

NEWSLETTER

Students receive hands-on microbiology training and research opportunities at SDSU.



Dean's Message

DR. CHARLENE WOLF-HALL

We hope you enjoy this special issue of our college newsletter featuring the life of Dr. Pengra. He was an outstanding Professor who had profound influence on the successful career paths of many former students.

I too was a beneficiary of the Dr. Pengra experience. When I first came to SDSU as an undergraduate I knew I wanted to major in an area of science, but was unsure of which way to go. I was fortunate to take Dr. Pengra's general microbiology course, was hooked, and declared my major in microbiology. Dr. Pengra was an outstanding teacher and

made the topic of microbiology so relevant and interesting. His influence, along with that of other wonderful SDSU faculty, led me on my career path starting with my microbiology degree from SDSU.

Now, a few decades later, it is such a tremendous honor and pleasure to get to know the amazing alumni and retired faculty who together are Team Pengra. They have created a wonderful endowed scholarship. What an inspiration for how a group of professionals can come together and leave a lasting legacy that will impact students for decades to come. Dr. Pengra's incredible positive influence carries on. Are you inspired?



**SOUTH DAKOTA
STATE UNIVERSITY**

College of Natural Sciences

Remembering the Life of Dr. Pengra

AND CELEBRATING HIS LEGACY FOR GENERATIONS TO COME

What happens when a passionate group of alumni reconnect with old classmates and rally around their experiences with an influential faculty member? Something truly special comes together, not only for the benefit of future students, but also for the alumni themselves.

“Team Pengra”, a self-given name for the cohort of SDState alum, was born out of “The Pengra Experience.” You may be asking yourself, “*What* or *who* is ‘Pengra?’” and Team Pengra would be more than happy to enlighten you! After all, it’s one of their favorite topics.

Dr. Robert (Bob) Pengra taught Microbiology at SDState from 1957 until 1991. During his time here, in addition to teaching, he mentored hundreds of students in a deeply profound way before retiring as Head of the Bacteriology Department. And, as anyone who saw him around campus would be quick to tell you, he was well known for his colorful, ever-present bowties. (Most of which he sewed himself!)

“He always wore a bowtie, and he sung in a Brookings choir. He was very active in the community,” Myron Falken ’75 recalled. “And he also wore a cheese-cutter hat,” Ven Lengkeek ’74 added. “Ron Shave ’71 and I were up at Deer Field Lake, in the middle of the Black Hills, in a little trailer house in the middle of this campground, and

Bob was going to come out for the weekend to do some work with us. Well he shows up, and he’s got on blue jeans, cowboy boots, a cowboy hat, and a bowtie!”

I sat down (via Zoom, as everyone does these days) with some core members of Team Pengra to learn about how they’re hoping to link generations together through the Pengra connection. Regarding their efforts, Lengkeek explained, “It has brought this whole group back together, and there are others of us out there someplace. Some we’ve probably kept in touch with, some we haven’t.

But I think any of us would get on a Zoom like this and it would be like we’ve never left after 40 or 50 years. Bob Pengra is the heart that whole connection, the center part of it.”

The hour-long chat was filled with smiles, laughs, and crazy stories. (Some of the stories are a little too wild to be published, but I can report that everyone I talked to still has all the fingers they started with!) Silliness aside, the recurring theme was a deep sense of gratitude and respect for Dr. Pengra. He was clearly influential.

“He was really teaching us to be critical thinkers. It served us very well when we got out, in whatever direction we went.” -Rick Steece ’73

When they were students at SDState, Steece, Falken, Lengkeek, Shave, and Tom Schneeweis ’75 put their critical thinking to the test, working out issues together.

