



## Season 6, Episode 9: Shipwreck Cannons

Gwen Wright: Our first story investigates a maritime mystery washed up on an Oregon beach. 1846: tensions between the U.S. and Britain are approaching a boiling point. All eyes are focused on the disputed border between the U.S. and the British colonial territory of Canada. At stake is ownership of the enormous riches of some 300,000 square miles of the Pacific Northwest. The U.S. needs reconnaissance, and dispatches an armed naval vessel – the *USS Shark*. But that September disaster strikes; the *Shark* wrecks and sinks at the treacherous mouth of the Columbia River. More than a century and a half later, fourteen-year-old Miranda Petrone, from Tualatin, Oregon, thinks she may have found a piece of this historic ship.

Miranda: Me and my dad were walking along the beach. And I saw this big thing with rust. And I'm like, hey dad, come here.

Gwen: I'm Gwen Wright, nice to meet you. So I heard you found something pretty interesting around here.

Miranda: Yeah.

Gwen: What was it?

Miranda: We found a cannon.

Gwen: Now, are you sure it was a cannon?

Miranda: Well, not at first. Me and my dad were walking along the beach. Then there was this big black rocky thing so I went up a little closer and eventually saw rust. I thought, rocks aren't supposed to have rust. And so, I called my dad over. He came and checked it out. He's like, huh, maybe it's a cannon. He was just joking though. But I still went out there and it was, so...

Gwen: Now, I'm hoping those are some pictures you took? Is that right?

Miranda: Yes.

Gwen: So this is you. Are these your sisters or friends?

Miranda: Well, that one's my sister and that one's my friend.



Gwen: What did you notice? Actually was it this rust here?

Miranda: Yeah. I walked up closer and saw there was rust. And then this friend of ours found the second one.

Gwen: Miranda's friend made a similar find – another big, stone-covered object. Was it in the same place?

Miranda: No. It was probably a little bit farther out.

Gwen: Miranda's discovery generated a lot of local excitement. The media speculated she'd found a relic from the shipwreck of an old navy vessel called the *Shark*.

Miranda: It was made in 1821, and it crashed in 1846 around this area.

Gwen: What did you do next?

Miranda: My dad, he looked at this book. And, it showed pictures of the *Shark*. And we looked at them so we're like, okay, well, this has some similarities.

Gwen: Miranda's research indicated that the *Shark* sank in the Columbia River, 60 to 75 miles north of here, and that some wreckage could have drifted south to this beach. Can you tell me exactly what you'd like me to find out?

Miranda: I'd like to find out if it really is a cannon and if it really did come from the *Shark*.

Gwen: I'll see what I can find for you, okay?

Miranda: Okay.

Gwen: Whatever it is she's found is now being protected by the Oregon Parks and Recreation Department at Nehalem Bay State Park. Hi. Are you Chris Havel?

Chris: I am

Gwen: Gwen Wright. So nice to meet you.

Chris: A pleasure.



Gwen: Chris Havel is the project coordinator for the department's cannon conservation.

Chris: Let's take a look.

Gwen: Oh, my. It's actually beautiful. All these colors. Well, I can see that this one sort of looks like a cannon. Although the other one, not at all. So what is this stuff that's all over it, beyond the rocks and stones I can see?

Chris: Well, these are concretions. This is a natural form of concrete that forms around anything that's left on the ocean shore in contact with the sand for a long period of time.

Gwen: Does this kind of concretion give you any idea about age?

Chris: It's difficult to tell the age just based on the concretion. The kind of chemicals that are on the beach, the weathering, how much water is there, the salinity; all of these things can affect how quickly the concretions build up.

Gwen: Chris says Miranda's discovery has the department excited, because 100 years ago another cannon also presumed to be from the *USS Shark* was retrieved from the very same beach.

Chris: I've got a drawing here.

Gwen: Chris compares the soaking mass of sediment and rust to a diagram of a *Shark*-era carronade, or short-barreled cannon that could be hidden beneath it. But if I'm to determine whether Miranda's cannon is from the *USS Shark*, I'll need to learn all I can about the ship – starting with its final voyage. I'm retracing the *Shark's* route up the Columbia River to Fort Vancouver, where the ship anchored when it first arrived in the Pacific Northwest. The fort, now in Washington State, then operated under an English charter and belonged to the Hudson Bay Company, the first corporation in North America. Greg Shine is chief ranger.

Greg: Welcome to Fort Vancouver. Here is an image of the *Shark*. The *Shark* was a schooner...and she was launched in 1821. And a fore and aft rigged schooner, which meant it had two masts here slightly raked back.

Gwen: The *Shark* was well-armed, having policed West African waters against the slave trade, safely conducted freed slaves to newly founded Liberia, and protected American merchants against pirates in the Caribbean. But I can't see any cannons in this picture... Do you know how many she was carrying?

Greg: Yes. The *Shark* had ten carronades and two long guns. And these little open areas here are cannon ports.



