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# CHANGING PLANET



## Sailing a 108-Year-Old Ship Through the Most Biologically-Diverse Marine Ecosystem on the Planet

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[Sam Keck Scott](#)



*This winter (in the northern hemisphere), the Biosphere Foundation is undertaking a sea voyage on their 108-year-old ship through the gumdrop islands and turquoise waters of Raja Ampat – the most biologically-diverse marine ecosystem on the planet.*



SAILING VESSEL MIR

### *A Homecoming*

I hadn't seen her in over seven years, then there she was, resting peacefully on a mooring line in the middle of Banyuwedang Bay in northwestern Bali – the volcanoes of nearby Java cutting black into the sky behind her. She looked both the same and different; her 114' steel hull is still painted a deep blue, but now her two masts are made of aluminum instead of Oregon pine – a better choice for the wood-dissolving tropics. As I climbed from our small boat up Mir's wooden ladder I too felt the same and different – both like I had never left at all, and that it must be someone else's life I was remembering who had lived on this ship all those years ago. My only other experience on Mir is so wholly distinct from the rest of my life that it seems a separate existence entirely. Seven years ago I went on my greatest adventure by far when I spent thirteen months as part of a small team who rescued Mir from being turned into scrap in a Maltese shipyard. Now for the first time since, I'm back.

Mir is operated by the [Biosphere Foundation](#), an environmental NGO that has been tracking the health – or lack thereof – of coral reefs worldwide for decades. In 2009, the Biosphere Foundation needed a new boat to continue their mission, which is what brought them to a shipyard on the tiny island-nation of Malta – a speck of limestone in the Mediterranean Sea between Sicily and Tunisia – where they found Mir. At the time, Mir was still named Marilou from a previous owner, and she was a few months shy of her 100<sup>th</sup> birthday, and let me tell you, she was showing every minute of those hundred years. Marilou was about to be cut up for parts when Gaie Alling and Laser Van Thillo, the founders of the Biosphere Foundation, first saw her in Malta. Most people would have laughed at the

thought of trying to resurrect a boat in her condition – in fact, many people did laugh – but through her incrustation of rust; her peeling paint; and her spongy, rotten wood, the two of them saw something that no one else did: a beautiful sailboat with amazing potential.



GAIE ALLING AND LASER VAN THILLO, FOUNDERS OF THE BIOSPHERE FOUNDATION

As luck would have it, I met Gaie and Laser in California three days after they had finalized the purchase of Mir. I was twenty-five at the time – an unemployed biologist who had always dreamed of going to sea. Within minutes of hearing about the boat and their plans to move to Malta to fix her up and then sail to Singapore, I asked if I could join them. I had no experience in construction or sailing, but I promised enthusiasm and energy, and they quickly agreed. In August 2009, the three of us and seven other volunteers moved to Malta where we spent the next nine months working day in and day out to bring the old ship back from the brink of a rusty death. In June 2010, we finally had her in good enough shape to leave Malta.

We spent the next four months sailing Mir from Malta to Singapore; first heading across the Mediterranean towards Egypt; then down the narrow Suez Canal and into the Red Sea where there was a dust storm of atmospheric proportions blowing north off the Sahara called a “haboob” which turned the entire sky red for three straight weeks. Next, we had to brave the Gulf of Aden where

Somali pirate activity was peaking that summer; and after making an emergency stop in Oman to fix a snapped shroud, we crossed the Arabian Sea and Indian Ocean where the swells were colossal the entire way. Finally, we sailed between Sumatra and the Malay Peninsula into the busy shipping lanes of the Strait of Malacca which delivered us to our final destination of Singapore. As I said, nothing about that year resembles any other time in my life.



SAM KECK SCOTT ABOARD MIR IN THE RED SEA IN JULY 2010 (I'VE CLEANED UP A BIT SINCE THEN)

Fast forward more than seven years, and I am back aboard Mir for the first time since arriving to Singapore the better part of a decade ago, typing this post from her navigation room. And I'm not the only one who's back – our chief engineer from that original voyage, Clarence Wainer, has also returned to Mir for the first time since. Clarence and I both decided to leave our busy lives in California behind when Gaie and Laser invited us to come along on an upcoming voyage to the most biologically-diverse marine ecosystem on the planet: Raja Ampat. Surely we couldn't say no to that.

### ***Voyage to Raja Ampat***

Raja Ampat is a collection of 1,500-plus speckled islands in northeastern-most Indonesia off the tip of the Bird's Head Peninsula of New Guinea. Though only a small corner of the greater Indonesian archipelago, Raja Ampat is a hotspot for marine life unlike any other. According to a 2002 study conducted by the Center for Applied Biodiversity Science, and Conservation International, Raja Ampat has 456 species of hard corals living in its waters – that is over half of the world's total, and more than six times the amount of coral species in the entire Caribbean Sea (1. McKenna, Allen, Suryadi, 2002).

Coral reefs are in grave danger worldwide from a myriad of causes, the most dire of which is rising ocean temperatures due to climate change, which is causing mass coral bleaching events across our oceans. According to the documentary [Chasing Coral](#), 50% of the world's corals have died in the past 30 years alone, and if current ocean-warming trends continue, most of those remaining will be lost

in the next 30 years. There is a distinct possibility that coral reefs may be wiped out in my lifetime, the consequences of which could be catastrophic to the delicate web of life on our planet. Coral reefs occupy just 0.1% of the ocean's bottom, yet they provide habitat to 25% of all marine life (2. Doherty, 2015).

