

# SAYA DE MALHA DAILY

A Newsletter by Dominique and François

Supplement n°1, 2023



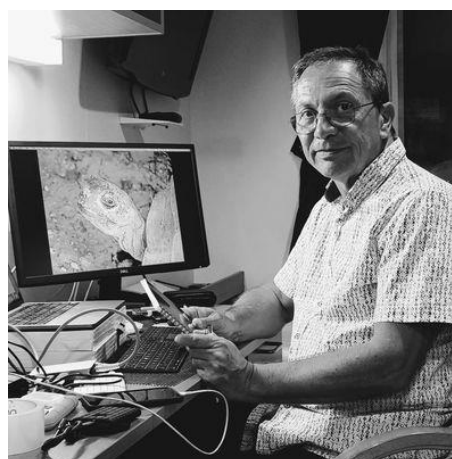
## PORTRAITS OF AN OCEAN VOYAGE

**These 33 portraits** present a community at sea over a 3-week period onboard S.A. *Agulhas II* during Monaco Explorations investigation of the Saya de Malha Bank, a poorly documented submerged island in the middle of the Indian Ocean. Initially randomly selected and included in the Saya de Malha daily as a mean to get to know people on board and what they do, they quickly became an exploration of people at sea, their motivation and reflections on being at sea and a member of this expedition.

Although we could not include everyone, we have tried through these few portraits to capture who they are as people, bound by space, time and a common purpose. Although from a range of backgrounds, nationalities, and age, they all share a love of the ocean and passion for what they do. It was a privilege to photograph them and to hear their stories. We hope you will enjoy them as much as we did.

### Didier Théron, Outreach Officer, Monaco Explorations

**Didier** was born in 1961 in Montpellier. Biologist by training and passionate by the marine life, he first worked with the Marine Biology Station of Sète and entered the Oceanographic Museum of Monaco in 2008 as a member of the aquarium team. Quickly, he became in charge of education and cultural outreach. On the expedition, he is responsible for communication and outreach. *"With this exploratory campaign, I hope that many children and youth will learn about marine life and its protection, and more broadly, that this campaign will raise awareness of high seas conservation on the basis of robust scientific information".*



### Bernard Rota, Founder of Globice



**Bernard** was born in 1954 in Savoie, France. He has lived in La Reunion for 27 years. In 2001 he set up Globice Reunion, an NGO dedicated to the knowledge and conservation of the Indian Ocean cetaceans. During the expedition, Bernard will share his time between the upper deck with binoculars and camera and on a zodiac dropping his hydrophone in the water for evidence of cetaceans. *"I hope to advance the knowledge of those animals and specifically the Bryde's whale observed before between the Ritchie Bank and Saya de Malha. Spending so much time on the upper deck in the sun scrutinizing the vast ocean for 7 hours a day can be challenging but I get a lot of visitors. "*



## Brendan Quinn, Expedition Doctor



**Brendan** was born in Pretoria 28 years ago. He studied medicine in Pretoria and specializes in maritime emergency and aviation medicine. His role on the *S.A. Agulhas II* is to look after the passengers' and the crew's health. It ranges from passengers' seasickness to risks of injuries around heavy machineries and operations of cranes and boats. It also entails taking care of the divers including rebreather deep sea divers. The ship is equipped with a decompressions chamber. *"An on-board doctor is on call 24 hours a day and during the first leg of the expedition, I helped arrange the evacuation of an injured scientist to the Comoros and then to Nairobi for treatment"*.

## Céline Dimier, Engineer, CNRS Sea Institute- Villefranche-sur-Mer

**Céline** was born in 1977 in Nantes. On the expedition, she oversees the samples brought in by the "Rosette" a sampling instrument essential for developing water profiles, first to describe an area poorly known and second to calibrate other instruments such as the Argo floats. She is part of the team led by Hervé Claustre. *"For me it is important that the instrument I am responsible for are in good order so that researchers can obtain reliable data for future research"*. Céline is an expedition veteran and would not have it any other way.



## Stéphane Dugast, Journalist, Author, Film Maker



**Stéphane** was born in 1974 in Nantes, the city of Jules Verne, which predestined him to explorations. Following 15 years in the French Navy as a journalist on military and scientific campaigns, he now is a free-lance exploration journalist. Compulsively curious about wild and unexplored places, his passion has taken him to all corners of the globe on a range of issues, and to this expedition. *"To tell the story of an expedition from the inside, communicate the excitement of research and experiencing field work are very important. Despite technology, we need people in situ and in vivo to give the right mood and emotion to a story"*. Stéphane has published books and made documentaries and is the Secretary General of France Explorers Society.



