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Bertha Clow [00:00:15] I was going to say, I've never had this done before, once before it was done. Are you?

Denise Denelias [00:00:22] Yeah, she'll tell you when she...[unintelligible]

Bertha Clow [00:00:30] A long time ago, I was auditing a course in mythology, and I had told in the class about some of my studies about snake mythology. I don't like snakes. [cut].

Bertha Clow [00:00:43] You can imagine, it knocked out all the electricity in the house when they hooked it up, I know that. And so I've been confronted with this before, but that's the only time. [cut].

Bertha Clow [00:01:00] I wish you could show Denise a little bit more instead of me.

Denise Denelias [00:01:09] Hello, today we're here doing a Living History interview with Bertha Clow. My name is Denise Denelias. And so today Bertha, what we'd like to find out is a little bit of information about you. And I'd like start by finding out a little about your family and your background, where you're from.

Bertha Clow [00:01:27] Okay, I was born in Oshkosh, Wisconsin in 1902 and my father was in the staff at the university. In those days, it was called the Normal School, but it's now a part of a branch of the university and that's where I grew up, and from there I went to the University of Wisconsin at Madison and took home economics and when I finished in home economics, I got a degree in foods and nutrition, and I was wanting to be a hospital dietitian, I thought. And so I went to Mayo's and took a hospital dietetics training course. But while I was having the training course, I decided that a lot of being a hospital dietitian was going to mean being an administrative person. And I didn't really care for the administrative part of being a nutritionist, I liked the teaching, and I liked the working with students. So I didn't ever practice as a hospital dietitian, but it was a wonderful training for me and teaching. So after I finished the hospital course and did not go into dietetics, I went back to the University of Wisconsin and worked part-time for my master's degree, and got my master's degree in 1927. Well, I got my bachelor's in 1924 and my masters is in 1927. And the research that I was doing was on vitamin C mostly, and then some on vitamin D. And in those days, in the 1920s, we had three vitamins, A, B, and C. And it was very, very simple trying to keep track of the vitamins. But also, while I was doing this vitamin research work, a lot of other research work was going on at the University of Wisconsin. And they were developing some other vitamins. And as a matter of fact, Dr. Steenbock was developing vitamin D. And that was very fascinating, because actually, I have grown up with vitamins. If you want to say that I grew up with vitamins. A little instant in the family background, my family had quite a good size garden and we raised a lot of tomatoes and my mother always canned a lot tomatoes and we had tomato soup very often. But the tomato soup was always made with soda because if you put milk into tomatoes, it'll curdle the milk. So my mother didn't like to have the soda in her tomato soup. And fortunately, she didn't put it in, because they didn't know then, but they knew later on, that soda or alkali destroys the vitamin C. So as growing up youngster, I got my vitamin C from these tomatoes. Incidentally, later on I had a student do a research project on vitamin C in Campbell's tomato soup. I suppose we shouldn't put commercial things in like this. But Campbell's tomato soup does not have any vitamin C. And they doubtless have to use

some sort of soda in their preparation because when you use their soup, you just add milk to the canned soup and everything is fine, it doesn't curdle.

Denise Denelias [00:04:58] And then after you did your research and received your master's, and then what happened?

Bertha Clow [00:05:03] Then I stayed on at the University of Wisconsin another two years and was doing some teaching and also still doing some research work. And then in 1929, I came to Bozeman. And when I came here, I was teaching all the foods and nutrition courses. It was quite a job, from a very simple little job that I had of doing some teaching at Wisconsin, to having to do all the food and nutrition courses. Incidentally, when I came here in 1929, there were five teachers in the department, and two of them were part-time teaching. And there were, in other words, there were three of us that were doing the full-time teaching at Montana State. I wish that I knew how many students were enrolled in Home Ec, but I never was able to get ahold of any figures. I do know that when I came in 1929, there were 12 girls who got a bachelor's degree in home economics. I have no idea how many they would be getting now, how many, but they would I'm sure they would be in the 50s someplace that would get a bachelor's degree at Montana State in home economics. Of course, the name home economics has changed a great deal, because I don't know whether you want to go back to the history of Montana State or not, but Montana State was established in 1893, and they had— what we would now call home economics, as part of the curriculum when it was established. And only it was called domestic science, and sometimes they called it domestic economy, and sometimes, they called it domestic science and the ladies course. So that started home economics at Montana State University. The university then got their first building, which is now the Extension building. It's an old, kind of a partly brick building, and that was the first building on the campus. Then the next building was Montana Hall, which was built in 1890. I've got some notes down here. Yeah, 1898 was when Montana Hall was built. And then home economics, when it was domestic economy, was in the basement of Montana Hall. They decided that it better be in the basement because, you know, when you're cooking things, it might make smells up in the rest of the building. So they should keep it down in the basement. Later on, the agriculture building was built, and home economics then was in the agriculture building. And it was in 1912 that they called the department Home Economics instead of this domestic economy or domestic science and the ladies' course. This was very soon after the National Home Economics Association was started. The building then that I taught in, and it still is Home Economics, is called Herrick Hall, and that was built in 1926. So when I came here in 1929, I came to teach in Herrick Hall.

