

Transcription

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Interviewer: Lesly Kassandra Martinez
Lea Gallarzo

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[Lea Gallarzo] Okay. Hello. My name is Lea Gallarzo and today is Thursday, October 24, 2024. It is 12 o'clock in the afternoon. My partner, Lesly Kassandra Martinez and I are conducting this interview in Meriam Library Podcast studio in Chico, California. We are here with Dr. Eric Bartelink. This interview is part of the oral history project preserving Chico State voices for change, which aims to archive and narrate the history of community activism at Chico State. Dr. Bartelink. Before we get started, we need to formally ask you, do we have your consent to record this interview?

[Dr. Bartelink] Yes, that's fine.

[Lea Gallarzo] Thank you for agreeing to participate in this oral history project. I want to remind you that this may be published as part of the Oral History Archives project for Dr. Gloria Lopez in my ethnic studies mythologies class at California State University Chico. I am now passing this to my partner, Lesly Martinez.

[Lesly Martinez] All right. So, after that brief introduction, Dr. Eric Bartelink. Firstly, can you share some insights into where you're from your early teenage and college years that influence your career path as a forensic anthropologist?

[Eric Bartelink] Yeah. So, I was actually born in the Bay Area. And when I was about four, my dad got a job transfer to Lake Orion Michigan area. So, I moved there, kind of grew up in Michigan, stayed there through college. But I did spend a lot of time in California because my parents divorced when I was ten, my mom moved back to California. So, I spent kind of all my summers and winter breaks and spring breaks in California. So, I kind of felt like I had a foot in both worlds, and I was always interested in like Native American studies. I was interested in history. I was interested in forensic science, but I had no idea what forensic anthropology was when I went to college. So, I ended up majoring in anthropology. I did a minor in history. And in my senior year, we

had our anthropology society had basically gotten a couple of professors to come to Central Michigan University to give lectures and talks to anthropology students. And that was the first time I learned about forensic anthropology. We had a forensic anthropologist from Michigan State come. He talked about the cases that he's worked on over his career. Also had a bio-Archaeologist come who, bioarcheology studying archaeological skeletal remains and he was from Howard University. He was talking about the African burial ground project in Lower Manhattan and how they were trying to study the skeletal remains of people who were enslaved, and he was an African American anthropologist, which is not super common for our field. I was really inspired, and I decided this is what I wanted to do. So, I kind of kind of moved into that direction, my senior year of undergraduate.

[Lesly Martinez] That's good. Okay. So, with being as- a forensic anthropologist, did you have any other, like, sparks? 'Cause I know, with anthropology, there's four sub fields. Did you ever think of like moving towards cultural anthropology, or did you know, like, right away that inspired you to be a forensic anthropologist, and that's what you wanted to do. Because I know that like back then, anthropology, even forensics wasn't as much as it is today. So, was that like something you stuck with the rest of, like, your years at college or did like another sub field kind of interest you?

[Eric Bartelink] Initially, I was more interested in cultural anthropology. I had dabbled a little bit in archaeology. I was kind of interested in that, and it was really when I learned about forensic anthropology that I was I was like, this is what I wanted to do. I love- like skeletons and skeletal remains. I love forensics, and I just didn't know there was a career for that. So, I've always been a four-field anthropologist, though, so I've always had for all my degrees, undergrad, master's and PhD. I took course work in the different subfields of anthropology. Think it's really important. Even as a forensic anthropologist or bio-archaeologist you have to use anthropological and archaeological theory and methods in our work. So, I like to think of myself as a four-field anthropologist who specializes in the human skeleton but definitely derives a lot of information and perspectives from the other fields of anthropology. Good. That's great. I love hearing that. Now, you're not just one field. You're all four fields together, but you still like base yourself on skeletal remains and stuff like that, but you can basically do anything. I think that's great. Okay. So, could you share your academic and professional background? Where did you complete your education and training? So, my undergrad degree was a BS (Bachelors) in anthropology, a minor in history at Central Michigan University in Mount Pleasant, Michigan. That was in 1995, and I had finished in about 3.5 years by taking a lot of summer units. I don't know why I was in such a hurry, but and then I moved to San Francisco in early 1996, lived with my sister and her husband briefly, and then I ended up in Mountain View, California, and the Bay Area. I got a job at Stanford