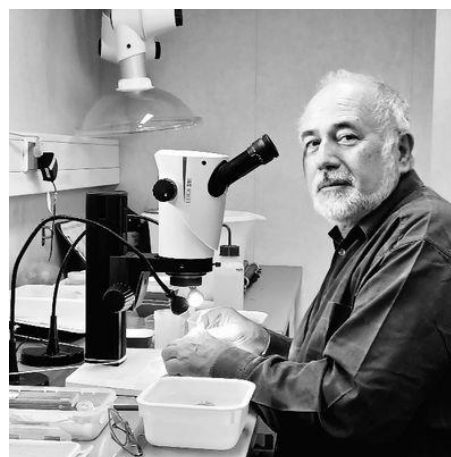
## Sharmaine Mamashela Seemole, 4th Mechanical



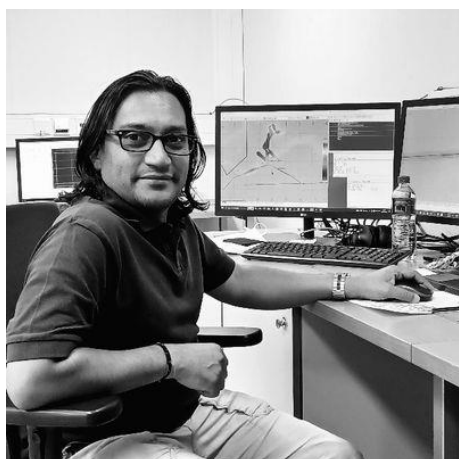
**Sharmaine** was born in South Africa Limpopo province but grew up in Durban and lives in Jo'burgh. She trained as a mechanical engineer. Shortly after graduating, she saw by chance an ad in the paper about a government programme to train as a marine engineer. She applied and was accepted. Since graduating in 2016 she never looked back. *"Marine engineering is my home."* she said. Working in a male dominated industry means that you have to work twice as hard to prove your capacities. Her ambition is to become a chief engineer one day. There are female cadets coming into the industry. *"I say anyone can do the job, it is not about strength. This expedition is very different from our usual Antarctic work, it is hot and I learn a lot about corals and the ocean".*

## Philippe Bouchet, Professor Emeritus, French National Museum of Natural History

**Philippe** was born in 1953 in Brittany. As child he spent a lot of time on the coast fishing for shellfish and learning about the marine world, which led him to his vocation to become a marine biologist. At 20 years old, he was recruited at the French Museum of Natural History where he worked until his recent retirement. Beginning with New Caledonia, and thanks to his entrepreneurial spirit, he organised and led international expeditions, financed by philanthropic foundations, to document marine biodiversity around the globe. *"Documenting the benthic biodiversity of Saya de Malha is a long-held dream. What we find most surprising are the small size of organisms collected and the limited primary production which so far cannot be explained. Although not yet all described, we expect to find high levels of endemism."*



## Dass Bissessur, Marine Geophysicist, Office of the Prime Minister



**Dass** was born in Mauritius in 1980. Following studies in mathematics and physics in Toulouse, he first specialized in information technology and more specifically satellite remote sensing. Thanks to two senior scientists keen to form a new generation able to work in the Indian Ocean, he embarked on a PhD in marine geoscience. His passion is to understand better how the Indian ocean seabed is evolving and to be able to map it. *"The seabed is not easily accessible and so it is a long-term project"*. He has participated in several expeditions and was co leader in the 2018 expedition of the Norwegian research vessel *Dr. Fridtjof Nansen*, a Mauritius Seychelles initiative funded by FAO. *"Each expedition is an opportunity to improve our knowledge of the seabed. This expedition is also an opportunity to plan for the next one"*.





## Mfundo Lombi and Darrel Anders, Technicians, DFFE



**Mfundo** and **Darrel** were born in 1978, one on the East coast of South Africa and the other in Cape Town. Darrel was passionate about the marine world from a very young age. He specializes in physical oceanography. Mfundo has always been interested in marine engineering. Their job is to operate the ship instruments which monitor temperature, salinity, currents' velocity and the echosounder. This expedition is very different from the polar expeditions they usually do. *"Working with scientists, innovative projects and open access to data is really great."* says Mfundo. *"Meeting people with different backgrounds is the best."* says Darrel. *"Bringing knowledge to the countries we visit in the region is also important."* says Mfundo.

