really worth a visit. If you want to combine a family vacation with diving, this is a very good place to go. The animal and amusement park is the town's number one tourist magnet. Everyone knows "Kardemmeby" (Cinnamon town), right? Not to mention, the city also offers a wide range of cultural activities including many museums.

The dive center

One Ocean is located in Korsvik Marina, 8km east of Kristiansand. The dive center has a modern 35-foot dive boat moored only 20m from the dive center. One Ocean is open year round and offers boat trips seven days a week. In the summer there is up to three daily sorties and dependent on the arrangement and destination you can have one or two dives a trip. The boat has been purpose built for diving in 1998 and is equipped with a 215 hp diesel. On the stern a big diving platform is mounted with

a ladder. On the dive deck there are showers with hot and cold water so the diving equipment can also be rinsed after diving. With a top speed of 23 knots most dive sites in the archipelago is reached in less than 30 minutes. Tanks can be refilled from a station 24 hours a day. You pay with tokens bought in the dive shop during opening hours. Courses offered is PADI Open Water and upwards in the PADI hierarchy.

One Ocean has two types of accommodation on offer: Two condominiums view seaview located directly above the dive shop. These apartments come with all modern amenities, for up to eight divers in each. The other option is the nearby Dvergnestangen Camping, only 500m from the dive center, which also offer condos and, obviously, camping.

For more information, contact One Ocean located at Strandåsen 22, 4638 Kristiansand, Norway. E-MAIL: oneocean@oneocean.no, website: www.oneocean.no. Tourist information for Kristiansand can be obtained from www.sorlandet.com. ■



Close-up of a colony of polyps growing in a formation

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Kristiansand is located on the south coast of Norway

ABOVE: Dramatic view of a city wreck

Invasion of the Crabs

King crabs invade Norwegian waters

Text by Arnold Weisz

Photos by Stein Johnsen

The Cold War has been over for more than two decades, but a relentless red army of monster crabs are still pouring over the border of Russia into Norway. The crabs are feared by environmentalists, but not by scuba divers.

First introduced to the Barents Sea off northern Russia in the 1960s, Red King crabs (*Paralithodes camtschaticus*) are now spilling down western Norway by the millions. The first crab was spotted in Varangerfjorden in 1976. Since then, the crab has headed steadily west bound and is now found in large numbers west of the North Cape. The King crab roaming the sea floor of the Barents Sea is one of five species in the same family.

Three are native to Arctic waters, and two have their home waters along the California coast. The crab was taken from the Kamtsjatka Peninsula, on Russia's Pacific coast and introduced to the Barents Sea by Soviet scientists to get a better supply of seafood for the people in this part of the former Soviet Union.

Alien creature

As an introduced species, the crab is by many rated as an environmental hazard. Even though there has been research done on the crab for three decades, neither Russian or Norwegian scientists can agree on the future impact of the crab invasion on the local marine life. WWF Norway and other environmental groups have long raised their voices in concern for the impact on the

local marine life, as well as fish stocks and bottom dwelling animals. These groups accuse the Norwegian government of ignoring the possible consequences for the marine environment.

Estimates say that the total number of crabs is around 15 million in the Barents Sea. As these millions were



derived from only a few thousand at the beginning, the species have proven to be tough, prolific and enduring. In the mid 90s there was a scientific catch of the crabs, but only in small numbers. Commercial crabbing was first started by both the Norwegian's and the Russian's in 2003. The crab is regarded as a delicacy and can fetch up to USD 65 per kilo at fish markets in Oslo. It will be very difficult to stop this "red army" from marching on to battle fields further away just by fishing them, so it seems that we have to find other ways of controlling the population. For now, they have given the local fisheries another source of income, which by many is welcomed, as many coastal fish stocks are heavily depleted.

Docile monsters

Diving with this monster crab is not nearly as frightening as it seems. Although they can grow up to 180cm

(6ft) between the tips of their legs and weigh up to 9-10 kilos (20-22lbs), the crab is a rather docile creature. The first time I saw them under water was in the Jarfjord, just a few kilometres from the Norwegian-Russian border. We were told by the local divers that you can handle the crabs, but we were still a bit anxious when we encountered them for the first time.

They are bottom feeders, so you will most likely observe them sifting through the sea bed searching for everything from worms and molluscs to sea urchins and sea stars. The King crab is also known to add some vegetation to its diet and grazes on kelp and seaweed.

Or you can see them stride along the sea bed, either single or in large numbers. I must admit that the first time I saw a pile of 40-50 of these

beasts, I wasn't too eager to get too close. After having caught my first crab with my neoprene protected hands, much of the monster stories lost their sting. They are indeed beautiful crustaceans and will not run if you decide to have a closer look at them.

