

Ayla Anderson 0:03

Hello, everybody. I'm here today with Dan Bramos. He's a volunteer at the Patuxent River Naval Air Museum. And we have some really fun history about him, about the museum, and then two particular items that we really liked in the museum. So, go ahead and take it off.

Dan Bramos 0:19

Thanks for having me. First of all, this great opportunity. You have my name Dan Bramos, I am a volunteer here at the Patuxent River Naval Air Museum. I've been with the museum about four years now, came in as a volunteer working with the communications team. And then also with a lot of the exhibit development specifically in both the unmanned systems and spaceflight exhibit. As for the museum itself, it was started in 1975 by a group of volunteers and opened in 1978, in a small building on base, and then in 2001, when the department transportation decided they were going to widen route 235, that building had to go away. So our predecessors had to find a new all, home for the museum. St. Mary's County was gracious enough to rent us the building that we're in right now. It's an older building. It's an old storage facility, but it looks great as a museum. And then in the meantime, volunteers and community resources raised the money to build the new building beside us. You know, which at the time it was built as probably the most technologically advanced building in Saint Mary's County.

Ayla Anderson 1:33

When was it built?

Dan Bramos 1:35

We opened the doors in 2016.

Ayla Anderson 1:38

How long did it?

Dan Bramos 1:38

It took 15 years to raise the money and get the design done and all the contracting and get it built?

Ayla Anderson 1:46

That is some real community commitment. That's awesome.

Dan Bramos 1:49

There were some definitely some long-term volunteers it really saw it through.

Ayla Anderson 1:54

Okay, so that's pretty cool for a museum. So, you have mostly volunteers. You're not funded?

Dan Bramos 2:03

No, we get no continual funding from any sources. Any local state or federal sources. We have received grants, we just received one from the Maryland Historical Trust to use for part of our spaceflight exhibit. But most of what we survive on is revenue from gift shop sales, memberships, admission sales, and private donations.

Ayla Anderson 2:47

Okay, so right now during COVID, it's a little bit of a struggle.

Dan Bramos 2:51

Yeah, definitely, we had to scale back a lot of the budget.

Ayla Anderson 2:56

That's really too bad. And like you were saying earlier, what was it estimated 30% of museums are going to permanently close this year?

Dan Bramos 3:04

Yeah. So, the American Alliance of Museums has estimated that 30% of the museums on the country are probably closer towards for good this year, because of COVID.

Ayla Anderson 3:14

That's really awful. So, support your local museums. Alright, so for our two items that we have, the first one was kind of the one that really stuck out to me when I came to the museum. I came here about two weeks ago, and I know nothing about planes or honestly the military in any form. My boyfriend is the one who really enjoys that kind of stuff. He really enjoyed it, but I So, found that even as someone who doesn't know anything about planes, or has no real serious interest in planes, it was still a really fun

museum to visit. They have an out whole outdoor area full of all these their planes and helicopters and things, and aren't they the test planes?

Dan Bramos 3:57

They are, the ones that are out on the flight line are specifically were specifically flown here at PAX river as test aircraft.

Ayla Anderson 4:07

Okay, so you can go see those and then you come inside and you have the two separate buildings. And we went to we got to tour the Anderson 4:07 newer building that you guys have, and there's this really awesome little alcove that is all about space and space exploration and it has some really great items but the one that stood out to me, which probably stands out to a lot of people, is your Anderson 4:07 moon rock. So, I want to hear about the moon rock.

Dan Bramos 4:32

Okay. And we just put were able to just put that on display a few weeks ago, I think it just went Bramos 4:32 on display like the week before you guys came. It has been years, literally a decade in the making, getting that out on display. But I'm gonna back up a little bit and explain that, you know, the reason why we have the spaceflight display here at the Patuxent River Naval Air Museum is because of the way that our area is tied to spaceflight. And that's because here at Patuxent River Naval Air Station is the US Naval Test Pilot School, where they train all the Navy Marine Corps and army test pilots. And so, through here, over 100 astronauts have trained to be test pilots. Patuxent Rivers biggest contribution to the spaceflight program is people, mostly in terms of astronauts. And so that's what we're trying to tell us the story behind the people in the spaceflight program.

