

Field Notes: Dan Costa in Antarctica

Video on Sep 18, 2012 by [Sheraz Sadiq](#) from [QUEST Northern California](#)

Topics: [Biology](#), [Television](#), [Video](#)



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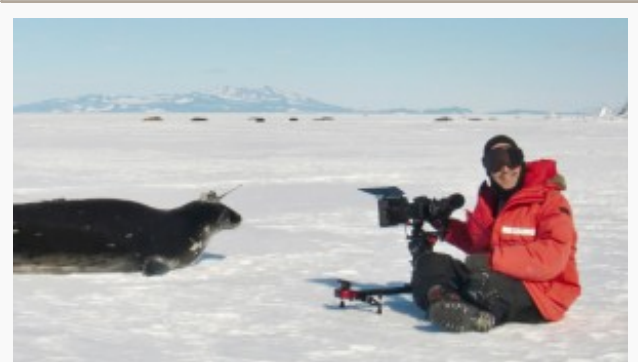
Bay Area filmmaker and musician [Jesse Hiatt](#) traveled with UC Santa Cruz marine biologist [Dan Costa](#) to Antarctica in October 2011 and February 2012. Professor Costa had been awarded a National Science Foundation grant to study the winter foraging ecology of Weddell seals in Antarctica through the use of sophisticated satellite tags and physical examinations conducted by his research team. Hiatt first met Professor Costa while studying marine biology at UC Santa Cruz, where he developed 3D visualization software for diving mammals.

During the research trip, Hiatt spent long days filming Costa and other UC Santa Cruz researchers as they deployed and retrieved satellite tags from the seals and examined the large marine mammals. His breathtaking footage was edited into the two-minute QUEST segment, "Field Notes: Dan Costa in Antarctica." In June 2012, QUEST Producer Sheraz Sadiq conducted an interview via email with Jesse Hiatt about his unforgettable experience working in Antarctica and getting up close to the hardy seals during their breeding season. The following is an excerpt of the interview which has been edited for length and clarity.

Can you describe the gear that you used while filming in the harsh, extreme climate of Antarctica?

I decided to use a Canon 7D for this project, because it is a fairly rugged weatherized camera. More importantly, I realized that despite the challenges of using a DSLR camera for video, it allowed me to stay within my budget and it could deliver the most high-quality cinematic footage. It would also take good stills. To make the camera more suitable for shooting video, I had a Zacuto EVF external viewfinder, a matte box with a variable ND filter and a Zacuto follow focus unit.

Traveling in Antarctica can be a real challenge. We traveled by foot, snowmobile (referred to in Antarctica as snow-machines) and helicopter. Space was always limited and in every case I could not take nearly as much equipment as I would have



Filmmaker and musician Jesse Hiatt in Antarctica poses for a photo while a Weddell seal sticks its head out of the water. Image courtesy of Jesse Hiatt.

liked. There was no one system that worked for all occasions. I had a bewildering array of different cases, backpacks and bags and would have to decide each day what I would bring and how to pack it. And every time, as Murphy's Law would suggest, there would be a great opportunities to use whatever I left behind.

We had a small box on the back of the snow-machine for gear and that would get seriously battered and beaten. I had several pieces of gear broken this way, and found the only safe place for cameras and lenses was in my backpack. When traveling by helicopter, space was even more limited, and I resorted to wrapping my Sachtler tripod in bubble wrap (no room for the case) and holding my camera in my lap.

One of my favorite scenes in the "Field Notes" story shows a Weddell seal swimming underneath the ice. How did you capture this footage?

I took a GoPro camera, and attached it to a bamboo pole. I used the pole to put the camera underwater in an area where the seals were swimming under the ice. I couldn't see what I was shooting so it was a lot like fishing. I was hoping to catch a shot of one of the tagged seals as she was swimming, and I got very close, but unfortunately she was just out of frame.

The day started with lovely spring-skiing weather. Antarctica will lull you in a false sense of complacency and then all of a sudden slap you in the face and remind you who's boss. So without warning, it got bitterly cold and windy, and to add some excitement, huge sheets of the ice below our feet began shifting around us. Because I was dipping the bamboo pole below the water, my gloves would get wet, and so I was developing painful, frozen popsicle fingers.

There is no glove that can really stand up to the cold. And there always arises some occasion that requires you to take your gloves off for a minute. Once your fingers get cold, it is very hard to warm them up again, even if you put them in some fresh gloves, you are basically insulating cold fingers, and the gloves become a refrigerator. The only solution is to stick your bare hands deep in a pocket with some chemical heat pads.

So bracing from the cold and nursing my increasingly



A Weddell seal with a satellite tag on its head. The tag allows Professor Dan Costa and his research team to track the animal's movement from their lab back in Santa Cruz. Image courtesy of Jesse Hiatt.

...struggling from the cold and noticing my increasingly useless, frost-nipped claw hands, I finally I got a bit of luck. From where I was standing, I could see a seal below my feet, swim right up to the camera and put her nose right on the lens. Then she took a few breaths from the hole in the ice, and I knew she was in the shot. I couldn't wait to get home and see how it came out.

Having spent so many hours observing and filming them, what did you find particularly fascinating about the behavior of Weddell seals?

When seals are on the surface, they look like big fat slugs and it is relatively difficult for them to move around. Underwater, they are the masters. They are in complete command and swim quite gracefully. I dream of being able to go back to Antarctica and capture some more underwater footage. But it is a very rare privilege to be able to go there, even for researchers who have studied these animals for years.

The Weddell seals are fascinating creatures that live in one of the Earth's most extreme environments. They are in fact the southern-most mammal. During the winter they never see the sun. They can dive to depths of 500 meters. And they have no land-predators, so they have no real fear of humans which makes them great research subjects. It was a great privilege to visit their home and spend time with them.

What's next for you? Do you have any plans to travel to other exotic locales for wildlife documentaries?

In all, I captured about 18 hours of footage in Antarctica, which I hope to edit into a half-hour documentary. I have moved from New Orleans back to Oakland, and I am building a small music studio where I will soon start work on my next record. I have upgraded my camera to the Canon 5D Mark III and I can't wait for the next opportunity for adventure and filmmaking.

Tags: [antarctica](#), [Dan Costa](#), [satellite tags](#), [Weddell seals](#)

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Jesse Hiatt records audio during his two month stint filming in Antarctica. Image courtesy of Jesse Hiatt.



A Weddell seal pokes its head out of an ice hole in Antarctica. Image courtesy of Jesse Hiatt.