Denise Denelias [00:08:53] So you had a fairly new building when you came?

Bertha Clow [00:08:55] Yes, it was very nice and new. And the foods department was very good. It's entirely different now. I can't tell you what it's like now because I don't really go around and take a look at what's going on there, but I know that they've changed the rooms a great deal. Well, as a matter of fact, part of our home economics foods work, we had to have formal dinners. And that was part of the training for the girls. And there was a dining room that was right next to the present fireplace room and the dining room was used for the formal dinners. And there was a kitchen right near there, too. Now it's offices. And I'm sure that the meal-serving courses don't include a formal dinner, but I'm not too sure about that. You don't think it does.

Denise Denelias [00:09:51] It's an option, I believe.

Bertha Clow [00:09:53] Oh, an option. Wonder where they serve a formal dinner, though. You don't know where. Where would they serve it?

Denise Denelias [00:10:00] Downstairs in the food science lab.

Bertha Clow [00:10:03] But they don't have a real nice place there for a formal dinner. But we had a nice dining room.

Denise Denelias [00:10:07] What was it like?

Bertha Clow [00:10:08] It was a very nice dining room with a lovely dining room table and chairs. And I remember a mirror that was on the wall and some lovely overhanging lights. And it was a lovely dining room, so that it was a nice place to serve formal dinners. And we invited faculty people from around the campus and from around town to be our guests at the formal dinners. And the girls had to really practice up on their waitressing so that they did the proper job for doing the formal dinner.

Denise Denelias [00:10:44] What made you become or how did you become interested in home economics as a chosen profession?

Bertha Clow [00:10:48] Oh, that goes way back, doesn't it? When I was younger, I kind of liked history and geography. But, I had a heck of a time with dates and with names, and I decided that I shouldn't do either geography or history if I couldn't remember names and dates. So a friend of the family's who had been a trained nurse was telling me about being a nurse, and at first I thought maybe I might like to be a nurse if I couldn't teach geography and history. And so that was a possibility, but my parents thought that being a nurse wasn't a very good profession in those days. Now, of course, nurses get degrees and are professionally much more important than they used to be. So they had this person who had been a nurse talk to me about maybe being interested in dietetics. If I wanted to be in a hospital, that maybe I could be a dietitian. I didn't know that I wanted to be a hospital. So that was sort of the reason why I went ahead and took foods and nutrition when I went to school.

Denise Denelias [00:12:07] That's fine. So she came and spoke to you about, perhaps, getting into dietetics?

Bertha Clow [00:12:13] Yes, uh-huh, uh huh, that's right.

Denise Denelias [00:12:18] When you came to Montana State University after you'd been doing your research on vitamins, what kind of classes were you teaching?

Bertha Clow [00:12:27] I taught all the foods and nutrition. That means the cooking, the food preservation, the meal serving, nutrition, diet therapy, everything was what I taught. We did have, now the other faculty people, there was Gladys Branegan, who taught some Child Development and Home Management and other courses. There was a textiles and clothing teacher, and the three of us were the only full-time teachers. Then there was another one, who later was Mildred Leigh, who had charge of the women's dormitory and taught Institution Management. She taught Large Quantity Cooking and Institution Management, then we had another person who was in charge of all of the vocational education in Montana, and later on that office was moved to Helena, but at that time she was housed in Herrick Hall and taught the education courses, and had charge of the student teachers. So that was the faculty when I came. And later on, of course, then there

was Research and Extension, but they were not, well, the Research was housed in Herrick Hall, but not the Extension.

Denise Denelias [00:13:41] Do you have any memories of any of the classes in particular that you enjoy teaching?

Bertha Clow [00:13:50] Well, this is not something you enjoyed, but I can remember in the food preservation course, the custom at that time was to do oven canning. And you put your food in the jars and put the cover on and stuck them in a hot oven. The trouble is that in oven caning, you have moist heat inside the jar because there'd be liquid around the foods. And then you'd have dry heat on the outside of the jar. And that combination of moist and dry heat sometimes made the jars explode. Fortunately, while we were teaching oven canning, we didn't ever have any explosions. But I knew from what I read that that was a possibility. And I don't know how many years I taught oven canning, but probably three or four years. And then when we began getting these reports of accidents, and some of them were pretty terrible accidents. You know, a person would open the oven door and it would blow off in their face, and so they quit doing the oven canning. Of course, using pressure cookers was pretty new, and I was teaching food preservation. We had pressure saucepans. I can remember one time when they were doing the meal-serving. This was not a special dinner, but just an ordinary dinner. This student was doing some baked beans in a pressure saucepan and she had the molasses and the beans that had been soaked, and she didn't watch the pressure gauge very well. So the pressure gauge went off, and the baked beans stuff hit the ceiling. And so for a long time, where that stove happened to be located, we had a great big brown spot in the kitchen until we finally got around later on to redecorating the room.