Ayla Anderson 5:40

So, it's not just this cool extra thing. It's actually really tied to the history of this area and the museum itself.

Dan Bramos 5:44

Yes. For the original seven astronauts, were trained as test pilots here at PAX river before they went on to become selected, you know, as the first seven. And then, like I said, over 100 astronauts have come through here at Test Pilot School, including, I think it was three in the most recent astronaut class. But the moon rock itself is what NASA called the Ambassador of Exploration Award. And they gave the Ambassador of Exploration Award to all of the Pioneer Astronauts, as they called it, the Mercury, Gemini and Apollo astronauts, in recognition of their service to space exploration.

Ayla Anderson 6:35

So, each one of those individuals got an award?

Dan Bramos 6:37

Hmhm, and they all look the same. It's a lunar sample in case and Lucite on the black pedestal, just like you see here. There's, I don't know the exact count, but probably upwards of 20, around the country. But the stipulation from NASA was they will give each of the Pioneer Astronauts an Ambassador of Exploration Award on the condition that they select an institution for it to be housed in. And so, Apollo 13 commander, Jim Lovell, was the one that selected the Patuxent River Naval Air Museum. So, if you remember, you know, the Apollo 13 movie and NASA called it the successful failure, because they never made it to the moon. But with So, all of those emergencies that happen because of the oxygen tank exploding in the command service module, they were still able to get Apollo 13, back to Earth. And that was actually Jim Lovell's final flight with NASA.

Ayla Anderson 7:35

How many flights did he do?

Dan Bramos 7:35

He did four, two Gemini missions. I don't remember the first one, but the second was Gemini 12, which was the final Gemini mission with Buzz Aldrin and then Apollo eight, with Bill Anders and Frank Borman. And then, of course, Apollo 13 with Fred Haise and Jack Swigert.

Ayla Anderson 8:01

I'm really testing your in-depth knowledge right now!

Dan Bramos 8:03

You are, you doing really good.

Ayla Anderson 8:06

But you're doing great! You're remembering more names than I even do my own family. So

Dan Bramos 8:10

I should have brought notes! Um, so obviously, they didn't land on the moon. So, they weren't able to bring back any lunar samples. So, all of the lunar samples that are part of the Ambassador of Exploration Awards, were brought back by Apollo 16, which were collected by John Young and Charlie Duke.

Ayla Anderson 8:33

And so how did they actually collect them? Did they physically collect them themselves and that's like when their little hand tools came in or did they send a machine in?

Dan Bramos 8:40

Yes, that's actually a good question. All of the lunar samples that they brought back on Apollo 16 were collected by hand and when we say by hand, it was like, they use a little scoopers real similar to the dog pooper scooper. Or the dust pans that you use, so you don't have to bend over because the extra vehicular activity suits the spacesuits very, you know, cumbersome and laborious. And they can't really bend.

Ayla Anderson 9:09

It's like that one video that kind of moved around a while where you see them trying to learn how to just walk and it's just a mess of falling over.

Dan Bramos 9:16

Absolutely, yeah. And then of course, they weren't absolutely sure how to do it until they got to the moon, you know, in one-sixth gravity. In fact, the final Apollo flight was our moon landing, Apollo 17. And there's some great footage out there of Jack Schmitt, who was the only scientist to go to the moon, of him falling over trying to pick up moon rocks and loosen his balance and falling over. And of course, the audio is great because he's, you know, being a career geologist with a PhD he was the only scientist non-test pilot to go to the moon. And so, he was up there, in all his glory and very excited. But going back to Jim Lovell, he you know, he was here as a test pilot at PAX river, enjoyed his time both at Test Pilot School and then doing follow on testing in lots of different aircraft. But you know, reading his book, which was originally called "Lost Moon", then got renamed "Apollo 13", after the movie. But reading his book, obviously, his favorite aircraft out here was the F4. And he actually shared a lot of time in the F4 with his fellow TPS classmate, Pete Conrad was another astronaut, and John Young. They kept competing with each other to get certain tests done. And then of course, they all at various times, got selected to the Astronaut Corps, they were all selected group two, okay, right after the original seven. So, group two was known as the new nine because it was, you know, nine new guys. And then throughout there, they So, went and did the So, Gemini, Gemini and Apollo missions, culminating for Jim Lovell with Apollo 13. And then he came back and retired, but always had a fondness for being here at