University, installing computers for the library systems. This was the early days of the Internet. So, I was learning a little bit about the Internet, getting my first email address. And then when that job, once we completed the work for that job, I got a job at Stanford Hospital. And I ended up getting placed into the orthopedic surgery clinic, which was actually quite fortuitous because it was about bones. And so, I worked there for about a year and a half in orthopedic surgery. I got to learn about, you know, bone fractures and bone diseases and things like that. So, I definitely was even though I worked at the front desk and made appointments for patients. I was always talking to the doctors and just kind of soaking it all up. In the fall of 1997, I got into Chico State, and at the time, it was one of the few programs that had two board certified forensic anthropologists. It was Dr. Tarjan Mirad and Dr. P Willy. And so, I started grad school at Chico State in 1997. And I was here for four years working on my master's degree. I got to work on casework. I got to study archaeological skeletal remains and just be very involved with things on campus, really loved my time here. And then I had applied to some PhD programs in 2001, when I was done with my masters and went on to Texas A&M University in fall of 2001. Of course, a couple of weeks into my first semester, 9/11 happened. And the following summer so summer of 2002, and then also in the summer of 2003, I was hired to actually work on identifying remains from the World Trade Center. So, I spent two summers in New York working on that. The person who was in charge of the entire identification effort was a former master student from Chico State that I had known. She's now Dr. Amy Mundorff, professor at University of Tennessee. So that was a really eye opening experience. Also, when I was a- a master student at Chico State in 2000. I had the opportunity to go to Bosnia, and I helped with the United Nations forensic team to exhume mass graves of victims of genocide. So that was another really eye opening thing I got to do. I got to learn more about how you locate graves, excavate them, scientifically, and collect evidence that can be used to prosecute people for war crimes. So that was a- 2000 and 2001 were pretty big years for me. Finishing my master's, going to Bosnia, getting into a PhD program, working on 9/11. And then I was at Texas A&M until 2006. I officially graduated in May of 2006. However, in 2005, job opened up at Chico State for a faculty position, and to ultimately replace Dr. Mirad my former master's advisor, who was going to retire soon. I applied for that position. I interviewed in May of 2005, and I was actually offered the job before I completed my PhD, so one of the things I wanted to negotiate was starting my p- or sorry, starting the new position after I actually had my dissertation completed. So instead of starting in August of 2005, I started in January of 2006, had defended and turned in my dissertation and, you know, graduation date was technically May of that semester. So, my first semester here, I didn't technically have my PhD, but all the Everything was completed. I was just waiting for, you know, the degree. And I have been here ever since. So, this January will be 19 years of me being at Chico State.

[Lesly Martinez] Wow. So being a forensic anthropologist, you did a lot with, like, 9/11. You went through excavations. Would you say that anthropology just came naturally to you? Like, was your school like, hard? Did you have, like, a hard time at school or did it just come like naturally easy to you? And I was like, that's what I wanted to do. I know how to do it, or did, like the excavations and things you did outside of your career like, also help like the hands-on experience?

[Eric Bartelink] Yeah, there's several parts of that question. The first thing, I'll go back to high school. I was not the best student. I did the work. I took school seriously. I just honestly had trouble paying attention, and, you know, I was a pretty mediocre like maybe a low B student. Didn't really have a whole lot of ambitions, didn't really know what I want to do with my career. When I went to college, I did take college, you know, more seriously. I had a little bit more focus, and I did, you know, pretty decent in college. I always went to class and everything, but I didn't really have my passion until I found out about forensic anthropology. So really when I got into graduate school, that's where you know, it became it was never easy for me, but it became easier because I wanted to do it. I knew what I wanted to do. I knew what I needed to learn, and I put in the time and the effort. So I think all of the, you know, working on things like 9/11, going to Bosnia and working on many cases where you have to recover human remains from buried contacts, fire scenes or remains that are scattered on the surface by animals and other forces of nature have really provided all the hands on sort of learning I needed. There's only so much you can get from a book. You really do have to go out in the field and do the work and to really understand it. So now this work to me, I absolutely love it, and I'm always working on a case. Our lab is very busy. We do about 150 cases per year, which is quite a lot where the busiest lab in the Western US in terms of forensic anthropology. And we have five forensic anthropologists on our staff. We have- myself (Eric Bartelink), Dr. Colleen Milligan, Dr. Ashley Kendall, Dr. P Willie, who's retired from teaching, but still active in our lab and field operations. And then about a year ago, we hired Dr. Amber Plemons, who is a forensic anthropologist, and she's actually on the staff side. She doesn't teach, but she is our lab supervisor. So, the first time we've had a- an actual PhD level forensic anthropologist as the lab supervisor. So we have a very busy operation between casework and trainings and teaching and mentoring students.

[Lesly Martinez] Okay. So, I know that you said before that the reason why you opened up Chico State was because that a position opened up while you were getting your PhD for faculty. Was that like your ultimate first choice? Was that like the first job you straight got into, or did you have other like, dreams that you wanted after you completed your PhD, or did you know that Chico State was, like, somewhere you wanted to work because you got your master's degree here?