“I would say that he [Pengra] was instructor, and he was also a teacher. An instructor being that he taught Microbiology classes which we all took, but he was a teacher in that he taught us how to use these skills for our future work,” Lengkeek explained. Pengra taught his students how to research, how to write, how to be better people. “He was also a mentor, meaning that he gave us advice on how to do things and showed us directions to go. I don’t think he ever pushed us into these directions, he just gave us directions and let us follow wherever life took us. **And I think we all have to agree, we’re pretty happy with where life took us. If it weren’t for Dr. Pengra, I don’t think any of us would be where we’re at today.”**

Bob Todd ’67 is another Pengra alum who has joined the project. Pengra mentored Todd in both undergraduate and graduate school, and Todd would eventually go on to serve as a Department Head at SDState from 1982 – 1989. “Pengra encouraged his students to reach out and expand their academic horizons by participating in local, regional, and national microbiology meetings,” Todd said. He recalls driving to California in 1966

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with Pengra and two other graduate students to attend one of those meetings.

As this project began to develop, we contacted Bruce Pengra, Bob's son.

Regarding mentorship, he said, "I know that Dad felt this same way about his mentors at SDSU and UW Madison. In particular, Dr. Berry who was the head of Bacteriology when dad came to SDSU. He told the story, several times, about how 'Doc Berry' encouraged him to apply to the PhD program in Madison when he was finishing his master's degree. He told him, 'Bob if you get your PhD in Madison there'll be a job for you here at SDSU when you're finished.' Doc Berry gave him the confidence and guidance that later his own graduate students got from him."

"It's safe to say that the careers of many students were heavily swayed by The Pengra Experience. It's hard to comprehend the extent of his influence and the number of generations he touched."

-Tom Schneeweis '75

"In fact, I can prove that," Schneeweis continued. "In April, I got a hand-written note from Dean Wolf-Hall. It said that she too was an alum of South Dakota State University and that she took Dr. Pengra for general microbiology. And, she switched her

major to microbiology. Now she's Dean of your college over there and it just shows how, you know, there's not very many students who get this experience in an introductory class. Well, it happened to Rick Steece, too!"

Recalling what would be his first of many courses with Pengra, Steece said, "When he started talking, I really hadn't heard this stuff before about microbes and bacteria and fungus and parasites. **With all this stuff he was talking about, a light switch just went 'click', like a big beam coming down out of the sky, and I said, 'This stuff is cool! This is for me.' That was the point where I really knew I wanted to be a microbiologist.** I didn't know what or where, I didn't know a lot about micro because it was my first course in it, but that was Bob Pengra that did that to me, and his enthusiasm."

Here, Bruce Pengra added, "Dad really liked teaching the Micro 101 class, as well as the higher level classes. He used the old film slides for his lectures (this was long before PowerPoint) and my sisters and I appeared in several of those slides. The mark from my small pox vaccination was shown to hundreds of first year microbiology students, as was my big sister drinking a glass of pasteurized milk."

All four alumni are proud of the education they received at SDState, and a lot of that had to do with Pengra. "I did my bachelors and masters at

Brookings, and then went to the University of MN for my MPH and PhD.

And I have to say that the education I got from Brookings and the Microbiology Department was a higher quality than the education I received at the University of Minnesota, which has one of the top Public Health schools in the nation,"

Falken said. "You could put our education up against any other institution," Steece added.

The rigor of education helped Schneeweis land a job out of grad school. "When I went from South Dakota State to North Carolina State University, the micro courses were nowhere near as good as what I had at South Dakota State. Bob introduced me to Dr. Gerald Elkan at North Carolina State University, who was well-known internationally in microbiology and nitrogen fixation. The first thing Gerry Elkan said to me was, 'I understand that you can isolate *Rhizobium* from the roots of native legumes.' And I could. I guess I thought everybody could. But he couldn't find anybody."

"His research group was doing metabolism and genetics but he needed someone with the experience I had learned at South Dakota State," Schneeweis continued. "So I directly got a job because Dr. Pengra took me to a meeting and introduced me to my next mentor. This is one of the many advantages of going to a small school. It's not the size of the dog in the fight,

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it's the size of the fight in the dog. One-on-one personal experiences. Thirty four years later I retired from North Carolina State University."