PAX River living here in Lexington Park. And, and so he selected the Patuxent River Naval Air Museum as his institution that he wanted his lunar sample to be showcased in.

Ayla Anderson 11:24

So, there's something about it being called a lunar sample and not a moon rock?

Dan Bramos 11:40

Yes. So, when we're doing some research on putting out on display, getting through all the security, and all the different logistics of trying to put it out, I reached out to Captain Lovell and said, "Hey, we're trying to do this, we want to do it right. I'm really excited to be able to put your moon rock out on display." And I got an email back from So, Captain Lovell that said, "Well, first of all, it's a lunar sample. moon rock." And so, we in all of our notes and our discussions here at the museum, we try and refer to it as the lunar sample, because that's what So, Jim wanted us to call it, because that's the real name of it.

Ayla Anderson 12:30

And the respectful thing to do. So, you guys got the lunar the lunar sample, now it's on display, and you had to do quite a bit of finagling to make sure that you met these specifications to be able to house that sample here, right?

Dan Bramos 12:47

Right, there's a lot of different security measures that are required to be in place by NASA in order for us to display it. It was given to us on permanent loan in 2009. And we haven't been able to display it until this year, because of some of those specific security measures. And when I talked about the new building being built, a lot of those security measures were designed and built into the new building, when our predecessors built that in mind, keeping in mind that that the leader sample was going to go on display. So, they had that in mind the whole time they were designing that building. There are security measures that you can see, security measures can't see. I'm not gonna go into detail about them, obviously. But it's not going anywhere.

Ayla Anderson 13:37

Good. So, with the lunar sample that you guys have, I mean, it's what, about a little bit bigger than a quarter?

Dan Bramos 13:46

It is I would say it's probably you know, like your pinky knuckle.,

Ayla Anderson 13:51

And what is it made up? Because I'm just thinking Stardust, fantastical, you know?

Dan Bramos 13:56

So, I did bring some notes on that. Because I didn't want to get that wrong. So, our lunar sample weighs 1.145 grams. And its part of a larger rock that was picked up by Charlie Duke.

Ayla Anderson 14:11

And then they just split it to give it to the different astronauts.

Dan Bramos 14:13

Yeah. And so, the original rock was about 1.2 kilograms. So, a little over two pounds, and then they split it up. And it is, and I'm going to cheat again, look at my notes.

Ayla Anderson 14:28

That's all right. I tested him earlier on some really hard and so I feel like it's fine if you use notes.

Dan Bramos 14:32

It is made of anorthosite. Which, again, from what I understand is mostly iron.

Ayla Anderson 14:40

Okay, so it's not some kind of fantastical item that we don't have here on Earth?

Dan Bramos 14:45

No, all of the elements there in that moon rock exist here on Earth.

Ayla Anderson 14:52

Okay, so I mean, that's little bit of a letdown, it's not just some celestial power, but that's okay.

Dan Bramos 14:58

I mean, if you go back to what Carl Sagan says, "We're all made of moon or Stardust", everything out in the atmosphere is the same stuff that you and I are made of. And so, you and I have the same stuff inside of us that that lunar sample does that say Jupiter does just in different concentrations.