[Eric Bartelink] That is a great question. I was not looking for a job because usually get your dissertation done, you get your PhD and then around the time that you're finishing is when you're actually applying for positions. I always wanted to come back to California. I wanted to work here. I wanted to live here. I thought I would maybe get a job at a CSU sometime and didn't necessarily think I would get a job at a UC but was going to apply. Probably a year from the time that I applied to Chico State. I wasn't even on the job market. I applied because Dr. Murad encouraged me to, and I thought I had no shot whatsoever in getting the job. I was actually shocked when they offered the job to me. And then I was in a position where I was like, Do I want to come here? I decided Yes, this is a great master's program. I have an opportunity to help build it and expand it. And that's basically what's happened. We've been able to add new faculty and staff, and in about two years, we're going to have a brand-new forensic anthropology building. Which will be behind the Wildcat center on the other side of the railroad tracks. We have the money to build the building. We have a- architectural firm. We're working on all the plans. So hopefully in about two years, we'll have a brand-new building that will be around 30,000 square feet, and our current lab is like 2,500 square feet. So, this is a huge improvement and expansion of our program.

[Lesly Martinez] With with that building, how many staff and faculty do you guys approximate to have for this forensic anthropology building in general?

[Eric Bartelink] Probably have office space for around ten, and that include our archaeologists as well because they work with us. And we would like to fully move out of Plumas Hall. Many of our faculty are in the new BSS (Behavioral Social Science) building as well. So, we'd rather be split between two buildings and three. And so, we'll probably have about ten faculty and staff in the new building in terms of office space, but we'll have workspaces for our graduate students. So, we have about a dozen master students in forensic anthropology and usually about five to ten archaeology graduate students. So, our bottom floor of the building will be mostly the lab where we do the casework, and we'll have a training room on that floor as well. And then the second floor will be faculty offices and then more specialized labs like DNA lab, stable isotope lab, Zooarchaeology lab. And so, the smaller more specialized lab facilities will be on the second floor. So, it'll be like a bit of a research center as well as a forensic anthropology laboratory.

[Lesly Martinez] All right. So, within that new building, would you like to tell us about your first six years here at Chico State and like, what projects that you do the first six years? Like you said, you're about to be 19 years here, so that's like the first half of the years you've completed here. What have you done so far? Like, what are the big

projects do you think are something that contributed to the forensic anthropologist that you are today?

[Eric Bartelink] So my first six years or so was really, you know, you want to get tenure and promotion. And so, I had to do publications based on my dissertation research. I also was able to publish some papers related to things like 9/11, looking at DNA preservation and skeletal remains with Dr. Mundorff and another colleague. I had to start some new research programs as well. So, I started a long-term collaboration with the Ohlone tribe in the San Francisco Bay area, where we looked at ancient diet throughout prehistory in different regions of the San Francisco Bay based on human skeletons that had to be excavated from construction projects. And so, they've been very supportive of archaeological and bioarchaeological research. So done a lot of great collaborative work between myself, my students and members of the Ohlone tribe. So that was definitely a big project where we looked at dozens of archaeological sites throughout the Bay area, spanning several thousand years and providing a lot of rich information about the Loni's people's history through time and are a tribe that's not federally recognized, and so they really value archaeology and its contribution to showing their long term ties to the landscape and everything. Yeah, just getting things published, getting a lot of experience doing casework. I was able to get board certified by the American Board of Forensic Anthropology in 2012. That was a huge thing because you have to apply to sit for the board exams and then it was an eight-hour exam that you have to take, and you have to pass both sections of the written and the practical in order to become board certified. And so, I was the 89th person board certified by the American Board of forensic anthropology. And I think they're up to numbers of, like, almost 140 right now. Dr. Ashley Kendall just got board certified a couple of weeks ago. So, we now have four board certified forensic anthropologists at Chico State. So

[Lesly Martinez] That's great. I like I've talked to Ashley Kendall, but that's honestly great that we have. I think you said two now here or is it four at?

[Eric Bartelink] We have four, because Dr. Willie is board certified. And then maybe two, three years ago, Dr. sorry, Dr. Milligan got board certified. So yeah.

[Lesly Martinez] So does getting board certified, like, add to your resume adds to like your credentials, or is, like, can you elaborate or explain more about, like what getting certified means?

[Eric Bartelink] Yeah. So currently, you can only get certified if you have a PhD and you have sort of lots of experience in forensic anthropology. And so, you've done

research. You've worked on cases and everything, and you have to submit examples of your casework that get evaluated by members of the board of directors. And so, it is a very selective process. And then once you're approved to sit for the exam, you have to pass the written and the practical part, which is basically bone stations, you have to go through and do analyses, and you don't have a lot of time, so it's pretty stressful. So, it does add to, you know, credential. It shows that you've been evaluated externally. You've essentially been certified. That's kind of like the gold standard in our field is to get board certified. Moving forward, starting next year, there is a board certification at a slightly different level for master's level students. Students who complete a master's can apply to take the board exam to become a forensic anthropology analyst. And then later if they get a PhD, they can apply to be a diplomate, which is what we all currently are. So that will allow certification at the master's and PhD level. I think it starts next year.

[Lesly Martinez] Okay.

