

Interview with Robert Gates

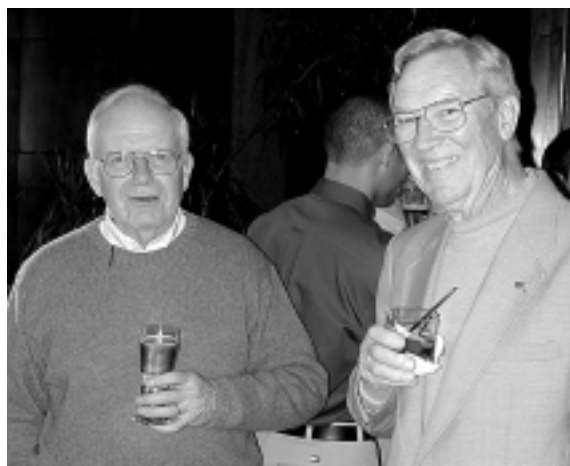
On January 17, 2000, John Fournelle conducted a three-hour interview with Emeritus Professor Robert Gates, for the department's oral history series. We reproduce a small portion of the interview below, where Bob discusses his early life in Madison and his undergraduate years.

I'm a Madison native; I was born here in 1918, in a family of five boys. I went to West High and was in the first class to graduate, in 1936. That was the height of the depression and everything was much different than now. No one who has not lived through that depression can even comprehend what it was like. My dad always had a job, so I was never impoverished, but we all knew what a nickel was. My dad was a civil engineer for the City of Madison Engineering Department, so as a civil servant, except for four or five months at the rock bottom of the depression, when salaries cut 30% and people put on half time, we managed all right. We kids did what we could, selling papers, selling subscriptions to the *Saturday Evening Post*, raising vegetable gardens in the summer time, anything to make 25 cents.

Anyone who graduated from high school was admitted to the university—everyone had a chance—though over half were gone after the first two years. At that time, semester fees were \$27.50 and lab fees were extra. The second year they changed the fee to around \$42, and lab fees were included.

I decided I wanted to go into geology before I came to the university, because I liked physics and chemistry and mathematics—and I liked being outdoors. I'd read some science-fiction stories—back in those days it was *Doc Savage*, who was a geologist and an archeologist. I liked archeology but no one could make a living in archeology in those days, so I thought geology sounded good.

Back in those days, all freshmen were assigned a faculty advisor. I was assigned Con Emmons as my freshman advisor. It was a very fortuitous association, as we were associated for years. One of the interesting aspects of my first days on campus as an 18-year-old freshman talking with Emmons about a major in geology, was his statement that if you want to amount to anything in geology, you need to take a PhD. And here, in the middle of the depression, I go home to my family and say I guess I'll be in school for eight years, not four. I started out with Twenhofel and Shrock in general geology and



Professor Lou Maher, left, and Emeritus Professor Bob Gates at the Spring Banquet.

Stan Tyler as my lab instructor. In our second semester, which was essentially historical geology, Twenhofel gave the lectures in paleontology and Shrock gave the labs—you can't beat that. Shrock was tremendously inspiring—and so was Twenhofel in his own brusque way.

Anyone who majored in geology had to do a field project as part of historical geology. I had the area that would now include the old fair grounds, the Coliseum, Lake Wingra, Vilas Park, and the arboretum. I did the field work during spring vacation. We had field trips up to Baraboo, which Twenhofel led both in the fall and spring. The other was lithology—hand sample study of rocks—that Emmons taught.

Starting in 1936 we would take long trips, a four-day weekend around first of May, and spend four days visiting outcrops all around Wisconsin. There was a group of us who did that year after year, who took it once for credit but every time there was a field trip, we went. We traveled in Greyhound buses now and then, depending how many people were going. It was that trip that ultimately evolved into the White Lake trip. Several of us had been going on that for four years, and in 1941 we figured we'd covered the state. Emmons had worked for the Canadian Survey as an undergrad and grad student as well as after his degree. He was well-acquainted with the area around Blind River and said it'd be a good place to take students. I went to the dean, Dean Sellery, and asked about taking the trip, and Sellery said, "Yeah, go ahead, but don't tell me about it." It was not at that time a formal course. Back in those days, money was a factor. You did not finance trips, it was all on your own. Also it was a matter of taking students across an international boundary—we were pretty parochial in our approach to things. That was the beginning of the White Lake trip in 1941. I remember very well, we were struggling with some car radio up there when we heard about the invasion of the Germans in the Lowlands.