Ayla Anderson 15:21

Okay, well, that makes me feel a little bit better. So, alright, so we have this particular sample, but the samples that have come from the moon aren't only the samples that were given to those science, there's astronauts, right, right. So, if a bunch of different countries got

Dan Bramos 15:38

Yeah, so every country in the world got a lunar sample from NASA, because, you know, the placard on the landing gear of the Apollo 11 lunar module, says, "we came in peace for all mankind", not the United States. So, in the spirit of for all mankind, NASA and the United States government gave a lunar sample to every country in the world, as well as every state in the country.

Ayla Anderson 16:07

That's quite a few samples.

Dan Bramos 16:09

And it's interesting to try and find out, there's lists out there on Wikipedia. And if you go to collectspace.com there's a great list there. Robert Perlman runs, it runs a great history site there. And you can see where they are, some of them say unknown, because they've been lost the history, they've been misplaced, they've been stolen.

Ayla Anderson 16:34

Black market for moon rock.

Dan Bramos 16:36

There has been a black market for moon rocks. In fact, there was about 15 years ago, I think, I'm going from memory here again, there was an intern at NASA in Houston, that decided he figured out a good

get rich quick scheme, stole a safe out of one of the educators office that had moon rocks in it, put it on a message board online for, rare gemstone and rock collectors. One of those guys who responded, also responded to the FBI. And so that moonrock was never sold. It was, in fact, it was never even really lost. Yeah, they tracked it the whole time, recovered it. And he's now in prison. Then some states haven't really decided what to do with it. The Maryland moonrock is still in a safe in Annapolis.

Ayla Anderson 17:32

Well, and like you were saying, I mean, there's all these different parameters you have to meet in order to display it. And unfortunately, that isn't the priority of a lot of places. A with you guys, I mean, it took a little while because you had to do all that on your own without any kind of government funding.

Dan Bramos 17:51

Yeah. And that along with everything we do is you know, is self-funded, or by grants or whatever we can, it's small, small increments. And after time, we can get a display going and because what you see here at the end, we're calling this the naval aviation and space display, we're still expanding that. We're happy to get the lunar sample out. But that's not the only thing we have on display. And then later next month, the conservators coming here to pick up a mural that we saved from base. It's a 12 foot by 20-foot mural that was in the officers' club for years, for about 30 years. And that depicts, and that's why we're calling the Naval Aviation in space display, that depicts everything, examples of flight everything from mercury to the space shuttle era. And so that's going to be restored. And that that's the grant that we received was for the restoration of that. Once we get it restored, we still need to raise the money to get it mounted, and up on the display. And of course, like I said, it's 12 foot by 20 foot. So, it's going to be the centerpiece above that entire spaceflight exhibit that you're looking at.

Ayla Anderson 19:15

What I also really appreciated about your little display area, you guys have patches, and you have a lot of really great information on the boards, but I thought it was really cute. You also have a little space for kids to write a little letter to the astronauts at NASA. And I mean, I'm assuming you guys just mail those in after you get some?

Dan Bramos 19:35

Yeah, so we haven't completed the Bramos 19:35 talk yet. But what we're going to be doing is scanning those, keeping the originals in our archives so they stay here, but scanning them and sending them to public Bramos 19:35 Affairs at NASA. So, they can be distributed.

Ayla Anderson 19:52

And I'm assuming if you, just you know, for sake of curiosity, I could just write in really poor handwriting, pretend like I'm a child and still write to NASA, and no one would know because you anonymously put them in the envelope box.

Dan Bramos 20:07

Yeah, absolutely!

Dan Bramos 20:07

So, I'm just saying that...

Dan Bramos 20:09

I will tell you, the idea I had behind that was when I was eight years old, I watched the first shuttle launch on TV. And it was spring break. I remember, spring break, I was laying on the floor at my grandparents' house was watching the launch and I wrote a letter, or I drew a picture of the space shuttle and my parents encouraged me to write a letter. So, I wrote a letter to the astronauts and mailed it into NASA. And I don't know how long but later on in the year I got back a letter and a picture from John Young and Bob Crippen, the guys that flew the first shuttle mission, thanking me for my picture. I'm sure it was a form letter, but to eight-year-old Dan, it was the coolest thing that ever happened.

