
Chemists honor Seaborg

Glenn T. Seaborg has been chosen to receive the 1979 Priestly Medal, the highest honor of the American Chemical Society. Seaborg is being honored both for his research contributions and for his role in communicating science to society. He shared a Nobel Prize in 1951 for his work on the chemistry of the transuranium elements and is the codiscoverer of 10 elements, including plutonium, and more than 100 isotopes. In addition, Seaborg has played an important role in the discovery and development of major sources of nuclear energy.

Seaborg has also been active in science policy and education. He served for 10 years as chairman of the Atomic Energy Commission and has been president of both the American Association for the Advancement of Science and of the American Chemical Association. He has also served as chancellor of the University of California at Berkeley and is currently chairman of Citizens for Urban Wilderness Areas and of the ACS Committee on International Activities, as well as president of the Board of Trustees of Science Service. He and colleagues at Berkeley are attempting to synthesize element 107 and superheavy elements. □

16,274 plant species and still counting

The plant kingdom has a communication problem. The scientific literature of botanical taxonomists is an impassable jungle to many, including authors of wildflower guides and scholars who need to know what plants grow in certain areas. The solution may be a "flora," a book listing and describing all known plants of a specified region. The Soviet Union has a flora, and the Europeans are just completing one. But plans for *Flora-North America* got waylaid by funding cuts five years ago. Now germination of a North American flora again seems likely.

"A flora is the scientific stepping-stone to public knowledge," says Stanwyn Shetler of the Smithsonian Institution's Museum of Natural History. He and colleague Laurence Skog have just published a checklist — the skeleton of a flora — derived from their earlier work on American plants. With that publication, and with the announcement of a new project to begin this fall at the New York Botanical Gardens, Shetler feels "renewed optimism" that a North American flora will be underway shortly.

Meanwhile, the provisional checklist will serve as a working document to specialists compiling a complete national (or continental) list of plants. The checklist includes authoritative plant names and some notes on distribution and growth

habits (for example, annual or perennial), but not a true flora's descriptions or keys to identification.

The major use of the checklist, Shetler hopes, will be not among botanical taxonomists, but among people outside the discipline who need quick information. For example, one anthropologist employs the list to study medicinal and poisonous plant use. "The checklist can provide a handle, even though it's imperfect, to scholars who don't have an entree into the scientific literature," Shetler says.

The checklist, which is available from the Missouri Botanical Garden, contains 16,274 species. Reports of additional plant types are already being sent in by botanists. The list was based on an earlier compilation by the U.S. Soil Conservation Service and on local floras and manuals. It covers the plants of the continental United States, Canada, Alaska and Greenland. □

Pupfish believed extinct

Has anyone seen the Tecopa pupfish lately? The Department of the Interior's Fish and Wildlife Service would like to know. Fearing the worst, it proposed last week striking the fish from the endangered species list. It would be the first animal struck for reason of extinction. "The most depressing thing about this loss," said DOI assistant secretary Robert L. Herbst, "is that it was totally avoidable. The human projects which so disrupted its habitat, if carefully planned, could have ensured its survival."

The hardy one-and-a-half-inch-long fish made its home in the Amargosa River near California's Death Valley. Able to tolerate very salty water and temperatures to 108°F, it sought out small pools and thermal springs near Tecopa, Calif. But despite repeated attempts to find it, the pupfish has not been seen since 1970.

Some believe that if the Endangered Species Act of 1973 had come along sooner (its mission is to protect the vital habitat of any endangered creature), the pupfish might still be alive. But attempts to build a bathhouse 20 or 30 years ago above a spring required rechanneling the river and combining two spring outflows. The pupfish was not adapted for the swift, barren channel that resulted. Later, the river was stocked with bluegills, crayfish and mosquito fish that competed with the pupfish for food and ate its young.

"What is so disconcerting about the demise of the Tecopa pupfish is that its plight has been so typical of what has occurred throughout the nation," Herbst said. "Lack of knowledge coupled with poor and careless project planning without regard to impact on the environment has taken a heavy toll on our wildlife resources." There are 12 known subspecies of pupfish in the United States. The Shoshone pupfish, a related species from the same area, is also feared extinct. □

N. Y. plan to remove PCBs

New York State's Department of Environmental Conservation is requesting \$25 million in federal funds for a polychlorinated-biphenyl (PCB) cleanup program of the Hudson River that could serve as a scientific and reclamation model for the nation. New York's plan calls for dredging river sediment at 30 to 40 heavily contaminated "hot spots" — accounting for about 75 percent of the 440,000 pounds of PCB's in the upper Hudson — and disposal of dredge material in "virtually impermeable" clay capsules at a monitored landfill. NYSDEC Commissioner Peter A. A. Berle unveiled the plan at a New York Academy of Sciences meeting late last month.

Berle said the timing was "critical" because at any time the PCB's may start migrating downstream, polluting the ecologically fragile estuary and destroying a multi-million-dollar fishing industry.

In justifying the request for federal money, Berle said his agency will have exhausted all its own money for the project by summer's end. Removing the total PCB burden would require dredging 40 miles of river bed, take about 10 years and cost up to \$204 million. Although this program "admittedly falls short of complete removal," Berle said, "it will serve as a trial program in which a sizable portion of the contaminants can be removed and the effectiveness of the project judged." In addition, "our sense is that we're farther ahead than anyone else in the country" in research to attack a problem that plagues virtually every U.S. waterway to some degree — toxic chemical pollution.

The project, expected to take three years, would cause local destruction to sediment life in the dredge area for a year or two, the commission estimates. □

Salyut 6 resupplied

After eight days in orbit aboard the Salyut 6 space station, cosmonauts Pyotr Klimuk and Mirosław Hermaszewski returned to earth July 5 in their Soyuz 30 spacecraft, leaving the station in the hands of Soyuz 29 crewmen Yuri Romanenko and Georgi Grechko, who had been there since June 17. During their stay, Klimuk and Hermaszewski had photographed the earth's surface for earth-resources studies, using the Salyut's multi-spectral camera, and conducted tests in the zero-gravity processing of materials such as semiconductor alloys. Then, only four days after their departure, Salyut 6 (with Romanenko and Grechko still aboard) was visited by the unmanned Progress 2 spacecraft — the second "robot" craft to dock with the station — bringing additional supplies. Soviet officials said recently that Salyut 6 should be able to function for as long as five years with the aid of such resupply missions. □