## Mervyn Ravitchandirane, Marine Electronical Technician, IFREMER



**Mervyn** was born in 1998 and raised in Concarneau, Brittany. He grew up by the sea and got to go at sea often with his grandfather. He studied for a marine electronic technician qualification focused on fisheries. He joined the French Polar Institute as an instrument technician and spent a year in Antarctica doing field work with wildlife scientists. Following a short stint with industry underwater acoustic regulatory monitoring of marine mammals, he recently joined IFREMER in Reunion. He works with an AI specialist on a citizen project to map underwater habitats, using open-source low-cost technology, which they hope to deploy on the expedition, weather permitting. *"What I like in this expedition is the range of expertise and diversity of people on board and sharing experiences".*

## Egon and Robert Laaser, ROV Pilots, Marine Solutions



Born in Windhoek, Namibia in 1985 and 1989 respectively. **Egon** and **Robert** studied electrical and mechanical engineering in Cape Town. Engineering is in the family. *"Subsea engineering was an exciting field to move into"* says Robert. As ROV pilots, the brothers worked well as a team. Contracted mainly by oil and gas and mining companies, a scientific expedition is a first. *"It is a very different pace, and we enjoy working with educated and passionate people. There is a lot to explore to make better use of this technology for science. The ROV is a versatile tool that can easily be customized once we understand the scientists needs to make the most of this expensive type of equipment. It would have been great to have an opportunity to explore further the areas we surveyed to better understand what we see."*



## Andrew Matthew, Senior Project Surveyor, Underwater Surveys



**Andrew** was born in Port Elisabeth, South Africa in 1981. A wrong phone call led him to his current job. Unsuccessful in his applications to fly planes, he was by chance connected to the head of Navy recruitment. Within 2 days he was offered a position of naval officer and worked for 7 years for the Navy on hydrographic surveys. Marine Solutions and Underwater Surveys have complementary skills and collaborate often on projects which brought him to this expedition. *"Each project is different with unique requirements, challenges, and expectations. This expedition is very ambitious, there is a lot to achieve on very tight schedule with different scientific interests over a very large area. Accommodating everyone is challenging. In the end we get the best possible outcome with what we have."*

## Jeandre Karreman, ROV Pilot, Marine Solutions

**Jeandre** was born in Cape Town in 1993. He trained as a mechanical design technician. It is his first scientific expedition. *"It is the first time with a bigger ROV, a new experience. It is very exciting. Aldabra was out of this world. There is so much to see and enjoy with this expedition, the ocean is so spectacular and relaxing"*.



## Sheena Talma, Independent Consultant, Nekton, Save Our Seas

**Sheena** was born in Seychelles in 1990. She studied biological sciences in South Africa and is specialized in fish biology and genetics. She joined the Nekton expedition in 2019. *"I fell in love with the deep sea "*. Since through grants and small consultancies she has taken any opportunity to study deep sea fish populations. Her passion is to make knowledge accessible and contribute to building deep sea research capacity in the region. She took advantage of the expedition ROV to test her low-cost deep-sea camera and hopes that Seychelles and Mauritius collaborate on the analysis of ROV data. *"The expedition brings regional scientists together and new collaborations. More research leadership from our region is needed"*.





## Mariette Dine, Entrepreneur



**Mariette** was born in Seychelles in 1991. Her family always had an interest in the environment. She completed her university qualifications on Marine Science and Sustainability at the University of Seychelles. Thanks to SeyCCAT grants, she developed a project on the use of marine algae to produce bioplastics. "The idea is to show what economic diversification could look like, linking science and innovation to encourage local entrepreneurs to persist with their ideas. *"This expedition is to look beyond Seychelles and develop new collaborations. I want to broaden the debate around plastic pollution, show the impacts of microfibers on the ocean and change habits. It is my first time on an expedition, I learn a lot about science".*