Gwen: This experienced ship was chosen to sail for the Pacific Northwest in 1846. As the U.S. border dispute with Britain intensified, the *Shark's* commander, Lieutenant Neil Howison, was instructed to rally Americans with a display of the flag, survey the Oregon territory, and talk with British and American homesteaders living there.

Greg: His orders were very direct. He was to come in and to obtain their disposition, whether it was for the United States or for Great Britain, and also to report on the agriculture, the commerce of the area, and give a general overview of the Oregon country.

Gwen: Howison knew a misstep could easily ignite tensions in the area. President Polk's Democratic Party was pushing to legitimize American settlements across the continent. Only a year earlier, in 1845, this drive was dubbed "manifest destiny", implying that it was God's will for the United States to expand across the continent – west to the Pacific, south into Latin America, and north into British Canada. This belief helped inflame the political rallying cry of "54-40 or fight" – a call to extend America's reach through British Canada all the way to latitude 54 degrees and 40 minutes. The Oregon settlers needed little encouragement.

Greg: There were certainly some American settlers that were here that were crossing the Columbia River and beginning to homestead. Or, in the eyes of the Hudson's Bay Company, jump land claims that the Hudson's Bay Company had established.

Gwen: What was the British response to the *Shark* arriving?

Greg: The Hudson's Bay Company welcomed the *Shark* and Lieutenant Howison and welcomed an American ship into the Columbia River, because it provided some law and order, really, to an area that didn't have much law and order.

Gwen: With the land and temperament surveyed, Howison set sail for San Francisco to file his report.

Greg: When they left Fort Vancouver, they were already behind schedule. The winter can be very ferocious especially at the mouth of the river and near the Columbia River bar.

Gwen: As the *Shark* headed for open seas, it wrecked on an uncharted sandbar at the mouth of the Columbia.

Greg: Luckily, all of the personnel were able to survive.



Gwen: Greg shows me Howison's report to the U.S. Congress. One passage may relate directly to Miranda's discovery. It says Howison is eager to recover the ship's lost weapons. "Receiving informations that part of the hull with guns upon it had come ashore I sent Midshipman Simes, an enterprising youth, to visit the spot." In the water just off the beach, Simes found a broken section of deck with three of the *Shark's* one-ton carronades. "He succeeded in getting one above the high water mark, but the other two were inaccessible on account of the surf." Greg says the rescued carronade was dragged toward the shore but had to be abandoned. In 1898, it was re-discovered after a storm, and is now on exhibit at the Cannon Beach Historical Society Museum. Did Miranda discover one of the two left in the surf? I want to take a look at the *Shark* cannon on display, but first I'm meeting with someone who's cautious about jumping to conclusions about Miranda's find. State archaeologist Dennis Griffin says the Columbia River was a notorious graveyard for hundreds of ships – not just the *Shark*.

Dennis: What we see today is a small glimpse of what it once was. It was the mighty Columbia before all the dams. But, the mouth of the Columbia was a very wicked place. You had tides coming up there, or storms coming up there from thirty-five to fifty feet waves to crash.

Gwen: Fifty feet waves.

Dennis: Huge waves. They called this the graveyard of the pacific.

Gwen: The mouth of the river was known to be dangerous, but Dennis says if you wanted a piece of the region's wealth, you had to run the Columbia's gantlet.

Dennis: We had the Hudson's Bay Company in Canada coming across for furs. Lots and lots of salmon. San Francisco, the big cities. They needed wood. People came up the coast, found lots of trees.

Gwen: All that ship traffic meant a lot of wrecks over the years.

Dennis: Of the 308 I know, I have 104 that I think were wrecked either at the mouth of the Columbia and down to Arch Cape, in that area. Now, of those 104, we have to narrow down which ones carried cannon. And we don't know that. And that's a big important part...

Gwen: What do you think are the odds that the cannons we have are from the *Shark*?

Dennis: Well, that's a good question. Everyone wants to say it's the *Shark*.

Gwen: I know.



Dennis: And I like to think of it being the *Shark*. But you don't know.

Gwen: Dennis suggests the recovered *Shark* carronade could help resolve our mystery. I'm meeting Columbia River Maritime Museum curator David Pearson for a closer look. So this is it, the cannon that was found in 1898, is that right?

David: This is it. Right. January of 1898.

Gwen: Dave says this cannon was recovered on the same beach, about 200 feet from where Miranda made her discovery. Was this the original base by the way?

David: This one that we're looking at here is actually a reproduction from naval drawings that are well known.

Gwen: If Miranda's discovery has a similar base, that would confirm it's a carronade from the right era...but not necessarily the *Shark*, or even an American ship – the carronade was invented by the British for their navy.

David: Their carronade was actually attached to the deck of the ship. And it would actually pin at the front of it and then swivel on that pin to prevent it from moving around on the ship. It was the old expression, loose cannons.