In those days, they had an honors course, which was an honor in the sense that your department offered you

this opportunity. What it involved, was that if you had the department recommendation and had maintained a 3.8 or so GPA you were eligible, and for the last two years. Six of your credits in each semester were “independent studies.” Up to that time, I had been working 20 hours/week outside to earn books and tuition. I was living at home; my dad had three kids in college, so feeding and clothing them was enough of a chore. At that time I needed money, and we didn’t have loan programs like today, but was told of a guy back east who “financed bright young men.” So I wrote him and told him what I wanted to do and I got a check by return mail, saying, “Go ahead, you have our blessing, and when you need more, let us know.” They basically said, “We’ll underwrite you.” I found out years later it was a group of finance people, stock brokers, who each year kicked in a certain sum of money to a pool which they used to finance “bright young men” in any field. Charles Watts was my contact, they financed me up until I started grad school, and after grad school I had scholarships.

I think the first \$100 I got was what I used in the first summer I spent with Ray Wilcox out in Yellowstone. He was working on his PhD thesis out there in Gardner River and he needed a field assistant—he was doing some plane table mapping and other things, you can’t do alone. He managed the transportation, and I was just responsible for my food. We spent two months that summer for \$100. Parenthetically, this was Emmons’ fine hand in putting me in touch with Ray Wilcox—Ray’s one of the great guys in my memory. We kept in pretty close touch over the years. Ray was one of those superb teachers. I worked with him two summers—he never let you stop thinking—you’d ask him a question and he had four questions for you to answer before you got his answers. The summers I spent out there with him were probably the best education I got as an undergrad.

I got into a special program in which I did anything that Emmons figured I should be doing to get myself properly educated. He said that I should learn a little bit about silicate chemistry, and he arranged for me to go out and work as a lab assistant to M.L. Jackson in Soils—who was ultimately in the National Academy [of Sciences]. Another time I worked with Rollefson in Physical Optics when I was involved in microscopic work. I remember Emmons at one time thought colloids were a very significant aspect of geologic processes and so I worked for a while with Jack Williams who was teaching a course in colloidal chemistry. It was a kind of tutorial system. In retrospect, it was a great experience—I thoroughly enjoyed it and appreciated the contacts I made at the time. The only thing I regret was that I finished up by my undergraduate career a total nincompoop. I never had a course in history, or sociology. Since retiring I’ve focused on learning a little bit about the things I should have learned about in college.

In the special program you had six credits of independent work, designed and approved by your major professor or the department, and at the end of your four years, you did a master’s thesis—back in those days everyone was required to do a bachelor’s thesis. I did a bachelor’s and master’s thesis together, which was on Baxter’s Hollow. At the end of four and a half years (I had taken a reduced load the first two years as I was working) I received my bachelor’s and master’s the same day.

Emmons and I started a rather close association of working together. My second year I took universal stage studies which was a “hot, new” instrument back then—and almost obsolete today. We got into twinning studies, and spent many a Saturday morning in Science Hall looking at thin sections of granites and other rocks of Wisconsin, trying to figure out the significance of twinning. I got involved in twin determinations using the universal stage. I learned double variation in immersion techniques, again in my sophomore year which ultimately led to the papers we did jointly on plagioclase twinning and five axes method of twin determination.

My mineralogy class was a five-credit-a-semester, two-semester, course and Winchell was the lecturer and Emmons taught the labs. That was the standard arrangement in those days—we didn’t have teaching assistants. I never had a teaching assistant the whole time I was in college. The people who taught the labs I was in—people like Shrock, Norm Newell, Stan Tyler, and over in Physics, Rollefson—taught the lectures and lab. Only in beginning chemistry did I have a lab instructor. I generally had assistant professors—in that category I had three people who ultimately made National Academy. You can’t complain at that quality of instruction.

The Geoclub was active then. No one had any money. We entertained ourselves and Science Hall was our home. The lab tables we used for our structure courses were also Ping-Pong tables, so there was always a Ping-Pong game going on. The Geoclub sponsored a lot of field trips in those days, and also did their annual *Outcrop* involving a lot of pictures of field trips or any activities going on. The Geoclub would put on a faculty spoof at our spring banquet in which we lampooned our professors in a friendly, fun way, although there were times where it was a little less fun than others. We had Parker Trask on the faculty at one time. He and Lew Cline were, shall we say, not good buddies, and the spoof we had was a parody of *Oklahoma!* Recall the song “People Will Say We Are in Love.” We had Cline and Trask singing the song and Trask went up to the dean the next day and resigned. We did some things on Emmons and his granitization stuff—we parodied everyone.

(We end here in 1941, before Gates enlisted in the Army Air Corps.)