

# Empowering change

Paul Rose

**In this article, Paul explains the empowering nature of geography, especially field trips, as a catalyst for education and action. He is one of the world's most experienced science expedition leaders who helps scientists unlock and communicate global mysteries in the most remote and challenging regions of the planet.**

## Ground-truthing

I was 14, peeling potatoes into a bucket in the rain at the Merthyr Tydfil Youth Hostel and had never felt so alive. This was a defining moment that delivered focus, joy and a desire to succeed – all thanks to Mr Grey, my geography teacher. School life was claustrophobic and dense with incomprehensible lessons, old books that I could not understand, grim teachers and the never forgotten smell of overheated paint from the radiator that I sat next to.

Mr Grey led the school's Brecon Beacons field trip and on the coach journey he became less of a stiff teacher and more of a friendly, cagoule-wearing man of action. The further we travelled the more enthusiastic and animated he became. His transformation was completely unexpected and so genuine that against my defensive instincts I started to like him.

Our days in the Brecon Beacons were wonderful. I discovered I had a natural affinity to wild and wet places. Map reading and navigation was no problem, I romped up the hills and had an easy feel for route finding. I especially liked it when those kids that were cruising classroom life were struggling and particularly when one of them, frightened by the exposure, tried to run off down a gully and Mr Grey boomed into the wind: 'You'll lose your life down there boy!'

One long day high on Pen y Fan in thick cloud, Mr Grey walked next to me for a while and told me that I was doing well and thanked me for getting stuck in. What a moment that was; I can still feel the pride. Back at the hostel sharing the chores, hanging up the gear – doing my bit for our small damp, hungry, noisy community was brilliant and I loved everything about it – I just knew that this was for me. Stupidly, I was too immature

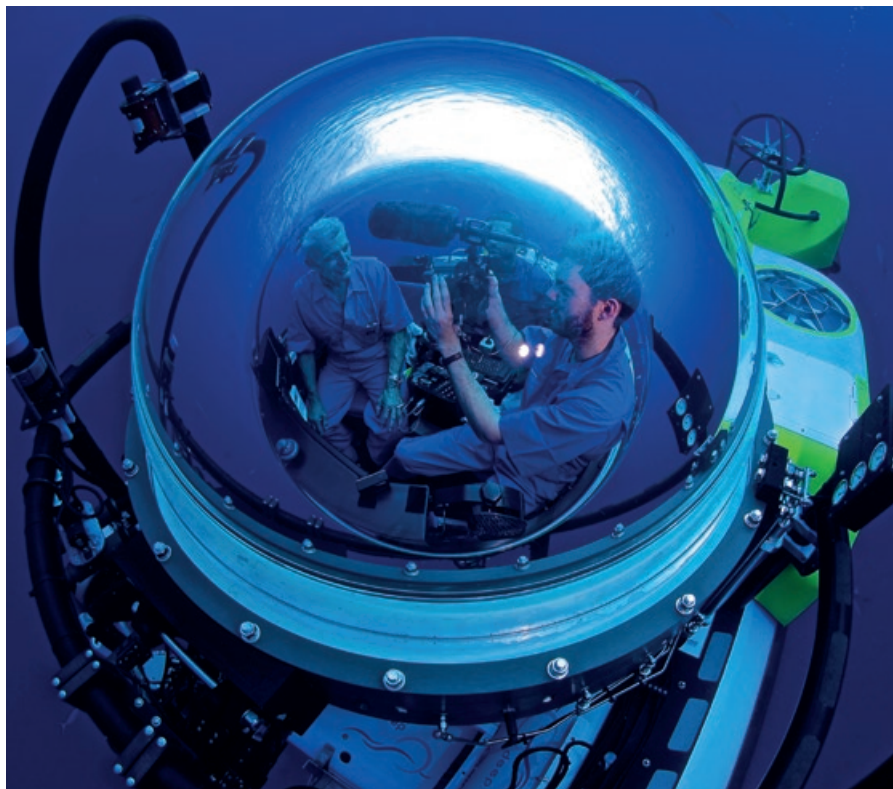


**Figure 1: His experience of Pen y Fan in thick cloud led Paul as far as the opposite side of the world to the Rothera Research Station, Antarctica. Photos © Fred Figgens (Pen y Fan) and Adam Bradley, British Antarctic Survey (Rothera).**

to thank Mr Grey, but, if we ever invent time-travel, it will be him I see first. I owe that man.