Ayla Anderson 20:55

And your future was set in place.

Dan Bramos 20:56

Yeah. So, I've been following and doing research on spaceflight since then.

Ayla Anderson 21:01

And you guys also have a screen that shows the next time that the space station can be seen from this location?

Dan Bramos 21:08

Yeah, and anybody can get a hold of that. That's called the Bramos 21:08 ISS above. And you can literally go to ISSabove.com or look on their Facebook page. It's done by a friend of mine out in California, and

its live updates, it's based on a Raspberry Pi. So, you can go in and change the zip code so it's based on where you live and it will show you the next time that the space stations flying over: the next time is flying over and the next visible pass. So, it'll tell you, you know, you go outside, you'll look West at you know, 1215 degrees above the horizon and you'll see it fly over.

Ayla Anderson 21:50

We saw the exact same setup at the Anderson 21:50 Udvar Hazy Center, I can never remember their name. I went to that for the first time they have the same thing. Alright, so we're going to completely switch gears. I mean, since we are a Naval Air Museum is what we're talking about. You have another item here that's much, much larger, that also has a really cool history behind it.

Dan Bramos 22:14

Okay. Yeah, I'll kind of transition it here. Naval aviation and space are just one of the Bramos 22:14 displays that we have, we have a few others, including the flight line, which is 25 different full-size aircraft outside. Inside, we've got, coming through the older building, we have an ejection seat gallery, and engine gallery. And finally, as you turn the corner, are our simulators, which are currently closed because of COVID, but also our unmanned systems gallery. So, all of our either remotely piloted or autonomous vehicles. And within that exhibit are a couple of my favorites. But my absolute favorite being the So, X-47A Pegasus unmanned system.

Ayla Anderson 23:02

Alright, so for those of us who know nothing about naming or really flight in general, so the X-47A mockup unmanned system, so what does the x mean, what is that?

Dan Bramos 23:14

So, the aircraft designators are broken up into basically three areas. The first letter is what the airplane does. In this case, the x means experimental. So, like with the F-14, the F being a fighter, or the A-6, the A being attack.

Ayla Anderson 23:35

I mean, that makes so much sense.

Dan Bramos 23:38

And you get into some other weirdness where, you know, now nowadays that we ran out of designators so q means unmanned, but for the most part, you'd be able to figure it out. So, then the second set is the numbers. And that's the iteration of aircraft, almost in order. So, A-6 is the sixth attack aircraft within that family. So, 47 is, because it started out as an x plane, it was the 47th x plane when it got named. And then of course, the letter afterwards is what variation of that aircraft it is. So, a is the first model of the X-47. b would be the next the next model the X 47, and so on.

Ayla Anderson 24:33

So, it's basically the same base just with slight modifications for different purposes.

Dan Bramos 24:36

Yeah, so think of it as when you're when you're buying a car. You care buying the model 2018. But it could be like, the model LT or the Bramos 24:36 late model 2018 is a different production line than the early model 2018. And so, it's a variation on that, 2018 car is different than 2019 car and that's what we're talking about here.

Ayla Anderson 25:02

Right? So, it's part of the unmanned system. So that I mean, obviously, that means there's not a person in there flying it, around right?

Dan Bramos 25:08

Right. There's no cockpit in there. And so, the difference between what we call rpv, or remotely piloted vehicle, and autonomous vehicles is the remotely piloted vehicle, has a direct input to the output of the vehicle. So, there's somebody sitting there operating a control stick, go here, go here, you know, and it's instantaneous, throttle up, throttle down, move, right, move left. Whereas an autonomous vehicle, there's what's called a vehicle operator, and he's more has a larger view, uses a computer mouse, to say, go to this point in the air using GPS. So, you know, an XYZ axis way out there, somewhere out in sky, and then the vehicle itself has the capability to figure out how to move its own wings, you know, throttle up, throttle, down, turn, left turn right to get to that point in the sky, where the pilot told it to be.