Denise Denelias [00:15:58] Did you have any opportunities? You were teaching for how many years?

Bertha Clow [00:16:02] I started in 1929 here at Montana State, and I retired in 1970, so I was here 41 years.

Denise Denelias [00:16:12] 41 years, did you in that time have an opportunity to develop any classes or to add classes to the curriculum that were your idea?

Bertha Clow [00:16:21] Yes, because I started traveling, and as I said, I was originally interested in geography and history, so I got around to doing some traveling and doing some geography and history on a practical basis. But when I was traveling, that got me interested in world nutrition problems. So, I developed, of course, in world nutrition problems. And enjoyed teaching it and doing it a lot from sort of a practical standpoint and from some of my personal experiences because I would go and visit in some of these other countries, things like hospitals or some sort of food setups. And so I taught this World Food Nutrition course. And there wasn't any textbook, so I decided maybe I'd better write a textbook. And I did have a friend at the University of Wisconsin who was also interested in doing something about world nutrition. And I spent quite a lot of time one summer with her in Madison. And we were working on a possible textbook in world nutrition. But, somebody else beat us to it and published a book on world nutrition, and so we just quit. I don't think I would be very much of a writer for getting something published. Maybe I could have, but I have had some things published. After I was here at Montana State, Merrill Burlingame, who taught history and did a good deal of writing, and I did this booklet called From Domestic Economy to Home Economics. And it takes the history of

home economics from the beginnings in 1893 up through 1980. And so there's a lot of good history material in here.

Denise Denelias [00:18:30] So you did that after you had retired from Montana State University, so you had still quite active involvement with the Home Economics Department?

Bertha Clow [00:18:40] Yes, because this was published in 1980, so I had retired.

Denise Denelias [00:18:45] That's wonderful. I don't know if this would show up on the video if it were turned, but [shows book titled "From Domestic Economy to Home Economics"]. During your career, as a professor at Montana State University, did you have many opportunities to advance your career by attending workshops or doing anything special that helped you improve your career?

Bertha Clow [00:19:16] Well, of course, my travels made a great deal of difference. I traveled to 100 countries. I've also been in all the states in the United States. But when I did my traveling, whenever it was possible tried to visit some of our students who had gone to other countries because after the war quite a few ag students went to other countries to help in their agricultural problems and some of them were married to home economics students. And so the home economics students sort of gave a little impetus on the home economic side but mostly they were just wives in the other countries. But I did visit them and I tried visit as much as I possibly could in other countries. And then in 1962, when the Peace Corps program was started, I was a part of the training for the Peace Corps students who went to Ecuador. And after I had done some of the training, when I didn't know very much about Ecuador, I did go to Ecuador and I visited some of these students that were in Ecuador and also did some other visiting. But I have actually done some observations in several other countries, and that of course helped out on my World Nutrition Course.

Denise Denelias [00:20:41] How about conferences? Were you able to...

Bertha Clow [00:20:45] Oh, yes. And then in 1956, there was a World Nutrition Conference in Rome. And I managed to combine that with just a tour to Europe. And I did go to this World Nutrition Conference in Rome. At that time, a nutrition deficiency was just being realized that it was a nutrition deficiency, it was called Kwashiorkor. And that was one of the important subjects at this World Nutrition Conference, was to tell about the Kwashiorkor cases pretty much in the Latin American and the African countries where Kwashiorkor was quite prevalent. Kwashiorkor is a protein deficiency. We don't know too much about it in the United States, however, there were some cases in the Unites States. But in these other countries, Kwashiorkor was a very important nutrition deficiency and the cause of death. When I was traveling, I saw some actual cases of Kwashiorkor.

Denise Denelias [00:22:00] When you were, after you'd done your travels and you were able to bring back that information to students in your nutrition class, there must have been, over 40 years, a lot of changes in the curriculum or a lot changes at the university. Would you like to talk about some of those changes?

