

searchers have been trying to synthesize taxol for the past 15 years.

The institute also wants collectors to keep detailed field notes. An area of great interest is how the plants and animals are used by local people. Consider the case of the rosy periwinkle *Catharanthus roseus*, of Madagascar, which native doctors prescribed for diabetes. In the United States, powerful anticancer agents isolated from the periwinkle—vinblastine and vincristine—are today

used to treat various forms of leukemia.

Balick of the New York Botanical Garden just returned from the interior of Belize, where he worked with a well-known *curandero*, or healer, who uses herbal remedies to treat illness. As the forests disappear, however, so do sources such as Balick's medicine man. "These people are encyclopedias of local flora, and they're not being replaced," says Balick.

Indeed, the collecting program has point-

ed toward how important taxonomy is, a field of the natural sciences that in recent years has received little funding or attention. Says Mark Plotkin, director of plant conservation at the World Wildlife Fund in Washington: "As long as people think that the genetic engineers can cure everything, the world will think it doesn't need taxonomists anymore. But there is no biological diversity without the taxonomist to tell the stuff apart." ■ **WILLIAM BOOTH**

Briefing:

Foreigners in Science

Foreign-born scientists and engineers educated in the United States promise to become an ever larger part of the U.S. work force, according to the latest report from the National Science Foundation.* Eighty-five percent of graduate students with permanent visas indicate plans to stay in the United States, and the proportion of those with temporary visas who intend to stay has risen from less than one-third in 1972 to more than one-half in 1985.

"From all indications, the growth trends in foreign involvement in U.S. science and engineering show no signs of abating" says the report. Foreign students comprise more

than one-fourth of full-time graduate students in science and engineering, and their enrollment is increasing by 7% a year. At the same time, there has been a proportionate decrease in enrollment by Americans—for example, the number of science doctorates awarded to men dropped from 8.5 to 3.5 per thousand between 1970 and 1985, while the ratio for women rose only from 1.1 to 1.7.

The number of students from South and East Asia has grown precipitously and they now comprise over 40% of all foreign students. The number of Middle Easterners has dropped sharply since 1980, along with declines in world oil prices.

Engineering continues to be the dominant foreign interest, with more than one-half of engineering doctorates going to foreign citizens since 1981. The report says that if the number of foreign students in engineering doctorate programs increases by 2% a year, they will outnumber Americans by 3 to 2 by 1995. Among science fields, computer sciences show the greatest increases in foreign enrollment, averaging 21% a year during 1979–85.

The report says that although the U.S. hosts the largest number of foreign students of any country, it ranks only 15th in the percentage of foreigners in the student population. Among major industrialized nations, the only ones that rank lower are Japan and the Soviet Union. ■ **C.H.**

Hopes and Fears at NSF

The National Science Foundation seems to be doing better in principle than in practice in achieving the doubling of the agency's budget over 5 years approved by President Reagan. Without disclosing any figures, NSF director Erich Bloch told the National Science Board on 21 August that the foundation's budget proposal for the 1989 fiscal year, which begins on 1 October 1988, exactly follows the plan set up by the Office of Management and Budget to achieve the goal. Bloch's mention of what he called a "second installment" toward a dou-

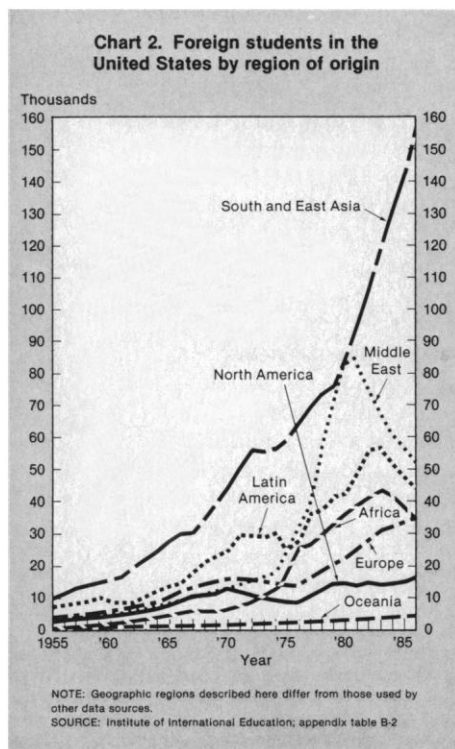
bling suggests OMB's blessing. At the same meeting, however, Bloch acknowledged difficulties in landing the first installment—funding in the fiscal year 1988 budget now before Congress. With Congress searching for savings in the science budget (*Science*, 3 July, p. 22), he indicated that NSF faces a formidable task in convincing the legislators to fund the full \$1.89 billion requested for the agency. ■ **J.W.**

Comings and Goings

Anthony J. Calio has announced his resignation as administrator of the National Oceanic and Atmospheric Administration. He will take a post as senior vice president for management and operations of the Planning Research Corporation, a provider of computer and other technology-based services for industry and government.

Although the International Institute for Applied Systems Analysis (IIASA) lost the U.S. government contribution to its budget, the East-West research organization has appointed another American, Robert Henry Pry, as director. Pry has held high-level R&D management posts with General Electric and other U.S. companies. He succeeds Thomas H. Lee, who is returning to his professorship at MIT after his 3-year term at IIASA.

Astronomer Sidney C. Wolff has been named director of the National Optical Astronomy Observatories (NOAO) in Tucson. She moves up from the post of director of Kitt Peak National Observatory. NOAO manages Kitt Peak in Arizona and two other major observatories—Cerro Tololo in Chile and the National Solar Observatory, which has telescopes at Sacramento Peak, New Mexico, and Kitt Peak—and oversees a development program that includes work on the National New Technology Telescope. NOAO is operated by the Association of Universities for Research in Astronomy under contract to the National Science Foundation. Wolff succeeds John T. Jefferies, who remains at NOAO as a senior researcher. ■ **J.W.**



*Foreign Citizens in U.S. Science and Engineering: History, Status, and Outlook.