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The seas around Raja Ampat are ideal for reefs – they are warm and tropical, but with the Pacific Ocean bordering the area to the north, they receive a bath of cool, nutrient-rich water. Because of this cool water, Raja Ampat's reefs are having less trouble with the harmful effects of increased oceanic temperatures than the majority of other places where corals live. For this reason, if temperatures continue to rise in our oceans in the way they're projected to, Raja Ampat may become one of the

last places on Earth where coral reefs can flourish.

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Raja Ampat may not be suffering as severely from temperature rise as other areas are, but the reefs there are still under threat from a host of factors, the most invasive of which is the recent tourism boom in Raja Ampat now that word is out about this underwater Shangri-la in remote Indonesia. Tourist boats are crowding the shorelines to visit the famed corals – their anchors wreaking havoc on the fragile reefs when dropped and dragged against them. Inexperienced snorkelers and divers also damage the corals by standing on them and kicking them with their flippers. This unmitigated tourist boom is also resulting in more and more coastal development which brings with it chemicals, sewage, and trash, all of which are detrimental to corals.

Coral reefs are vital to our planet's overall health, and Raja Ampat's have a better chance of surviving in our changing world than many others. It is for this reason that the Biosphere Foundation feels an urgent need to visit Raja Ampat now to begin building relationships with the people there to collaborate to keep their reefs, and thus their oceans, healthy and pristine.

The indigenous people of Raja Ampat have never needed anyone to tell them how to care for their coastal areas before – they have been doing that job better than anyone for millennia – and it remains true today that they do not need outsiders to come teach them how to manage their home. But where the Biosphere Foundation does feel we can be of assistance is to help both the indigenous people of Raja Ampat – as well as those who moved there more recently – to deal with threats to their oceans and coastlines that never existed until now, namely rampant development, an influx of tourists, and an ever-widening threat from outside commercial fishing industries. This can be achieved by demonstrating simple techniques such as how to install permanent moorings to minimize anchor damage; teaching methods to eradicate and manage populations of exotic and destructive reef animals such as the crown-of-thorns starfish; education about the harmful effects of dynamite and cyanide fishing; as well as restoring the reefs themselves by collecting living coral fragments that have broken off, and adhering them back onto the reef using local cement.

It is imperative to fragile ecosystems that experience high rates of tourism that there are programs in place to promote restoration through the mitigation of harmful practices. Without these, the reefs will



PHOTO COURTESY OF ORLA DOHERTY, BIOSPHERE FOUNDATION

suffer and eventually collapse, even in a place like Raja Ampat that has thus far been spared the lethal effects of ocean temperature rise.

It wasn't long ago in the course of human history when adventurers and explorers were setting off in droves in hopes of being the first to discover a new place, culture, or species. Nowadays, adventurous people have a different impetus for rushing out to far-off corners of the globe: to see things before they are lost to us forever. Be it polar bears, Amazonian tribes, or healthy coral reefs, our world is changing faster than many species, cultures and even entire ecosystems can keep up with. We at the Biosphere Foundation aren't interested in simply going to Raja Ampat to marvel at corals before they are lost to us forever, we are dedicated to helping ensure that they *are not* lost to us forever. The ten people onboard Mir are part of a global network of modern-day explorers who still possess that old spirit of adventure, but who also feel we must give something back along the way, because adventure alone is no longer enough if we hope to keep this planet a place worth exploring in the future.

WE MUST GIVE SOMETHING BACK ALONG THE WAY, BECAUSE ADVENTURE ALONE IS NO LONGER ENOUGH IF WE HOPE TO KEEP THIS PLANET A PLACE WORTH EXPLORING IN THE FUTURE.

Please follow along as we embark on this grand voyage on our 108-year-old ship through the gumdrop islands and turquoise waters of Raja Ampat this winter. We plan to leave Bali before New Years and sail straight to the Banda Islands where we will briefly stop over before continuing on to Raja Ampat. It will be a true seagoing adventure of the old sort, with visions and actions representing the future we plan to help usher in – a future with healthy oceans, clean air, and vibrant ecosystems – because we at the Biosphere Foundation know that our own health is dependent on the health of our Earth's biosphere.

Join us!



Sources:

1. McKenna, S.A., Allen, G.R., Suryadi, S. (2002). *A Marine Rapid Assessment of the Raja Ampat Islands, Papua Province, Indonesia*. Conservation International, Center for Applied Biodiversity Science, Department of Conservation Biology. Pg. 14. [https://www.conservation.org/publications/Documents/RAP\\_Reports/RAP22\\_Raja\\_Ampat\\_Indonesia\\_Apr-2002.pdf](https://www.conservation.org/publications/Documents/RAP_Reports/RAP22_Raja_Ampat_Indonesia_Apr-2002.pdf)
2. Doherty, Orla (2015). *Coral Reefs -- A Handbook for their Future*. London: IMarEST. Pg. 16.



### MEET THE AUTHOR

Sam Keck Scott is a writer and biologist from Northern California. When not in the field saving salamanders and bird nests from bulldozers, you can find Sam at home in his Airstream trailer in rural Sonoma County, writing about his adventures. Last winter (in the northern hemisphere) Sam was working for the Biosphere Foundation as a mate on their 108-year-old sailboat, Mir, which they sailed from Bali to Raja Ampat and back, setting up small-scale coral restoration projects along the way. Follow Sam's adventures here, and you can find both the Biosphere Foundation and Sam on Instagram at @biospherefdn and @samkeckscott, and on Twitter at @biospherefdn and @samkeckscott



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