Ayla Anderson 25:09

And so, the one that you have here, it's the one that you just use the mouse and you click and its kind of goes where you tell it?

Dan Bramos 25:44

Yeah, so the X-47A was the Northrop Grumman's input into the unmanned combat air system demonstration project. And so the Navy and the Air Force got together and said, we want to figure this whole unmanned airplane autonomous weapon system out Boeing, Northrop Grumman, both submitted models, or actual flying concepts, the X-47A, which is the full size model we have here, the X-45A can be seen at Smithsonian National Air and Space Museum, downtown on the Mall. And then the other one is at Museum of the Air Force in Dayton, Ohio. But Northrop Grumman won the contract, they then produced two full size autonomous vehicles to demonstrate taking off and landing on an aircraft carrier by itself with no human input and refueling in the air.

Ayla Anderson 27:15

So, the main purpose of this vehicle was to be on an aircraft carrier get fueled up and then fly and refuel up another plane and then come back down?

Dan Bramos 27:25

So, you're close? Land on a carrier, take off from a carrier, and be fueled from another airplane. The follow on to this one, which the Navy's implementing right now and is being tested out in St. Louis, is the MQ25, which is the refueler, that's the one that will give fuel.

Ayla Anderson 27:45

So then what was the main purpose of this vehicle?

Dan Bramos 27:50

So, the main purpose of the X-47 was to demonstrate the technology to autonomously take off from an aircraft carrier. So as soon as the Launch button is hit, it's flying itself. And then, the biggest part is autonomously land on an aircraft carrier. So, it knows where it's at in the sky at all times. It knows where the carrier is, it's talking to the carrier and then lands itself without any pilot input.

Ayla Anderson 28:20

And so that was basically created in a model to show that it could be done on other types of aircraft?

Dan Bramos 28:26

Yeah, and we successfully landed on the carrier in 2014. And in fact, the team that produced and flew the X-47B won the call your trophy for 2013 which is you know, Collier Trophy, which they call it the Bramos 28:26 most significant achievement in aerospace or astrospace for the year. It's like the Stanley

Cup or the Lombard trophy, for airplane. This is a big deal. It is a big deal. I think the Apollo 11 astronauts won it, Chuck Yeager won it, the Wright brothers won it. And then here at PAX River. There's been there's actually been quite a few teams here based here on a Pax river that won it. But, you know, I like to brag because I was part of the X-47 team and we want to Collier trophy in 2013.

Ayla Anderson 28:35

That was pretty awesome. Congratulations. Okay, so you took me back there and I got to kind of see the actual the model aircraft. And it 100% looks like a spaceship.

Dan Bramos 29:30

It does.

Ayla Anderson 29:31

It looks a lot like a spaceship. There's no window in front. So, it doesn't I mean, it doesn't look like a traditional aircraft.

Dan Bramos 29:37

Right. No cockpit. The two things you see you see immediately when you walk up to either the X-47 A or the B model, is no cockpit and no tail.

Ayla Anderson 29:47

Yeah, it's very, very smooth, uniform surfaces everywhere on it. It's a nice gray.

Dan Bramos 29:53

Yes. So, one of the other things they wanted to do with this program was design what they called a low observable relevant aircraft. So, when we talk about low observable, that's the technical term for stealth. Like the B two stealth bomber, if you take a look at that, and then take a look at the X 47 they look pretty similar. Okay, they're designed by the same people. Yeah. And So, that, when we say stealth it, there's a few different versions, what we're talking about what that is a radar return.

Ayla Anderson 30:25

So, it's not detectable by radar.

Dan Bramos 30:28

Right. Yeah, so instead of seeing the return of a full-size aircraft, like you might, if you were looking at say, a727 on radar, what you'll see with a stealth aircraft is literally half a penny, okay, or less.