I could fill pages and pages with more quotes from the team about Pengra's teaching, but I was intrigued by the non-academic factor as well. Just what made The Pengra Experience so special, aside from the standout education? "He was a friend to all of us. He was definitely our mentor, but when you were no longer in an academic situation, he was still a friend and we had a lot of fun together," Lengkeek explained.



"As Department Head, he was still a humble person, and he was quite thrifty," Falken said. "As an example, we were going out to the Antelope Range Station to bring the research trailer home. So Bob decided we're going to hook up with this old truck,

and there were no brakes on the trailer. We went 300 miles with me driving and with him sitting, with two bare wires, and every time we came to an intersection he would put them together to put the brakes on the trailer."

Todd recalled one day in the lab when Pengra came up next to him and stomped his feet, before asking Todd if he noticed anything. Todd didn't, and then Pengra pointed out that he had new shoes. The kicker? They were rejects from the manufacturer; one was size eight and the other size nine. Pengra said he didn't even notice the difference!

Pengra had a generous side as well. Todd explained there was a time when plastic petri dishes began to replace glass dishes, but Pengra didn't want to make the switch because keeping the glass dishes – which needed to be washed – gave students a job to do and helped to keep them involved in the lab. Steece also remembered a summer when he needed work and Pengra hired him to paint his garage and house, even though they didn't seem to really need it.

Pengra volunteered with Habitat for Humanity, where he became friends with Lengkeek's father-in-law. "**My father-in-law always said, 'He was very proud of you guys' and I said, 'Yeah, and I'm very proud of what Dr. Pengra did for us,'**" Lengkeek added. "We, as families, made friends as well. We were together all the time during

the school days, but during the after hours, we had a lot of fun doing things that we did as families. And we've always kept in touch, over all these years."

Another piece in this Pengra puzzle is Ron Shave, who was mentioned earlier. Shave managed the general microbiology teaching labs, working closely with Pengra and with the students. "**We were working with Ron, and hunting with Ron, and fishing with Ron,**" Schneeweis said. "**Probably some of the best days of my life were spent in Brookings.**"

He continued, "After doing research with Gerry Elkan for 14 years I became supervisor for the general microbiology teaching labs at NC State. I knew how to supervise these labs because I had watched Ron Shave. Ron knew how to make these labs work every time in every section. People didn't know quite how I was doing things in these teaching labs because Ron Shave was a magician."

When Lengkeek first started his graduate program at SDState, he shared some space near Shave's office. "Ron would always pack his lunches, and it was always amazing to see what Ron had packed, like fried muskrat. One day I can hear him grumping and fumbling around in his office so I looked in said, 'What's wrong?' He said, 'My soup's cold.' I said, 'Hmm, we've got Bunsen burners in here, right?' 'Yeah, I bet that would heat up my soup.' Well, it did."

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One thing led to another, and soon the burners were being used for marshmallows, hotdogs, and burgers. This was of course a secret from Pengra, who taught microbiology over the noon hour ... or so it was, until class ended early one day and Pengra walked in. "His first thing was, 'How come I smell hotdogs?' Ron said, 'You know, that last *Rhizobium* you had sure smelled a lot like hotdogs.' And I remember the look Pengra would give us all, that cockeyed kind of look, thinking, 'I don't believe this, but maybe I should?' type of thing," Lengkeek said with a smile. "He kind of looked around, and the Bunsen burners were still out and everything else ... **as he walked out, he said, 'Next time I'll bring the pie.'**"