Gwen: [chuckles] Right.

David: And that was exactly it. That was the last thing you wanted on a ship heaving in the waves was a cannon bouncing around. So the navy took the additional step when it actually pinned them to the deck.

Gwen: Dave explains how this worked. A threaded pin at the back of the barrel adjusted the tilt. The barrel was mounted on a small base or slider, which fit onto a longer slotted board. This board sat on rollers at the back and pivoted at the front. Another pin beneath the carronade went from the slider into the slot. When the carronade fired, this controlled the recoil. Dave says the recent finds show similarities to this design.

David: They still had that slider attached to it, or at least evidence of that. That brings the probability of this being a U.S. navy ship much, much higher in our eyes.

Gwen: But with all the concretions surrounding Miranda's object, it's impossible to make a definitive connection. My investigation might be at an end but because interest in Miranda's find is high, I've been able to



schedule an x-ray session for the cannons. I'm returning to Nehalem Bay to meet Robert Neyland, head of the Underwater Archaeology Branch of the Naval Historical Center, who will examine the x-rays.

Bob: This is just a generic carronade.

Gwen: Bob tells me these were common on many navy ships like the *Shark* in the first half of the 19<sup>th</sup> century.

Bob: In a close fight, they would do more damage to the opposing of the enemy ship and do more damage to the crews too. It would smash up the wood of the ship a lot more.

Gwen: Because this small cannon was a popular weapon, Bob says matching it to the *Shark* will be tough – but once the x-rays have penetrated more than 150 years of deposits, they may reveal something telling.

Bob: You could get lucky and actually see a date marked on the guns, as well as foundry marks. You could get lucky and see that...

Gwen: That would be very lucky.

Bob: Yeah, it would be...or you know...say U.S. navy too...

Gwen: To capture a glimpse of the object beneath this thick mass requires an extremely high-powered system. A team of specialists in nuclear imaging from Fuji film N.D.T. and P.S.I. incorporated are volunteering their expertise to help. Bob examines Miranda's cannon to plan the x-rays.

Bob: Here you've got your pin, for the carriage and this appears to be what's left of the breech ring. Looks like a piece of it's broken off if I'm correct on that. The screw, the elevated screw should be right in here somewhere as well too...

Rick: You guys are going to have to back off. It's going to get real hot right here.

Gwen: The film needs to be exposed for nearly 90 minutes to capture enough detail. When all of the exposures are finally complete, we take the x-ray plates inside to see what we have. We're still not getting anything.

Terry: I can see a little more.

Gwen: The first image reveals little. The second plate is only slightly better, but it does outline the shape of a cannon barrel.



Bob: In this shot, we've got some of the bore. We're definitely looking at the banding around the gun.

Gwen: The banding kept the barrel from rupturing when fired. We're down to the last plate.

Rick: That is a great shot.

Terry: Now we're talking...

Gwen: It's time to give Miranda her answer. I have done all the research that was possible on the cannon that you found. This is not just a cannon, it's a certain kind of cannon called a carronade, that was on U.S. Navy ships in the early half of the nineteenth century. I tell Miranda about the *USS Shark's* role in the shaping of America's borders, and its foreign relations. Only very powerful x-rays could peer deep into the mass of sediment and rusted metal to reveal what lies underneath.

Bob: So what are we looking at here?

Terry: There's your screw.

Rick: Excellent.

Gwen: I guess this is the threading on it right?

Bob: You can clearly see you've still got the threads very visible in here.

Gwen: Yep, that's where you crank it, okay.

Bob: The loop here for the breech rope, a long gun wouldn't have that. The elevating screw, a long gun would not have an elevating screw. It's definitely a carronade. It also compares very favorably to the cannon that was recovered in the 1890's and is now on exhibit so it's suggesting it is the same type of cannon, perhaps even from the same ship. I don't see anywhere where it says *USS Shark*, or U.S. Navy but this is all consistence with the carronade. So far, circumstantial evidence, it is consistent with what we'd expect to see for a carronade from the *Shark*.

Gwen: Here is an x-ray of the part of the cannon that would go into the deck there. And you would screw it to lift it up.



Miranda: That's awesome. Thank you.

Gwen: All the people agree that though we'll never know for sure, you probably found the cannon that was on the *USS Shark*.

Miranda: Nice. That's pretty cool.

Gwen: Don't you feel proud about that?

Miranda: Yeah, that's cool.

Gwen: You found something that doesn't just give us a critical part of the early history of Oregon, but tells us about a very important part of American history.

Miranda: Wow. One cannon.

Gwen: The great irony of the *Shark's* story was that a treaty ending the dispute over the Canadian border was signed in June of 1846, one month before the *Shark* arrived at the Columbia River. News didn't reach Lieutenant Howison until a month after the *Shark* sank. The Oregon Treaty set the U.S. / Canadian border at the 49<sup>th</sup> parallel, where it remains today.