[Eric Bartelink] So, yeah, it's a big deal. Yeah. And then you have to get recertified every three years, meaning that you have to provide evidence that you're contributing in casework, research, publications, public outreach. So, you have to achieve enough points to pass the recertification. You don't have to take the test again. Which is good.

[Lesly Martinez] Is the, like, test taken with all at once? Is it, like, different sections, or is it just, like, where is it established? Is there like, multiple locations, or is it just one building where everybody goes in and takes it?

[Eric Bartelink] So when I took it, and this was the case for the first 40 years or so, you would go to the American Academy of Forensic Sciences Annual Conference, and you would just go a little earlier. And then at the beginning of that week, it would usually be like a Sunday or Monday. You would take the written tests in the morning, so you would for 4 hours take a written test. It was a multiple-choice test. It's very challenging, you have to know hundreds of articles really well because they ask you specific information. And then you would have a lunch break and then for 4 hours in the afternoon, you would do the lab practical. So, you would actually do it at the conference that we normally go to, but at the beginning of the week. Kind of starting around COVID times where things started to get more challenging. They moved to remote testing for the written test. So, you can actually take the test at home, but you're going to be recorded on camera. So, someone's going to be proctoring and monitoring, making sure that you're not looking at anything, you know. And then the scores are they're known pretty quickly because it's being graded on software. The practical, you had to fly to University of Tennessee Knoxville, where they have a massive human skeleton collection. I think it's over 2000 skeletons now. And it's also a place where they have one of the outdoor

decomposition facilities, the classically known body farm. And so, you have to go and take the practical tests there, which means you have to fly to [Phone Buzz] Tennessee and sit and take that test.

[Lesly Martinez] Sorry, that was my phone, okay that's good to get, you know, background on how, like board certified. I honestly, I had an idea of, like, getting board certified by it and it was like a full process, like having to fly out, doing a whole eight hour test like still at the conference. But I think it's great that now they're doing a program for within the masters, and then you get to get more certified within your PHD. I think that's great so.

[Eric Bartelink] Absolutely.

[Lesly Martinez] Yeah. Now that you've been here at Chico State for about 18 years, you're about to complete your 19 years. Tell us what you contribute to as the co-director of the human identification lab.

[Eric Bartelink] So, while Dr. Plemons is the day-to-day supervisor of the lab. So, she's the one that assigns cases to one of us, and she also does case lots of cases herself. You know, one of my roles is just make sure that the lab is functioning properly, that we're following our standard operating procedures, that students are getting opportunities to assist with casework and go out into the field, making sure we have proper equipment and supplies for processing remains when we have to remove tissue from bones, we have to put in put on a lot of personal protective equipment or PPE. Also, when we go into the field, we have to have lots of PPE for if it's a decomposed body or burned body, or if we go out to fire scenes. So, a lot of it is just making sure everything is running smoothly that the lab is staffed with students are able to get opportunities in that we have enough equipment and supplies. Then when things happen like the roof leaks, something, the body freezer breaks down. We get panicked calls from Dr. Plemons when that happens. This is one of the reasons why we cannot wait to move into a new building where the building we're currently in is kind of running its life course, and it's been a little bit problematic. It's way too small for the volume of cases that we do.

[Lesly Martinez] So the primary reason that this lab is now being built into a bigger lab is that because your guys' case load also increased over time. And another add to the question, how many like students get to get into this program? Is it like just internships? Can any anthropology major get in? Like, what's kind of the process of how students can come to this lab and be involved?

[Eric Bartelink] Yeah. Excellent question. Over the last 15 years or so, our caseload has increased from you know, roughly 30 or 40 cases a year to about 150. And so, we are now working with most of the counties in the state. There are forensic anthropologists in Southern California and a few other places. But we do casework for dozens of counties in the state of California. So, Dr. Kendall, Dr. Milligan, and I are all also instructors for post, and POST is Peace Officers Standards and Training. It's the education system for law enforcement in the State of California. So, we all teach at the homicide class for POST. And so, every time we do one of these courses, we have about 25 officers, usually detectives. And so, through all those trainings that we do about 12 of those a year, we've actually picked up another one in Orange County focused on death investigation, and then we do four wildfire trainings for search and rescue teams as well. Plus, talk at the DOJ (Department of Justice) Missing Persons Conference, which I just did on Tuesday of this week. And sometimes the state Coroners Association meetings we really reaching a large audience in the state, so they're aware of what forensic anthropologists can do, what kind of resources are available. And so collectively, that has probably contributed the most to our casework is just getting the word out about what we do. And so, getting the new building, you know, was in part due to the massive increase in caseload. Also, just our very strong track record with helping resolve a lot of cases and assisting with large scale wildfire disasters like the Camp Fire (Paradise Camp Fire of 2018) We were the team that was doing the recovery of the fire victims. It was a 21-day 21 consecutive day process. We also helped with the North Complex fire, also known as the Bear fire, and multiple other fires. Last year, we went to Lahaina in Maui and assisted there in the field, and some of my colleagues in the Morgue as well. So um, we've gotten a lot of attention for the university positive attention, and also just we do a lot of grant and contract work as well. So, the hope is to have this facility, and the facility can generate revenue too through grant and contract activity and trainings that we can do on campus. So, it's sort of we've kind of created this beast, don't I think in a lot of ways. Currently in our lab, we have about 12 graduate students, and they do help with casework and go out onto the field, so they will sit around the table with us while we're working on a skeletal case, while we're doing the analysis, they'll help with processing remains. They'll help with going out into the field. And then for interns, we usually have somewhere around between maybe two and four undergraduate interns at a time. And they have to at least do three units for their internship. And they are doing the internship for the certificate in forensic science, which we're working on creating into a minor in the near future. So, it's not for every student, but students who are going through the certificate program or students that are in our master's program.