## Ivan Maart, Head Chef, S.A. Agulhas II

**Ivan** was born in Port Elisabeth in 1968. Growing up his dream was to become a doctor. So, he first trained as an orderly and realized then he liked cooking for patients. As an elder son, he helped his mum with cooking and thought of cooking as a profession. Friends encouraged him to come at sea and that was the start of his career at sea. His passion was born. Through training and hard work, he is now a head chef. AMSOL recruited him for this expedition, a highlight of his career. *"It is the first time I can experience the scientific work, I only dreamed of what I saw on this voyage. People are also amazing and friendly. They give me energy to do my best". My special moment was when I prepared a platter for Prince Albert II. it was heaven on earth!".* His final word is *"a great chef needs a good team".*



## Line Le Gall, Professor, French National Museum of Natural History

**Line** was born in 1976 in Normandy. Her love of botany and the sea brought her naturally to her specialization in the taxonomy and evolutionary dynamics of algae. She is the director of the Scientific Explorations Delegation of the French National Museum of Natural History and coordinates the Museum expeditions. On board, she oversees diving operations. She is an experienced diver and can dive to depth of 100m. *"Diving requires trust and leadership". It also about common sense, which at time requires adjusting protocols developed for professional diving to scientific exploratory diving and good relationships with the crew. This expedition is multidisciplinary and not always easy to coordinate, but it is rich in experiences and encounters."*





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## Florence Galletti, Lawyer, IRD

Born in Paris in 1974, **Florence** grew up in Senegal. At university, she wanted to study oceanography but not good at math, instead studied international law. She joined IRD thanks to her specialization in comparative law and Africa. Her interest is the interaction between the Law of the Sea and marine sciences and the evolution of the Law of the Sea. *"Being a lawyer amongst scientists can be challenging, but so interesting"*. She cooperates with the Nairobi Convention on the development of the 2023 Indian Ocean Regional Ocean Governance Strategy and its relationship with the new treaty on Biodiversity in the high seas (BBNJ), soon to be finalized. *"Scientific expeditions such as the Saya de Malha are influential and can lead to creative legal solutions to manage the regional space"*.



## Artists on Board



**Élise Rigot** was born in 1993, she lives in Toulouse. She is an artist and design researcher. In 2022, she obtained a PhD in design entitled *"Sensitive knowledge: transdisciplinary experimentation on 3D technologies and life engineering"*.



**Rémi Leroy** is 30 years old. *"Five years ago, then an engineer, started for me a great passion linked to a deep love: my wife asked him to come to Tanzania to illustrate her anthropological research"*. Since then, his work has been part of this dialogue between art and science. In the field, he mainly does sketch, spontaneous and suggestive, from which he develops his illustrations back in the studio.



**Chloé Thibault – Vanderlynden** was born in 1995 in Brittany. Creator and fashion designer, she works mostly for children. She illustrates projects to educate for the conservation of the environment. She also creates fashion for children and teenagers.

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## Abel Sorry, Principal Researcher, Blue Economy



**Abel** was born in Seychelles in 1982. As a child he always had an interest in marine science, and he completed studies in fisheries science at the University of Seychelles. He has been with the Blue Economy Department since 2019. *"What interested me is how to implement blue economy in Seychelles, how we use resources and manage our marine environment for future generations, not just fishing and exploitation. The expedition has been a learning experience, engaging with scientists of different nationalities and disciplines. The good collaboration between Seychelles and Mauritius and other scientists is very encouraging for the future planning and management of the Joint Management Area".*

## Gwennaïs Fustemberg, Project Leader, MADCAPS



**Gwennaïs** was born near Paris in 1999 but grew up in Brittany. The sea was always part of her life, fishing, surfing and hiking. She completed her master's in marine biology on the genetics of marine birds with the University of Brest in June 2022, which took her to Reunion Island and Azores. Her awareness of plastic pollution came from her work as a volunteer on beach cleaning and waste management in Reunion Island. On the expedition, she leads the MADCAPS project on microplastics distribution and vectors of pathogens in the Indian Ocean. *"This expedition for me is about encounters, sharing knowledge across projects and life experiences. As the youngest researcher on board, it gives me confidence. Working and sharing knowledge with the crew was the best part".*

## Knowledge Bengu, Captain of the S.A. Agulhas II

**Knowledge** was born in Durban, South Africa in 1980. Growing up in a family of teachers, he wanted to be a doctor but a neighbour who was a seafarer changed his mind. A high achiever and ambitious, he aimed to become an officer. Following his university degree in maritime studies, a cadetship with AMSOL and Master in captainship in 2012, he had his first command at 32 years old. He has been Captain of the S.A. Agulhas II for 10 years and is very proud of her. *"Responsibility, discipline, respect, and following instructions are my approach to leadership. As a Captain, you are responsible at all times. The daily meetings have been essential to understand and adapt to the needs of the scientists, share information and coordinate and plan the day ahead to ensure smooth and safe operations".*