Bertha Clow [00:22:15] Well, I think a lot of the changes that I'm aware of are in diet therapy. Because when I had my training at Mayo's, the diabetic diets were low carbohydrate, high fat, and then normal protein. Nobody worried about cholesterol in those days. And of course now we realize that a high fat diet isn't good from the standpoint of

cholesterol. So that was the kind of a diabetic diet that I was trained to calculate and also not only to calculate it, but to weigh it and actually figure each individual food in a diabetic diet. And then of course there were other different forms of insulin that were developed and then they realized that there were a lot of complications from that kind of diabetic diet and so that now a diabetic diet has a much more generous amount of carbohydrate and has not very much fat in it, because they are now interested in the cholesterol proposition. So that would be diabetic diets. Also, when I was at Mayo's, the diet that was, it wasn't a special diet, but it was interesting that we didn't have any kind of medication for syphilis, but they had discovered in the building of the Panama Canal that if persons got malaria, of course in the tropical countries malaria is quite common, but if a person got malaria that that in turn would cure the syphilis. So, at Mayo's, when I was there, they were purposely giving patients malaria, and after the malaria took care of the syphilis, then they could cure the malaria. Another diet that was quite interesting when I was at Mayo's was called the ketogenic diet. And the ketogenetic diet is a very, very high fat diet and very low carbohydrate, and it's used for children who have epilepsy because the ketogenic diet produces a condition in the blood called ketosis, which in turn seemed to control epilepsy. So I had a lot of experience at Mayo's calculating the ketogenic diets, and also we had to teach the parents how to calculate the diet, because again, it's like the diabetic diet. It was a definitely calculated diet, the foods were all weighed and very definitely prescribed in a ketogenic diet.

Denise Denelias [00:25:10] Did, when you left, or when you were teaching, when you first came to Montana State University, you said there were five or four or five teachers there. Over the period of time that you were there, 40 years is a long period, were there increased amounts in faculty and?

Bertha Clow [00:25:28] Oh, of course, it's been a big increase. I have no idea how many faculty there are now. I wish that maybe you could find out and put it into the tape somehow or other.

Denise Denelias [00:25:43] But your classes did change?

Bertha Clow [00:25:45] Well, of course, there was a lot more students too, many more students, and the curriculum increased a great deal. When Gladys Branegan was head of the department, she was very much interested in Montana State Home Economics Department being accredited by the Home Economics Association and also being the credit for the American Association of University Women. So that we had to do certain things in the curriculum that would make us qualified for this AAUW organization. So there were a lot of changes.

Denise Denelias [00:26:23] What kinds of things did you have to do in the curriculum to qualify for those?

Bertha Clow [00:26:28] I am sorry I can't tell you what the specific things were, but I know that that was one of the things that Ms. Branegan was very much working on and working towards, a qualification for AAUW. AAUW I think has changed so much now so that they aren't quite as restrictive in their requirements, but of course AAUW means University Women, and they have to have degree, and there's quite a long list of institutions that are qualified for this AAUW membership.

Denise Denelias [00:27:07] So are there any other interesting stories that you can recall about being at Montana State University that you would like to? There's lots of years and

lots of experiences I know that, in particular any other class experiences, what any other classes, you can think about that you might wish to speak about or?

Bertha Clow [00:27:35] Oh, I'm afraid you got me stumped now.

Denise Denelias [00:27:39] Okay, I'm sorry. I don't mean to do that.

Bertha Clow [00:27:45] I can remember this particularly during the war in the 1940s. The number of men on the campus was of course very, very limited because most of them were in the service. The courses that women took during the 40s were not very well filled, and home economics was an important curriculum for girls. In the 1945 graduation, there were, I don't know how many people graduated, but half of all of the degrees that were granted in 1945 commencement were for home economics. Because the men you see weren't getting any degrees, the nursing and what they called secretarial at the time were for girls, but they didn't get a degree. They had a two and three-year course and didn't get a degree. So that meant that half of all the graduates in 1945 were home economics people. That's never happened again, and of course it won't. Now it's a very, very different sort of a situation. Also during, you were asking about some special things. Now I wasn't there, but I remember hearing about the fact that during the flu epidemic, which was in 1918, the Home Economics Department sort of shut down as a college department and they would arrange things in their rooms with beds for the people that were sick with the flu, and the girls would prepare the food for these soldiers or men that had gotten the flu. That was in 1918.

Denise Denelias [00:29:44] Are there any people who had great influence on your career or your profession?

Bertha Clow [00:29:52] Well, I don't think so particularly. Of course, Gladys Branegan was head of the department when I came, and she was a great promoter. She thought that I ought to go to school and get a doctor's degree, but she said she didn't know who'd teach the courses if I did. So, I never did go to get a doctor's degree, but I felt that my travels and contacts with our former students and working on this World Nutrition course, might have been the equivalent of trying to get a doctor's degree.

Denise Denelias [00:30:28] Well, it's been wonderful talking to you today, Bertha, and I really appreciate you taking the time to do this interview with you.

Bertha Clow [00:30:35] Well, thank you. It's been nice to talk to you, too.

Denise Denelias [00:30:39] Okay, thank you.