

model fish painted with two eyes, but not to a one-, three- or four-eyed shape. However, the isolates seem unable to recognize even their own mating partners. A pair of normal fish together defend their eggs against all intruders. But an isolate will not attack another fish substituted for its partner. Even a pair of female isolates will defend eggs together. Thus, fish reared in an environment lacking a biologically important signal suffer rather specific damage. They know *what* a face is, Coss says, but don't know *whose* it is. □

## Alaska lands bill: A mountain to climb

While conservationists rejoice over the 277 to 31 victory of the Alaska lands bill in the House late last week, there is still a tough hurdle ahead. The bill addresses what has been called the century's greatest conservation issue and the year's greatest conservation controversy. At stake is whether and to what extent much of the rugged and majestic terrain will be closed to mineral exploration and development.

The bill that passed the House would set aside more than 100 million acres for new national parks and wildlife refuges and would protect 66 million acres of national land as pristine wilderness. None of this land would be open to mining, with the possible exception of the refuges. But oil, gas and hard-rock mining lobbies have fought for insertion of exceptions that would allow them a lever against permanent exclusion. And they got one in an amendment introduced by Jim Santini (D-Nev.). It requires the U.S. Geological Survey to continue its mineral assessment — which includes core drilling — on all lands; it also requires the President to submit a proposal to Congress by Oct. 1, 1981 that would allow mineral exploration and extraction on all national land if it was "in the national interest."

It's only a lever and the battle is far from over. Both Alaskan senators have threatened to filibuster if the bill hits the floor. And reports say Senate majority leader Robert C. Byrd (D-W. Va.) will try to see it doesn't hit the floor to avoid that filibuster.

Conservationists hope Byrd will change his mind in light of the sweeping House victory. If the bill doesn't pass the Senate and conference committee by year's end, they will have to start from scratch drumming up support for new legislation.

The Alaska coalition, with members from conservation organizations, civic groups and labor unions throughout the 50 states, has put a lot of sweat, money and time into lobbying for the bill, which would double the size of the national park system and preserve America's last frontier. They fear they'll lose the momentum they acquired if the controversy isn't settled. So all sides wait for word from Byrd. □

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## Potential Nobelists win trip to Sweden



Contestants at the 29th International Science and Engineering Fair receiving the Glenn T. Seaborg Nobel Prize Visit Award: Maryanne Povinelli of Rocky River, Ohio, and Perry J. Damiani of Greendale, Wisc., are shown with Seaborg (far left), Nobel laureate and president of the Board of Trustees of Science Service, and Richard L. Terrell (far right), Vice Chairman of General Motors Corp., sponsors of the award.

## Cleaner electroplating also reduces wastes

A computer-automated gold-electroplating system that is cleaner, faster, saves energy and reduces raw-material waste, was announced last week by Bell Telephone Laboratories and Western Electric Co. Compared with conventional systems of the same size, the process reduces exhaust gases by 97 percent, chemical waste by 90 percent and gold use by 50 percent. And production is increased because the system is seven times faster, says Don Koontz, one of its developers.

Keys to the system are a faster electroplating chemistry and operation within a totally closed environment. Unlike most conventional electroplating, which is carried out in open vats, each step in the Bell process occurs inside coupled, but independent, cells. The reduction in chemical evaporation and contamination of the plant environment reduces by 85 percent the energy needed to air-condition and treat air. Water is recycled where possible.

Koontz says that although the system was designed for gold electroplating, "we're quite confident that the system is generic," and can be applied to other metal plating. Energy and resource savings would vary, depending on the mate-

rial to be plated and metal used.

Bell's system was designed to plate tapes of telephone-network contacts. The tapes are wound around spools on either end of a 45-foot-long assembly, then drawn at a controlled rate through each chemical-processing cell. Cells can be rearranged to permit combinations of gold, nickel or copper plating, the Bell researchers say. Two platers, installed in a Western Electric plant last year, paid for themselves with reduced costs in only six months, according to George Helgesen, another of the developers. □

## Lowering cholesterol

Although elevated levels of cholesterol in the blood have been heavily implicated in heart attacks, especially in the half-million Americans who have inherited raised cholesterol levels, drugs currently available have only been able to lower cholesterol levels by about 25 percent. Now research reported at the recent meeting of the American Society of Clinical Investigation in San Francisco shows that two drugs combined with a low-cholesterol diet can reduce cholesterol levels by 55 percent.

J. P. Kane and his colleagues at the University of California at San Francisco had 49 patients with inherited high-cholesterol levels eat a low-fat diet and take two drugs — colestipol and nicotinic acid — for a year. Ninety percent of the patients' cholesterol levels dropped to normal. Colestipol acts as a chemical sponge, draining cholesterol derivatives from the liver so that they can be disposed of in the intestines. Nicotinic acid appears to block the synthesis of low-density lipoprotein molecules that transport cholesterol through the bloodstream. In the past, colestipol and nicotinic acid have been tested individually as cholesterol-lowering drugs, but with little success. So it is their combined use, along with a low-cholesterol diet, that must do the trick. □

Telephone network contacts electroplated by computer-controlled system (at rear).



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