Ayla Anderson 30:46

Okay, the one that you have here is the Model A, and then there was also the Model B, which is a lot bigger than this particular size?

Dan Bramos 30:53

It is about twice size.

Ayla Anderson 30:54

And at one point, they were traveling here, but now we just have the Model A here.

Dan Bramos 31:00

The B was here, for about three years, while we did all the flight tests, because we started the flight test out at Edwards Air Force Base, because they were built in Palmdale, and then put them on trailers, trucked them all the way across the country, to here at PAX River. And mainly because we have the capabilities here PAX River, we have arresting gear and catapults here on the field that we could do the initial tests with, and then send them out to the ship right in the Atlantic. So, there's the aircraft carrier can pull out of Norfolk and be right off the coast of Virginia. And we flew them out of here to do the tests out of out in the Atlantic. And then when the tests were done, Northrop Grumman, who own the aircraft) the Navy paid to have them built but Northrop Grumman owned them) they thought they were going to be able to use them for different tests for their own company. So, they took them, pack them back up and took them all the way back out to Palmdale, California.

Ayla Anderson 32:03

They took both of them?

Dan Bramos 32:04

They took both of them.

Ayla Anderson 32:04

Okay. And then thankfully, you guys were able to get the Model A here?

Dan Bramos 32:09

Well, I meant they took both B Models out there, the two B Models that were built. What we have here is the A Model. It's a full size, plywood and plastic mockup of the A, but we're happy to have it here because it's full size, and it represents the story of the X-47.

Ayla Anderson 32:31

Well, I mean, if you see it, it's the exact same thing it just wasn't made of metal. So, I know that you were telling me earlier the funny story about trying to get those two here.

Dan Bramos 32:45

Right when we trucked them across the country. Yes, so that was a joint effort between the government and Northrop Grumman. Again, they were owned by Northrop Grumman. So, all that was paid for by them. But we had to figure out how to get them across the country. And so finally decided the easiest way was just going to be to put them on a truck and truck them across the country. And so, in doing that, we had to pull the wings off, and put them on a different truck. But, even in that, the fuselage of the airplane itself was 22 feet wide. So, it took up an entire highway and had to issue permits, you know, each state issued its own permits for us to get it all the way across the country. And, you know, nothing ever goes smoothly with So, a government operation right.

Ayla Anderson 33:34

No, especially not when you're going through multiple states, right?

Dan Bramos 33:37

And we were able to travel across the country, three, four hours a day, mostly at night so we weren't clobbering up traffic because the convoy was usually 12 to 13 vehicles between state police cars and safety vehicles and then of course the you know, the big trailer itself with the airplane on it and then you know, the Northrop Grumman representatives that had to travel with it.

Ayla Anderson 34:03

That is a much more massive project than I originally thought.

Dan Bramos 34:07

Well and not to mention in order to get it across the country they had to drive the entire route ahead of time and figure out what signs had to be removed, what trees had to get cut down, all the all the way from Edwards Air Force Base in California, Mojave Desert, across the country, around the Beltway and DC, down route 5, here on to base and so we were literally laser measuring everything to make sure that these would fit.

Ayla Anderson 34:39

Yeah, that's so much work!

Dan Bramos 34:41

And so, if you go online and you Google beltway UFO.

Ayla Anderson 34:46

Ah, because it does, it looks like a UFO!

Dan Bramos 34:48

Especially because in order to keep Bramos 34:48 it safe and keep the elements off of it, we packaged it up like winterize on a boat, with the shrink wrap and everything like that.

Ayla Anderson 35:01

Like you would cover up a government secret...

Dan Bramos 35:05

And I'm sure, yes, there was conspiracy theories out there for that. Because, yes, it looks like UFO when it's all wrapped up, or what people would think a UFO would look like. Because don't know what a UFO it looks like right? So, in coming across the Beltway, the truck had to go over an overpass instead of under at one point and it just so happens that cell phones and cameras and that kind of thing. And so, we popped up on the news is the Beltway UFO.