[Lesly Martinez] Okay, so, talking about that certificate, can you give us more of like an in depth of what their certificate is? Like, what does this certificate do for students that are taking the certificate? Like, what will this do for them in the future?

[Eric Bartelink] Yeah, the certificate program was started by Dr. Turhon Murad and uh in the late 1990s. And it was originally called the certificate and forensic identification, and more recently, it was changed to certificate and forensic science. I won't go into all the history of that University politics kinds of things, but the goal was to give students who undergraduate students mainly an opportunity to take a curriculum that would prepare them for entry level work in a crime lab or doing crime scene investigation or death investigation kind of work. And so, Students would take often course work in chemistry and biology. Most of the students historically have been anthropology majors, but it has really grown. We have biology majors, we have psychology majors, criminal justice majors, of course, anthropology and biology and chemistry as well. So, it is a mix of students from multiple different departments. They always have to take coursework outside of their major, so get out of their comfort zone, so our Anthro (anthropology) students have to suffer through chemistry and biology. Most of the biology and chemistry students are set because you have to take chemistry if you're a biology student and vice versa. So, they are always kind of more easily meeting the requirements. You have to take the survey of forensic science core course. And you have to take at least one criminal justice course from the curriculum. And so, then the culminating event is to do an internship. It used to be six units, which was about 270 hours, and to make it more easy to get students through. We did change the requirements so that they only have to complete three units. And so, it can be easily, you know, completed in a semester or over the summer. We have run into our students who've gotten the certificate that are now deputy corners at various places or have good paying jobs with crime labs, and they don't always tell us that they got a great job, but sometimes we're actually working with our former students, which is pretty awesome.

[Lesly Martinez] It is. Mostly because I think also Chico State has one of the most high percentage rates for students getting job after they graduate. So being able to have a forensic anthropology program to where students can succeed in a small CSU because you don't see forensic anthropology everywhere. It's mostly like out of state to have something here is really great, and to actually be building a new building is really great. So

[Eric Bartelink] We agree.

[Lesly Martinez] Yeah.

[Eric Bartelink] Were very excited.

[Lesly Martinez] So with that, can you tell us, I know you also explained it, can you also let us know and remind us the primary mission of the lab? And what specific areas of researcher projects are currently happening today in the lab?

[Eric Bartelink] So the mission of the lab is to offer law enforcement, other legal entities because we do work on some civil cases, but to provide services that help with identification of human remains, so that could include everything from is this bone or not bone? Is this human versus animal? If remains are human, are they modern, or maybe they're archaeological or historical. And then if they're modern human remains, we want to try to aid in narrowing down the identity of who they belong to. And also, the circumstances surrounding their death. So, if they were beaten, shot, stabbed, dismembered, burned, we carefully document all that kind of information. So, we provide information on identification and information on trauma associated with that person's death. And we also aid in the search and location and recovery of individuals in the field. Usually buried, surface scattered or burned. So, recovery, identification and trauma analysis is the main goals. We want to- the larger overarching thing is to help law enforcement determine what they need to do regarding a set of remains, if it's, you know, dear bones, then case closed. In most cases, if it's human, do they need to investigate? Do they have to identify who the person is? And then they want to know what the circumstances surrounding a person's death you know was it a homicide, a suicide, an accident, a natural death, or an undetermined death. And the larger thing is to provide this information to law enforcement so they can work through these cases and then determine what they need to do. And then for the families to provide some answers, you know, some sense of closure to know what happened to their loved ones is really really important. There's nothing worse than someone who is missing a son or daughter, and they don't know what happened to them. It's you know very traumatic. So, this is one of the larger goals is to provide that information for families. What was the other question?

[Lesly Martinez] The other part to that question is what research or projects are currently happening within the lab.