My formative experience in the Brecon Beacons reinforced my sense that the right place for me to operate was outside and that to understand things, I would do well to connect with them physically (Figure 1). Only through ground-truthing have I ever learned anything; this has been the compass for my personal and professional life. It is the most satisfying thing to meet a science team with an ambitious, risky hypothesis that requires real on-the-ground data collection and then convert that hypothesis into a technical support team of cooks, mechanics, divers, climbers, drivers, medics, ships, boats, aircraft and field camps in challenging places at the end of long, complex supply chains.

This same practical-based approach works for television: the first time I was Vice-President for Fieldwork and Expeditions at the Royal Geographical Society (RGS – see web panel), I was helping the BBC programme development team with the technical side of their planning – high altitude diving, remote location camps, equipment, training and the like. At one of our sessions they asked if I could give the team a quick tour of the RGS on camera. Unknown to me this was a selection process because they were hunting for a non-scientist to present science programmes. The BBC were about to launch a climate change season, knew that I was working with science teams in Antarctica (see web panel) and, fortunately for me, had experienced complications when scientists explained the issue. This was 18 years ago.



**Figure 2: Reporting from a sub in the Pacific Ocean. Photo © Dave McAloney.**

Today most scientists are brilliant at communicating their work, but I am grateful to the few poor communicators that the BBC bumped into as it gave me a boost. There is great satisfaction in diving under polar ice to describe the loss of multi-year sea ice, or in the caves of Mallorca to explain the history of sea level changes (Figure 2). I know from experience that half of the audience are saying 'This looks great, I'd love to do that', while the other half say 'There is no way I'd do that'.

Either way they are listening to a description of a key issue.

The desire for practical action is a beautiful thing. My colleague, Dr Enric Sala, was at the time a Professor at Scripps Research when he realised that 'every science paper he wrote was like writing the obituary of the ocean'. He needed action and it propelled him to leave academia, join National Geographic and start Pristine Seas (see web panel) in order to find, explore and help to protect the ocean's last pristine places.

He brought me in to lead the expeditions. Since then we have been busy with three or four expeditions a year, making a total of 30 expeditions, creating 22 marine reserves, protecting more than 5 million square km of ocean and publishing 112 science reports.

Enric had just read about Mike Fay's Megatranssect expedition, in which Mike walked 3219 km across the Congo Basin and in partnership with the President of Gabon, Omar Bongo, helped to establish 13 new national parks – a powerful demonstration of the power and effectiveness of influencing smart decision-making by ground-truthing (see web panel).

## Being useful

Being useful is my key to this pandemic period and it has been rewarding to work on the education and outreach side of Pristine Seas, and to continue our work remotely by supporting our in-country hosts and partners. We should be back at sea in the latter half of 2021 and until then I am surprisingly happy with a more static life. It helps to have a good supply of weights and a pull-up bar, regular bike rides, runs, and cold swims in Windermere.

Covid-19 has meant a tough swap: from expeditions to being a 'professional Zoomer'. I am finding it hard and rely on my field experience, because thriving during periods of forced inactivity is an essential technique. When camping, it is all about getting outside regularly to check the tent and gear stored outside, shovelling snow, having enough food and fuel inside the tent, keeping the batteries charged up and the communications equipment in good order. At sea, life revolves around securing and stowing the gear safely, keeping a close watch on our passage



**Figure 3: Only controlling what you can control! Paul's dog decides not to behave too well in the Arctic. Photo © Maureen Dolan-Galaviz.**



and looking after team-mates with sea sickness. No matter what the circumstances, the main elements are to be totally organised, accept that we cannot change the storm conditions and that it will pass eventually, do a good job of controlling what we can control, and do not drive your mates crazy (Figure 3).

It has also been helpful to think of the opportunities that this pandemic has presented: with trust in political leadership, business motivations and ethics at an all-time low, the things that we fall back on are our instincts and the indisputable accuracy and beauty of science data.