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## Rajpaul Kniekeal, Chief Navigation Officer, S.A. Agulhas II



**Rajpaul** was born in Durban in 1996. navigating was never part of the plan growing up, however, being from a military family, he was familiar with the navy and ships. On completing a maritime high school, he knew it was his calling. Sponsored by AMSOL he completed a university degree in maritime studies and was offered cadetship and 2 years later graduated as an officer. Now 2<sup>nd</sup> in command, his next step is to study for captainship. *"What I love about the job is the adventure, the capabilities of S.A. Agulhas II and her missions. I like working with people with different expertise from different cultures and backgrounds. Diversity is attractive. this expedition is my first time in the Indian Ocean. For me the highlight was being and learning about Aldabra and meeting Prince Albert II".*

## Francis Marsac, Oceanographer, Expedition scientific Coordinator, IRD



**Francis** was born in 1956 in Sables d'Olonne, France. He grew up with Cousteau books and films. As a young boy, he used to go out with his dad sailing and catching plankton in his home-made net using his mother pantyhose and then observe them under a microscope. The Scripps Institution of Oceanography "Planet Ocean" inspired him to become an oceanographer. Visiting after completing his studies was very emotional time. *"I was no longer an observer but an actor".* He joined ORSTOM, now IRD, first in New Caledonia and then spent 26 years in the Pacific and Indian Oceans and settled in Seychelles. *"This expedition is challenging from a scientific point of view and from a diplomatic point of view given the unique governance of Saya de Malha. My role is to plan, facilitate, listen, problem solve and try to meet expectations of all".*

## Gilles Bessero, Expedition Leader, Monaco Explorations

**Gilles** was born in Montbéliard, France in 1952. Growing up, he developed a strong interest in the marine world, inspired by Jules Vernes and Jacques Cousteau, his ambition being to join the Navy. Graduating from Polytechnique and the ENSTA, Paris, he joined the Naval Hydrographic and Oceanographic Service (SHOM) where he spent most of his career. He later joined the International Hydrographic Organisation (OHI) based in Monaco. As the director of Monaco explorations and expedition leader, *"My first duty is to get everyone home safe and ensure cohesion. The Saya de Malha leg is very much about the JMA and working effectively with Seychelles and Mauritius to meet their needs. Building capacity is an important component of our mission".*



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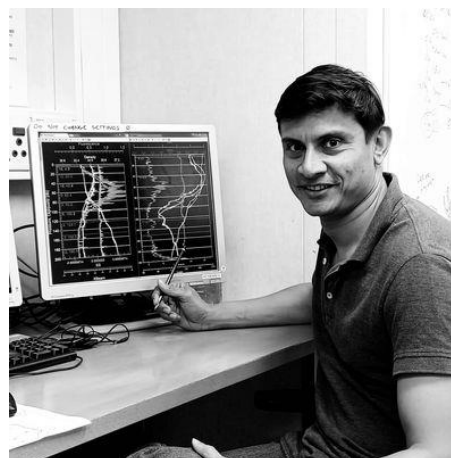
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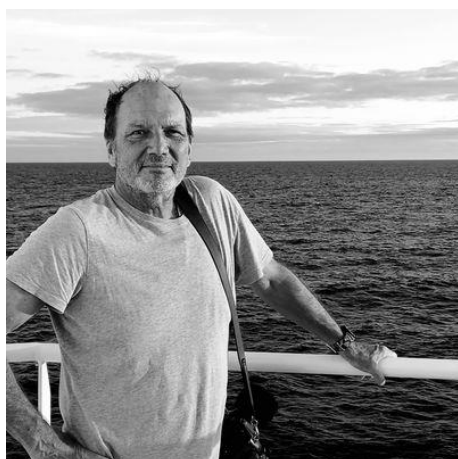
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## Arshad Rawat, Physical Oceanographer, Prime Minister's Office