[Eric Bartelink] So there is a number of projects that are going on. We, over the last several years have been doing a project where we have been placing rescue dummies that are typically used by search and rescue into the Sacramento River. And we have dropped many dummies in many locations to see how the river transports these dummies over time and under different flow rate conditions. We got a grant from the National Science Foundation that was about \$900,000 and we have been doing

research for the last several years to come up with methods to know where to locate a body. If you know where and when a person, let's say drowned or where they were dumped in the river, we can predict where to search for them. And currently, search and rescue teams go on rescue boats, and they might spend days searching using kind of guesstimates. And we created an app called Sac River search that allows you to put in some information about where and when a person was last seen or likely put into the river, if it's like a body dump situation. And we can predict a search area based on all of our dummy trials. And so, we've been doing extensive work on that. It's been really fun. We've got a lot of weird looks from fishermen, and we even brought former President Gail Hutchinson out on the river one day to see what we are doing. And we're of course coordinating with law enforcement in the counties that the Sacramento River goes through. So, it was a novel project. Nobody had ever done anything like this before. So, we're now need to publish some articles based on the research and everything. And we have some follow up projects that we want to do. We've had other projects where we're looking at stable isotopes in human bone. And these are remains that are from recovered from the Vietnam War, the Korean War World War two by the Department of Defense, and the Department of Defense has a Anthropology laboratory called DPAA, and DPAAA is the Defense POW MIA Accounting Agency. They're responsible for recovering all members of service who have died in past wars and conflicts. And using stable isotopes, you can look at chemical signatures and bones and identify whether the person, let's say a local Southeast, sorry a local person from, let's say Vietnam or Cambodia versus a U.S. soldier because the diets in Southeast Asia are so different from the US. Chemically speaking, and we can actually very accurately separate which bones are a local person versus a U.S. soldier. And so, the military has been using these methods over the last ten years or so to help with a lot of their cases, especially when they get thousands of fragments of bones turned over from possibly, like a plane crash or helicopter crash or something like that. Sometimes bones are found by, you know, people tilling fields and they're turned over as a possible soldier. So, we've been doing this work with the Department of Defense for about ten years, and so we've had a number of research papers published on that research. We've also been applying these same isotopic methods to people who died crossing the U.S. Mexico border in Tucson and also in South Texas, and trying to use isotopes to predict where individuals are from, so like what area in what country, Mexico, Guatemala, Honduras, El Salvador, etc. And so, we have done extensive work trying to help with the identification of people who died crossing the U.S. Mexico border, using isotopes. So that's been another major research area. My colleagues, Dr. Beth Shook, and Dr. Ashley Kendall and some of our graduate students have also been doing extensive work using rapid DNA technology. And most DNA testing takes usually a number of weeks to conduct to identify somebody, let's say, from skeletal remains. They're doing work on burn bone and using rapid DNA, and Rapid DNA, you can get a result in 90 minutes. So, it's very rapid. It was

used to identify about two thirds of the victims from the campfire. And so, you can use it even on Burn remains, and it's a lot more complicated, and we don't know a lot about how to get DNA from Burn remains. So that's been something that our lab has been extensively researching for the last few years so that we can come up with DNA protocols to better identify people from wildfire scenes in the future, have actual, sampling protocols and DNA protocols. Very few people are doing any kind of work on this, so it's been pretty amazing. And we do this work in consultation with training search and rescue teams throughout the State of California, as well. So, we're using donors' remains from a wheeled body donation program to aid in not only teaching search and rescue how to find burn remains, but also for our DNA project.

[Lesly Martinez] Okay. Those are some of the big, bigger ones- I did- I honestly did not know that was like happening in between the lab. There's a lot of stuff that goes on. Yeah. But so, I know you also collaborate with other teachers here to do articles and stuff like that, like of your research. Does this help, like any others in the research field like reading your guys' work or, like, why do you publish these articles with, like other collaborators here at Chico State?

[Eric Bartelink] Yeah. So, depends on which research project we're talking about. So, a lot of the bone chemistry work I've done. I've collaborated with Dr. Randy Miller, who's now doing the faculty early retirement program, but he's in the Department of Chemistry. And so, we've done a lot of work at looking at the chemical breakdown of bone that's been buried for years, and so, using something called FTIR (Fourier-Transform Infrared Spectroscopy) So we've done a lot of research on the chemistry of human bone with him. So that's been incredibly productive, and that's also involved former students of mine. Dr. Milligan, Dr. Kendall and I have worked together on a lot of the wildfire research and because there's very little literature on how to recover human remains from wildfire contexts. And previous disasters that have happened were not handled very well, like in Australia, for example. So, we actually have the most training of anyone in dealing with wildfire victim recovery. So, Dr. Kendall and Dr. Milligan and Dr. Allison Galloway, and a colleague of ours co-edited a book. It's the first of its kind on Wildfire victim search and recovery. And I was a author and co-author of a couple of the chapters in that book as well. So we all kind of contributed to that larger project and laying out protocols for how to do search and recovery, how to work with multiple agencies and something really complex, like a large scale wildfire. There's so many different collaborations going on with the DNA project. David Silveira in engineering has been a major collaborator on that project because he's studying using thermocouple probes, which you can put into a fire and determine how hot the fire is. And he found out recently that most of the work that people are doing is inaccurate. So, he's just published two papers in the journal forensic sciences with Dr. Kendall and Dr. Shook on

how to properly record fire temperatures. So, I think this is going to be really important not only for forensic anthropology, but for arson investigators, the data that they've been using previously is not accurate. And because these temperature probes fail in the fire, and you're not getting the proper reading. So, David, as an engineer, created a system that would protect the wires and, in a fire, so that the wires continue to accurately record temperature data.

