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## UAF's new biological sciences programs, facilities expand

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FAIRBANKS — Contractors in Fairbanks are on a fast-track schedule with the University of Alaska Fairbanks' new \$108 million Biological Sciences Building, and the plan is to have steel erected and the building closed in by Oct. 1, according to Brian Barnes, director of UAF's Institute of Arctic Biology, which will occupy the building when it is finished.

The new building will contain new and expanded laboratories for research, and more space for teaching. It will replace antiquated, cramped facilities now being used that have threatened to impair the university's ability to attract research funding, faculty and students.

Davis Constructors and Engineers Inc., the prime contractor, has completed one major concrete pour on the foundation for the building and plans a second in early July. With the building enclosed by fall, Davis will be able work through the winter to meet a target of having the building ready for use by research staff by fall 2013 and for students a year later, Barnes said.

The building itself will cost \$90 million. An additional \$15 million is budgeted for an upgrade of the steam heat distribution system on the university's west ridge research campus. The new building will require that, but the upgrade will benefit all of the buildings on the west ridge. Another \$7 million is being spent to relocate and rebuild a greenhouse used in UAF's agricultural research programs.

Some \$80 million of the \$108 million total cost is being funded from proceeds of state general obligation bonds Alaska voters approved last fall; the Fairbanks university will fund the rest out of its own budget.

Barnes isn't happy about this because it means money that could be spent on teaching and equipment for UAF students will go to pay for the building. The Legislature was more generous with the Anchorage campus, which approved all of the funding needed for a \$109 million new sports complex to be financed by the state bond issue.

However, with the biological sciences building soon to be a reality, Barnes is now on a happy hunt for new research faculty and plans a recruiting drive to attract more undergraduate students in the biological sciences field.

"I've got pictures to show," he says, of progress on the new building and what it will look like when finished. Barnes hopes to double the number of undergraduates and expand UAF's research in the biological sciences.

The new facilities come just in time. Climate change effects in northern latitudes are of major concern in the scientific community, and there is great interest in how changes will affect plants and animals.

About half of the institute's research funding is now related to climate change, Barnes said, but new growth is expected in the biomedical and health sciences.

The Institute of Arctic Biology, which handles research, and the university's

Department of Biology and Wildlife, which handles the teaching and academic side, are located in the same facilities and work closely together, with the majority of the academic instructional staff also holding research faculty positions in the institute.

UAF's current laboratories and buildings mostly date from the 1970s and are woefully inadequate. Space for faculty and students is in short supply — some research faculty even work in construction trailers on the university's west ridge research campus, not a pleasant experience in winter.

The old, cramped facilities have cost the university skilled research faculty and created difficulties in attracting students despite UAF's reputation in the field of Arctic biology and wildlife research.

Barnes said the university recently lost one researcher to the University of Texas and another to the Massachusetts Institute of Technology. However, UAF has now turned the corner, he said. The university has just recruited a post-doctoral student from Berkeley, Laura Prugh, who will be an assistant professor in wildlife beginning in January 2012 and whose primary interest is the role of food-web interactions in multi-species conservation.

Barnes has three more research faculty searches under way, searching for specialists in virology, biochemistry, ecology and other fields. The virologist would work closely with the state virology laboratory, which is adjacent to the institute's buildings on the west ridge.

Funding for research at the Institute of Arctic Biology comes from a variety of federal agencies, including the National Science Foundation, National Institutes of Health, U.S. Department of Energy and U.S. Department of Defense.

The institute has 50 faculty positions and 125 support and research staff. There are 175 graduate students, 20 post-doctoral students and 400 undergraduates in the biology and wildlife schools.

With the new building, Barnes hopes to be able to double the number of undergraduates in biology and wildlife.

"The number of master's degree and PhD students will also grow as our research expands, but I would not expect the number to double from the current 175," Barnes said.

Each of the 87 researchers at the institute earn \$40,000 or more annually, a boost to the local economy.

"This really shows that research creates jobs that are good paying," Barnes said.

Many of the remainder are graduate students who are also working at the institute, and while these jobs pay less than research faculty, the students are able to earn money toward their education and gain valuable experience.

Experience includes field work and co-authoring papers, as well as the ability to work closely with faculty. It is one of UAF's key selling points in attracting undergraduates, Barnes said.

The Fairbanks university is at the top of the field in terms of northern studies, but there are several competing top-notch U.S. universities in the biological sciences.

However, few offer the kind of close working relationships with research faculty, and the chance to actually work on research, as are available at the Fairbanks university.

"No other university can offer anything like the 360-million-acre natural laboratory we have here in Alaska," Barnes said.

Another selling point is the close relations between UAF, the state Department of Fish and Game, the biology unit of the U.S. Geological Survey, and the U.S. Fish and Wildlife Service, all linked in a formal cooperative research group, the Alaska Cooperative Fish and Wildlife Research Unit.

There are only a handful of these academic and agency partnerships in the nation and one is at UAF and located, in fact, in the same building with the institute. Through the agreement, the agencies' scientific staff at the institute are also faculty.

What's important about this is that it means UAF graduate students can work on federal and state agency research projects, both in the field and in administration of programs, which opens the door in landing professional positions with the agencies after graduation.

"This is a huge advantage. The agencies get to test-drive these students and learn their capabilities, and most important to know they like to live in Alaska," said Marie

Gilbert, the institute's public information officer.

Between 1990 and 2000 there were 124 UAF graduates in wildlife and the biological sciences recruited and hired by state and federal agencies, private companies and the university itself, and one foreign government.

UAF will aim recruitment at the Anchorage area. About 80 percent of all UAF students are Alaskans but relatively few from Anchorage, Barnes said.

"We are targeting Anchorage-area families to let them know of the great opportunities and undergraduate research experiences in biology, ecology, wildlife management and biomedical and health sciences at UAF. We can provide an outstanding start to professional careers," Barnes said.

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