

Wave Chasers: : Deep Flows Through the Samoan Passage *Cultural Exchanges*

Narrator: Three-hundred miles off the northern coast of Samoa.

John Mickett: We're over a really deep spot. About 4800 meters. Almost 5 kilometers down.

Narrator: APL-UW oceanographers deploy deep-ocean sensors in search of new clues to climate change.

Mickett: We don't fully understand it. We know the Earth is warming up.

Narrator: The goal: To map the seafloor and measure the volume, velocity, and temperature of a massive flow of deep water northward through the Samoan Passage.

Mickett: We're looking at the response of the deep ocean to climate change, or how the deep ocean circulation is maybe impacted by the Earth warming up.

Narrator: Recovery and deployment operations continue around the clock. On a rare break, APL's Matthew Alford and John Mickett bring some American blues to the South Pacific. And just before this research cruise to probe the mysteries of the deep, they are invited to sample Samoan culture.

Narrator: John and Matthew on their way to the village of LufiLufi on the north coast of Ipolu Island half a world away from their home base in Seattle.

Mickett: We were on a plane for a day and a half. To travel that far and not to kind of interact and learn more about their culture seemed odd to me.

Narrator: The people of Lufilufi made the APL scientists feel more than welcome.

Mickett: We were the guests of honor. They had a fantastic meal prepared for us and we had a lot of local foods. They were weaving hats. They taught us how to weave with these local leaves. The Peace Corps volunteer got a grant for sewing machines. They're hand powered because they don't have available electricity on a lot of these villages. Or if they do, it's very expensive."

Matthew Alford: We really wanted to not ignore the locals. We rely on the locals in fact for knowledge and help. The Samoans really care about their ocean. They care about their waters and they're interested in what we're doing.

Mickett: One of the things we shared with them was there was this incredibly interesting and cool spot in their backyard. I kind of liken it to a natural wonder. We can't see it with our own eyes – we know it's there. Something like 70 percent of all that deep water is moving right through the Samoan passage moving north. Something like 36 times the flow of the Amazon. So it's a huge amount of water. You know – it's a day's steam north of Samoa. And I thought that was fun to share with them: 'Did you know you have this pretty amazing spot just north of you and it's really important to the Earth's climate, at least we think it is.'