[Lesly Martinez] Okay, so we've also talked about how you and the lab have worked with law enforcement. Are there any, can you enhance like the departments in the institutions? I know you work locally but you guys work like everywhere else, like, locally, like enforcements come in coming to you guys. And how do these partnerships enhance the work that's done at the lab?

[Eric Bartelink] So a lot of the counties our lab has been around for 50 years, the first case was 1974. Dr. Murad did, so we basically hit, you know, 50 years this year (2024). And we basically just either they've worked with us forever and they know about us, or they heard about us through one of our trainings. And we do so many different trainings that you know, there's agencies that are like, okay, I'm gonna use Chico State for now on or I didn't. We only this is the first time we've ever had a skeletal case, and so we're glad we have a place to bring the case. So, all of these consultations are coming in by someone contacting our lab. We don't hear about something in the news and say, reach out. We don't do that at all. They just know about us through trainings and word of mouth. And so, if they have something where they just think it's, you know, they don't know if it's human or animal, usually they can just e-mail or text us photos. And from the photos, we can easily tell that's a deer bone or that's a bare bone. So, we get those all the time. Those are super common cases for us. For the more complicated ones, they obviously have to bring those in, and so those are usually delivered by one of the coroner investigators. We do a lot of work for local counties, Butte, Tehama, Shasta, Solano. But cases we even get cases from San Francisco, but, you know, it's a city. There's not lots of places where, you know, but you do get cases of people who are dismembered or buried or sometimes maybe a historical skull turns up, and they want us to take a look at it. Some agencies we might only work with once in ten years because it's a small police department. And they only needed to use us one time because that's the only time they ever had bones that turned up. We work a lot with the California Office of Emergency Services, and they're based out of Rancho Cordova. It's essentially the governors under the governor's office, and they are responsible for monitoring all disasters or potential disasters in the State of California. Their main office looks like NASA's mission control, you know, big monitors, they're monitoring storms and mudslides and fires. And so, we have become their go to team for fire disasters, where there's going to be victim recoveries and stuff like that. So they've even provided

us a vehicle that the state pays for. They pay the insurance; we have a gas card so that we don't have to use our personal money or funds to pay for gas and maintenance on a vehicle. So anytime we're doing any trainings or going out into the field, we have a large SUV that they pay for. We've only had it for a couple of years. But that way, we don't have to put a lot of wear and tear on our personal vehicles, and that vehicle has been amazing, so to have access to. So we use that for all of our recoveries and trainings.

[Lesly Martinez] All right. So, with ongoing on working with law enforcement, you building this new lab, how do you integrate student involvement into ongoing projects? And what do you hope they gain from their experiences?

[Eric Bartelink] We definitely want to continue to expand that certificate in forensic science. It soon will become a minor, and I think that's more aligned with what the workload actually is. We would like to maybe eventually turn that into a major. So, we'd have a major in forensic science and a lot of interdisciplinary collaboration across the different sciences. And our hope is to become a center or hub for forensic science training for the state. And we think it's really important. We think that there's a lot of job opportunities out there. So We're hoping that through expanding on that program and having students do the certificate or the minor once it comes up, that through the internship and through some independent studies that they'll be able to get more hands on training, whether it's fieldwork or lab work, whether it's chemistry or biology or anthropology. So really having some skills when you leave, actually working on things like casework or research and being able to maybe present at a conference would be really good, so that these students go on to the workplace, they're more prepared. If they go on to a master's or PhD program, they're more prepared. Our master's program has been very successful. So, our biological anthropology students when they complete their master's degrees. More than two thirds of them go into doctoral programs, which is, I think really great, and others go into either working in museums, archaeological firms where they might have to analyze and recover burials from large scale construction projects. Some of them have worked for the Department of Defense Lab, the DPAA Laboratory. We have some that have gone on to work for the FBI. So, we see a lot of success in our students. We just want to keep expanding on what we can offer for those students moving forward.

[Lesly Martinez] All right. So, would you encourage students from other majors to get involved with the human identification lab, whether it's like reading about its history or even just reading into casework that you guys do? What benefits or experience do you think they would gain? Even if they're not like an anthropology major, what do you think they would gain from it?