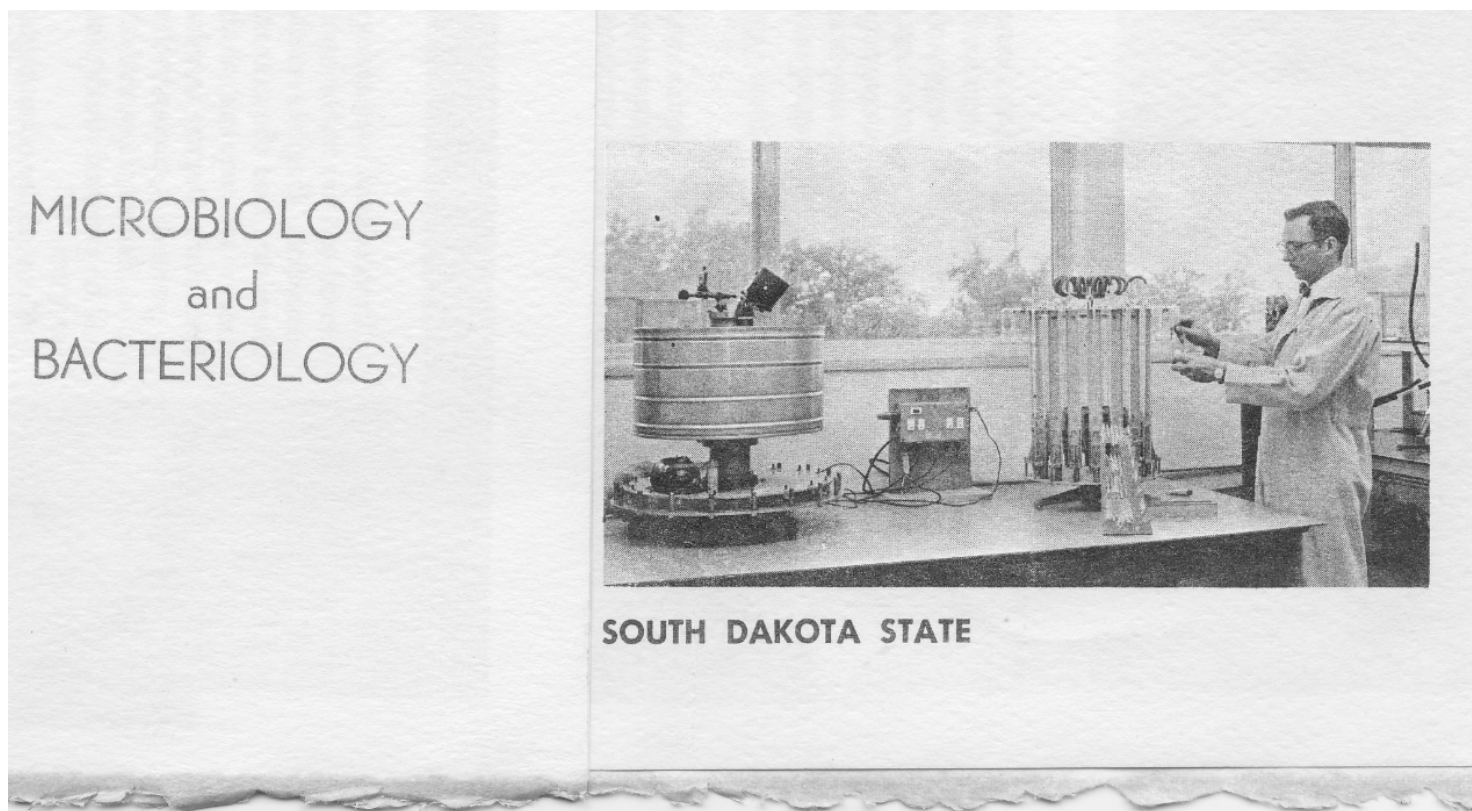
Another facet of The Pengra Experience which can't be neglected is going green. As Schneeweis explains it, **"We were green before it was cool. Now everyone wants to be green, well, we were doing that years ago."**

As a student, he worked with Pengra on symbiotic biological nitrogen fixation in legumes. "Basically, it's green because these plants team up to form a symbiotic relationship with specific bacteria in soil to provide their own source of available nitrogen from air. It's the alchemy of air."