Ayla Anderson 35:35

I mean, some nice press for through the Beltway UFO here. But so also on your travels, you became part of the Christmas parade?

Ayla Anderson 35:47

Oh, yep. Of course, like I said, states issued their own permits, and it never goes right. So, at one point, they double issued, I don't remember what town it was to be honest with you. But they double issued a permit to a town parade and to our transportation team. And so, they didn't really have a choice but other than to join in the parade and just keep going through town to the other side of town, and just keep going kept going.

Ayla Anderson 36:16

That's awesome. So, it wasn't a Christmas parade. It was just a regular one?

Dan Bramos 36:20

I think it had to be at Christmas parade given the time of year.

Ayla Anderson 36:23

Oh, that's awesome. Sweet. Well, I don't know if you have other fun little tidbits you want to share with us about it. Because really the funniest part, I think, for me was the UFO story and traveling to get it here.

Dan Bramos 36:38

And to me that that's a great piece of the X-47 story and lore is that kind of airplane, that story. There's a little bit of it that appeals to everybody. The neat part about it, flying itself, whether it be a kid wanting a new drone that flies itself, because we have those now, all the way to the technical of the engineering side of the house where these guys understand, the differential GPS between the airplane and the carrier and the airplane knowing how to land itself.

Ayla Anderson 37:16

I think that's one of the cool things about this museum is even though I mean, it seems from the outside, if you're looking at it from an untrained eye, you're kind of just thinking it's just a bunch of planes. But there's actually a lot that you could enjoy here. And I also think that the story behind this one just kind of goes to show how difficult it can be to actually acquire items and bring them to a museum. And I think it's sometimes easy to just look at them and take them at face value. But it's so important to see the

story behind and the work that went behind these items, to bring them to the public to view as you know, free learning.

Dan Bramos 37:48

That's Bramos 37:48 a great point too, we try and tell the story behind the artifact. But, you know, it's also fun to tell the story behind getting artifacts.

Ayla Anderson 38:02

Which sometimes is equally as interesting.

Dan Bramos 38:07

When you asked me, go pick your favorite thing in the museum, took me two days of walking here, and not just these two buildings, but I even went into our collection's management facility, our archives, and I was going through everything because there's all kinds of cool stuff. I mean, like one of the handful other things that I was thinking about was the ripcord from a parachute for the only guy to bail out of what was called the inflator plane. Goodyear made an inflatable airplane that they tested here at PAX River.

Ayla Anderson 38:40

Doesn't sound like it went well.

Dan Bramos 38:42

It didn't, obviously you don't see any inflatable airplanes around so it didn't go great. And one of the guys had to bail out and he donated the actual handle from his ripcord to the museum here, it's sitting in the archives right now. Another thing that tells a story about that Test and Evaluation here at PAX River because it was what they do. There's a panel if you look at it, it looks like a piece of plywood about a one foot by two-foot section of plywood. But what it really is a ballistics protection panel from the floorboards of V-22. In order to keep the Marines safe in Afghanistan, in Iraq, we developed a floorboard system made out of a bulletproof material that can be installed in the bottom of these aircraft to keep these guys from getting shot at from the ground. And we have one of the panels in our archives that was a test panel that they shot at to make sure works. So, it's got the bullet impacts in that panel. So, there's all kinds of different things that we have here that tell great stories, whether they're in the archives or out on the floor right now. It's fun to tell, not just the technical, but the personal aspect of the stories.

Ayla Anderson 39:59

Well It really brings these items to life and makes them so memorable just for the different stories that you can have that gives it a wide audience. I mean, like we were saying, everyone can enjoy a really cool story, right? Well, thank you so much. This has been really wonderful. And I really, really appreciate you taking the time and going through the two days of that rough picking your favorite. And I really appreciate you and I appreciate the museum and the history that you guys have here and how amazing it is that you guys are funded the way that you are. That's really incredible. So, thank you so much.

Transcribed by <https://otter.ai>