You don't have to venture very deep to see the crabs. They have been found as deep as several hundred meters, but are very frequently found in shallow coastal waters. You will find the King crab year around, but in the spring (March-May) they usually can be found in large quantities at depths easily dived by most, from 30 meters and up. We also caught a few crabs to cook, because they really are delicious. The taste and texture ranging somewhere between lobster and shrimp. While frowned upon by many, for Norwegian divers, this alien monster of the deep is a delicacy and an exciting newcomer to their underwater back yard. ■



fact file



Norway



History After two centuries of Viking raids into the European continent, Christianity was adopted by King Olav Trygvason in the year 994. Over the next several decades, conversion of the Norwegian kingdom took place until Norway was absorbed into a union with Denmark in 1397 that lasted for more than four centuries. Sweden tried to cede Norway in 1814, but Norwegians resisted and adopted a new constitution. Sweden then invaded Norway, but finally agreed to let Norway keep its own constitution in exchange for accepting a union under a Swedish king. But rising nationalism during the 19th century led to a 1905 referendum, which won independence for Norway. World War I saw heavy losses for Norway in shipping, even though it remained neutral. At the outset of World War II, Norway proclaimed its neutrality again, but was nonetheless occupied for five years by Nazi Germany (1940-1945). In 1949, neutrality was finally abandoned when Norway joined NATO. IN the 1960s, oil and gas were discovered in adjacent waters, which boosted Norway's economic fortunes. The country's current focus remains on containing spending on the extensive welfare system. Norway continues to plan for the moment when petroleum reserves become depleted. However,

Norway rejected joining the EU through a referendum held in 1972 and 1994; Government: constitutional monarchy

Geography Norway is located in northern Europe and is bordered by Finland 727 km, Sweden 1,619 km and Russia 196 km. Two-thirds of the country are covered by mountains; Norway has one of most rugged and longest coastlines in world with some 50,000 islands off its fjord indented shoreline; It holds a strategic location adjacent to sea lanes and air routes in North Atlantic; Terrain: Norway was shaped by glaciers which carved out fertile valleys and fjords from high plateaus and rugged mountains; Norway also has small, scattered plains and arctic tundra in the north; Lowest point: Norwegian Sea 0 m; Highest point: Galdhopiggen 2,469 m; Coastline: 25,148 km (includes mainland 2,650 km, as well as long fjords, numerous small islands, and minor indentations 22,498 km); length of island coastlines 58,133 km); Natural resources: petroleum, natural gas, iron ore, copper, lead, zinc, titanium, pyrites, nickel, fish, timber, hydropower; Natural hazards: rockslides, avalanches; Environmental issues: water pollution; acid rain damaging forests and lakes and threatening fish stocks; air pollution from vehicle emissions; Capital: Oslo

Climate is temperate along the coast, influenced by the North Atlantic Current; Norway has a colder interior with more precipitation and colder summers; the west coast is rainy year-round

Population 4,593,041 (July 2005 est.); Ethnic groups: Norwegian, Sami 20,000

Economy A capitalist welfare state, Norway has an economy that combines free



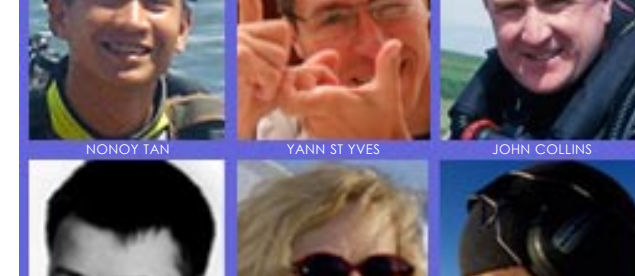
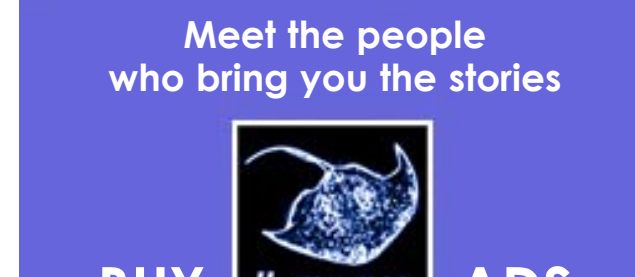
market activity and government intervention. Key areas such as the vital petroleum sector are controlled by the government through large-scale state enterprises. The country is richly endowed with natural resources such as petroleum, hydropower, fish, forests and minerals. With one-third of its exports being oil and gas, Norway is highly dependent on its oil production and international oil prices. Only Saudi Arabia and Russia export more oil than Norway. While Norway opted to stay out of the EU in 1994, it still contributes a substantial amount to the EU budget. Privatization has been encouraged by the government and Norwegians worry about the day, which will come in the next two decades, when the oil and gas will start to run out; So, the country has been saving its oil-boasted budget surpluses in a Government Petroleum Fund, which is invested abroad and now has now reached a valued of more than US\$150 billion. The early part of the new millenium saw lackluster growth of the country's GDP, but growth picked up by 2005. Industries: petroleum and gas, food processing, shipbuilding, pulp and paper products, metals, chemicals, timber, mining, textiles, fishing; Agriculture: barley, wheat, potatoes; pork, beef, veal, milk; fish

Currency Norwegian Krone (NOK); Exchange rate: NOK per US dollar = 6.62; NOK per Euro = 7.97

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Web sites

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