And there's the story of Pengra's electric car. After running out of acetylene in the lab, Pengra brought Schneeweis to his garage to get more from home. While there, Schneeweis noticed a tiny car of Pengra's; an old

Nash Metropolitan. "He said, 'Let me show you something,' and he opens the hood, and there wasn't an engine in there. It was all car batteries. He had made an electric car. He had gotten a World War II surplus motor from a bomber ... I don't know where the motor was, maybe under the car or in the trunk."

"I was curious about this because it was the first electric car I'd ever seen, so I asked him about it because I'd never seen it in the parking lot. And he said, 'Well, it works. The only thing is, it takes about 3 blocks to come up to speed, and then I come to a stop sign, and then I gotta come another 3 blocks to get up to speed.' So he didn't drive it very much. But he liked to tinker with stuff like that."



Remembering the Life of Dr. Pengra

The reminiscing would've continued another several hours if time allowed, and this article would certainly be pages longer, if space allowed. Team Pengra had given me a good sense of who Dr. Pengra was, but what about the future? What is this team working on, now?

The answer to that starts in 2013. Schneeweis was back in Brookings, visiting campus and the Department of Biology & Microbiology, and was surprised to find out that no scholarships had been set up in Pengra's name; he had been an influential part of so many students' lives. At that time, the core group of Schneeweis, Shave, Lengkeek, Steece, and Falken came together to establish a scholarship, which was first awarded to a student in 2014.

Since then, the group has been working towards getting the scholarship endowed and they recently achieved this financial goal. This means that funds will be available to students for perpetuity, so that the Pengra Connection can span the generations. With the group's strong South Dakota ties in mind, the intended beneficiaries are students from within the state and, of course, who are majoring in Microbiology.

Currently, the "Robert Pengra Scholarship in Microbiology" is funded to a level that awards one scholarship per year. Team Pengra would love to award additional scholarships in the future, to further honor Dr. Pengra. If you have been touched by the Pengra Connection, whether through his

classes or his legacy at SDState, you are encouraged to [donate here](#).

Ian Hastings, current undergraduate majoring in Microbiology and Biotechnology, is the most recent scholarship recipient. "I would like to offer a heartfelt thank you to the donors of this scholarship, because of their help I'm able to take things in stride and continue on towards my goals," Hastings said. **"Having a scholarship takes off some stress regarding the financials of school, allowing me to focus more on my coursework and perform better in my field."**

Financials aside, Team Pengra is also a place for gathering and is continuously growing in membership. Dr. John Parsons, who served SDSU for 33 years from 1968 - 2001 and was the Department Head of the Dairy Science before retiring, recently joined the Team's Zoom calls. Dr. Parsons has an impressive track record when it comes to fundraising and leadership and is serving Team Pengra as a trusted advisor in this effort to grow the Pengra scholarship's impact on students.

Other alumni have begun joining the effort, whether through donations or chatting during the monthly Zoom calls. If you'd also like to join, email Marissa.Marshall@sdsufoundation.org to get on the list. Team Pengra would love to reminisce with you and expand the Pengra Connection!

--Layne Manson

"When [past Pengra] students see this, hopefully they're going to think, 'You know, I really enjoyed being a student at South Dakota State. And I can't be a student anymore, those days are gone. If I can't be on Main Street on Saturday night, maybe I can give some money to some kid who grew up on a farm somewhere who doesn't have a lot of money. And they would be able to go out with their friends down to George's Pizza or whatever is downtown these days and have a couple beers and socialize,'" Schneeweis said, describing the spirit of the scholarship.

"These people that you're seeing at one of the brewpubs downtown, you're going to be seeing those guys 50 years from now. They're going to be your friends, forever. And if I can be a facilitator for that, and make that happen, it's worth every cent of it to me."