[Eric Bartelink] Yeah, so we wish we could offer even more opportunities for students outside of anthropology. We're very constrained by the space, but the fact that we're doing like stable isotope work, which is chemistry, and we are not chemists by training, I really like to have involvement from students from biology and chemistry who have you know, actually a pretty solid background, and to be able to give them some opportunities to work on our lab. So, we've had a number of students over the years from chemistry and biochemistry come and train in our isotope lab, so they actually go through a training program. We've also had some interest from undergraduates and some of the rapid DNA work. We haven't had opportunities yet to integrate undergraduate students into that DNA work, but that's something that we hope to do in the future. And once we have a larger building, more space, and within those smaller labs, more space dedicated, we should be able to offer more opportunities for students in the future. So, I think it's important students who are interested in forensic science definitely become familiar with us. Even if they can't actually work on like the skeletal cases, there could be other opportunities where we can collaborate. There's always areas of overlap, and we definitely want students to have those opportunities if they want to go into some kind of career related to the forensic sciences.

[Lesly Martinez] Also know that within the anthropology archeology also does like a bunch of stuff to where they'll bring any students if they want to do an excavation or if they want to do some sort of activity that goes into archaeology, even if you're not archaeology major, in the next couple of years when this new building is built, do you think as the lab, would you guys have some sort of like activities for even if you're not in the major, you're able to do just normal activities, but still if somebody wants to get into forensic science, say they go to the orientation, like, will you guys have something to kind of spark interest? Or do you guys just plan to just keep what you're doing the same evolve it as it goes.

[Eric Bartelink] We definitely want to grow our major. We've had some decline in enrollment at Chico State, and most of the CSUs over the last few years. We definitely want to get more people involved with anthropology. And so, archaeologist great career opportunities in archaeology. A lot of things are changing in California in response to some of the repatriation laws and how they're changing. So, most of the UCs and the CSUs will not archive a whole lot of artifacts anymore that are Native American. These are being turned over to tribes. And so, we're going to go through a period of sort of reconfiguration where tribes are going to drive the research of what might happen at a CSU more so than the faculty. So, this is pretty significant changes. We do have some strengths in historical archaeology, so we have a faculty member that works on a Japanese internment camp in Colorado and does a field school there. And even people who were children in turn there during World War II are volunteers that go out there and

work. So, it's a really great example of community engagement. And so I think we're going to see some changes in how archaeology is done, you know, in part to undo some wrongs to the past and then just put more power to tribes. But archaeology is really broad field. Where it comes into play in forensics, it's forensic archaeology, which is the outdoor field recovery work that I was talking about earlier. So, I think there's opportunities there. Our students have done things like flint mapping workshops where you can learn how to make tools out of raw materials. That's definitely fun. And they've been doing things like speaker series and stuff like that. There's opportunities for community engagement and for students in that field as well.

[Lesly Martinez] All right. And we're coming into the last question. What are your hopes for the future of the lab as it evolves? And what are your hopes as the co-director? Do you want to, like, advance in the lab as a co-director, or would you like, like, what are your hopes and beliefs for this lab going into the next two years, three years?

[Eric Bartelink] So when I was, um, When I first started in 2006, I was given the directorship position. And I had that for probably, like, 13 or 14 years. And then, you know, Dr. Milligan got hired in 2012, 2010, sorry. And at some point, because she was putting in, you know, a tremendous amount of work, we decided to split that position up. Over the last few years, she's been department chair, and Dr. Kendall was hired in several years ago, I think around 2017, and she's tenured now and also very involved in the lab. So, she's also a co-director. So, we actually have three co directorships. It's not so much like we have split up the roles and responsibilities. It just means that when one of us is busy, we have another two people to kind of cover everything, and we have good communication between all of us. And so, I'm a full professor. I've been a full professor for a long time. So, there's not really an advancement within the university for me. There's lots of professional things I can do outside of the university. So, you know, like, after I was board certified by the ABFA, I was nominated to be on the Board of Directors, and then I served as the president for four years. That was a huge honor. And then over the last year or so I have been nominated as the chair of the National Standards Forensic Standards Group that's funded by Congress. So, I am the chair of the Forensic Anthropology Subcommittee of that. So that's also a big honor, but also a lot of work that you're not compensated for. So, I'll continue to be involved with things at a national level as much as I can. And I just really hope our program continues to expand. We need to hire more staff as we expand into the new building. We'd like to get accredited as a crime lab, which is very rare in anthropology. The only accredited labs are either in a medical examiner's office or they're one of the military labs that I mentioned or the FBI. And so, accreditation is very expensive, and its very time consuming. And we'd also like to have more kind of research opportunities, like

interdisciplinary work with other departments as we want to expand our forensic science program.

[Lea Gallarzo] Again, thank you so much, Dr. Bartelink for agreeing to participate in this oral history project and sharing responses about the Human identification lab here in Chico State. We are concluding this interview here. If you want to add anything else, you are open right now.

[Eric Bartelink] I just want to say, thank you very much, your questions were great, and it was all very well organized, and so thanks so much for inviting me to speak with you today.

[Lea Gallarzo] Of course. Thank you so much.