**Arshad** was born in Mauritius in 1978. He advises on maritime issues. His primary focus is marine spatial planning which includes the JMA seabed and the Mauritius EEZ. *"As a small country, it is difficult to know what is going on at sea let alone manage and enforce regulations. International scientific partnerships are the solution to characterize our maritime domain. In this expedition, I lead the day team in charge of the CTDs. We used the results of the Nansen expeditions in 2008 and 2018 to plan for this expedition. The expedition has good objectives and a multidisciplinary and cosmopolitan scientific team. It is great to share and learn. Overall, it appears that the Bank is low in productivity except in the east side where there is upwelling. The ROV is interesting as a tool."*



## Harald Pokieser, Natural History Filmmaker



**Harald** was born in Vienna, Austria in 1958. He came to filmmaking through 14 years of journalism and photography. His main focus is natural history and science documentaries. His company has collaborated with European and US media outlets such as PBS, the National Geographic, the Smithsonian, and ARTE. He boarded the expedition by chance as he had just finished a job. As the director of the team, it falls on him to develop the Saya de Malha narrative. *"With such a diverse range of science and outreach activities going on, both fascinating and puzzling, finding the thread that brings them together and tells the whole story of Saya visually has its challenges. What to take as a filmmaker: new encounters, opportunities to film ocean science, facing challenges? Saya evades the usual tropical cliché and is secretive".*

## Byron George, Steward, Baker and Pastry Cook, S.A. Agulhas II

**Byron** was born in Cape Town in 1994. His first love was cycling. He coached kids, taught sport education, raced and featured in documentaries. Becoming independent started his second career. With his school hospitality training, he embarked for a month on a ship and knew that was for him right then. He started in the kitchen, then steward, got his cook certification. Baking and desserts are his other passion. *"I love working with passengers, cooking food and seeing a smile on their faces. Meeting people from different nationalities, meeting the Prince of Monaco and two Seychelles Ministers were highlights. I also like the school visits on board. There is a lot to learn on this expedition. Once your feet have touched the sea, the land will never be the same".*



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## Nicolas Mathys Photographer

**Mathys** was born in Arras, France in 1994. Very young, equipped with a high school international trade certificate, he left for Australia for a year, working many jobs from jackaroo in the outback to barman in Melbourne. Back to France, he took ski resorts jobs, which got him closer to nature and the need to photograph his experiences. Since, he has travelled widely and learnt his craft as a photojournalist. 2 years spent in Canada were a turning point where he documented the struggle of first nations faced with industrial development of their ancestral lands. *"This expedition is a new experience professionally. I knew nothing about the ocean. Working with Stéphane, my collaborator, meeting new people and appreciating the work of scientists have been a window on the ocean world."*



## Frédéric Ménard, Scientist, IRD



**Frédéric** was born in 1965 near Paris from a family of teachers who instilled in him at an early age a sense of public service. His grandfather taught him gardening, fishing and nature. A good student, he first studied engineering and soon oriented to ecology and geography and ended graduating in marine ecology. He joined ORSTOM, now IRD, in 1994 and spent 4 years in Côte d'Ivoire. He is an ocean scientific advisor on overseas territories. *"To me the main success of this expedition is the collaboration between Maurice Seychelles and French teams that we need to continue in the future to resolve common challenges"*.

## Bryan Wilson, Senior Research Fellow, Oxford University



**Bryan** was born in West Germany in 1974 and grew up in rural Ireland. From a young age, he knew of the wonders of the ocean through his dad who had dived as a young soldier. Graduating in microbiology at the University of Kent, his research on coral microbiology took him around Europe and Australia. *"Bacteria in corals are like gut flora in humans and a sign of good health"*. Thanks to a Bertarelli Foundation grant, his quest for a now rare and endangered coral species brought him to the Indian Ocean and this expedition as there were records in Saya De Malha and St Brandon. *"If we can save this coral, there is hope for all corals"*.



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**Dominique Benzaken and François Simard: The Daily Editors**

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**Dominique** was born in Nice in 1949 and grew up in Paris. She settled in Australia where she completed her studies in tropical ecology. Following 15 years with the Australian Government on environmental policy, she works as an international consultant on ocean governance and sustainable blue economy. *"The expedition was a unique opportunity to visit the JMA and an experience in understanding ocean people."*

**François** was born in Paris in 1956. After studying biology, he went to Japan for working in fisheries sciences. Back to France, he worked during 12 years as deputy-director of Monaco Oceanographic Museum, and after that he joined IUCN Global Marine and Polar Programme. *"I enjoy every minute on the ocean, a real gift to be here on this ship!"*