Field scientists have warned us for many years about the dangers of our out-of-balance relationship with nature, but it has taken a global pandemic for us to finally understand that everyone's health is reliant on everyone else's health, which in turn is reliant on nature. We have confidence in the science that has developed a Covid-19 vaccine, but we also know that the only long-term vaccine will come from protecting nature. The way to do that is:

1. Protect what we have
2. Restore what is damaged
3. Re-set our values so it does not happen again.

Answers to 1 and 2 can be found in the smart decision-makers leading the '30x30' campaign (see web panel) bringing it to be a truly global ambition. At the 2020 United Nations Summit on Biodiversity, 71 global leaders endorsed the Leaders Pledge for Nature to reverse biodiversity loss by 2030.

Even better, is that the 30% by 2030 is now seen as a waypoint to the '50x50' goal – E.O. Wilson's Half-Earth (see web panel). It is also great to see the recent report that the benefits of protecting at least 30% of the planet outweigh the costs by a ratio of at least 5:1 and that nature conservation is smart business – it drives economic growth and is a net contributor to a resilient global economy. Oh, and by the way, it will keep us alive too.

These feel like revolutionary times and represent the best opportunity we have had in recent history to reset our values.

1. We need to be close to nature through all of our formative years. The best way to do that is to have every subject always taught outside of the classroom. Special dispensation would be required to run a class inside a classroom.
2. Scuba diving, sailing, camping, climbing, skiing and cycling should be available in all schools. These activities are the best way to learn and there is no excuse for them only being available in the private school system.
3. Sharpen up our voting practices: before a politician takes office, a business leader accepts a boardroom position or a community influencer accepts their role, they must display their values by proving their record of fieldwork, charity efforts, humanitarian, arts, social, sports activities and their relationship with nature; and not just giving financial support, but real hands-on life-defining efforts. Surely, this will go some way to reduce empathy gaps?

The way we vote can easily change to reflect these values. I imagine election forms that display the candidate's values at the top and, if voting online, then the values section would flash red if none were shown and display 'Danger, danger. The candidate you are about to vote for has not demonstrated any values!'.

4. To help us become better-informed consumers and to encourage/force better-informed business decision-making, all businesses must display their values. Before any purchase, it should be routine for us to question the company's values, especially for big purchases like houses, insurance, investments, mortgages and vehicles.
5. We must have enforceable international environmental law. There is progress and I am hopeful that in the next few years we will see certain politicians and business leaders behind bars at The Hague for crimes against humanity and the environment.

Covid-19 really can be the catalyst for change. When it comes to our values there is no time to lose, so I have my list ready (Figure 4).

I would also love to know what our politicians and business leaders actually do with their lives beyond politics. Are they scuba divers, climbers, cyclists, runners, wild swimmers, skiers, photographers, painters, singers, dancers, actors, poets, walkers, campers, birdwatchers? It would be a beautiful thing to see our society influencers with that spark in the eyes or spring-in-the-step that comes from having had a hairy adventure or truly rewarding personal experience.

This is an approach to be celebrated in a toast to Mr Grey. Cheers Sir, and thank you!



## Web Resources

British Antarctic Survey:

<https://www.bas.ac.uk/>

Mike Fay Megatransect:

<https://blog.nationalgeographic.org/2017/04/09/mike-fay-discusses-his-expedition-through-the-heart-of-africa-and-his-plan-to-keep-on-walking-for-ten-years/>

Mike Fay Outside Online:

<https://www.outsideonline.com/1887471/how-nomad-found-home>

Half-Earth Project:

<https://www.half-earthproject.org/>

National Geographic Pristine Seas:

<https://www.nationalgeographic.org/projects/pristine-seas/>

Ocean Unite 30x30 campaign:

<https://www.oceanunite.org/30-x-30/>

Paul Rose website:

<https://www.paulrose.org/>

Royal Geographical Society:

<https://www.rgs.org/>

**Paul Rose is a broadcaster, author and journalist, and presents BBC television programmes on current affairs, science and the environment. Paul is currently Expedition Leader for the National Geographic Pristine Seas Expeditions. As well as being a former Vice President of the Royal Geographical Society and recipient of the Ness Award and the Founders Gold Medal, he is Ambassador for the UN Basel, Rotterdam and Stockholm Conventions. Paul was also the Base Commander of Rothera Research Station, Antarctica, for the British Antarctic Survey for ten years and was awarded HM The Queen's Polar Medal. For his work with NASA and the Mars Lander project on Mt Erebus, Antarctica, he was awarded the US Polar Medal. A mountain in Antarctica is named after him.**

Figure 4: A plan for re-setting our values.