creating a Sun Day. Says its coordinator, Denis Hayes, "Sun Day has been organized by people who want change." The festiveness of Sun Day celebrants should not be confused with frivolousness, he says. There's "a deadly earnest sort of strain underpinning this," marked by dissatisfaction with the direction and magnitude of the federal commitment to solar energy, he told SCIENCE NEWS. "Although I had hoped for a bit more out of the Carter Administration," he said, "I expect we can get some important pieces of legislation through this year," in large part due to the visibility and effectiveness of the various Sun Day events.

Several key observers of solar legislation on Capitol Hill agree, saying that the "gearing up for Sun Day" has been an important factor in strengthening the force and membership of a growing "solar coalition" — now nearly 100 strong — of House and Senate members. Legislation they've introduced would:

- provide low-interest loans to small businesses for purchase and installation of solar equipment;
- provide $5 million for solar demonstrations overseas, primarily at United States embassies;
- provide $5 billion for direct loans to homeowners and businesses to buy and install solar equipment (this bill already has more than 100 sponsors);
- provide $1.5 billion over 10 years, beginning with $125 million in the next fiscal year, to reduce the cost of photovoltaics to $1 per peak watt by December 1987 (this bill already has more than 80 sponsors);
- provide matching funds to states for the study of how each might tackle the legal aspects of one's right to sunlight;
- supplement appropriations to permit full funding of solar demonstrations in agriculture;
- and create an office of small-scale technology within the Energy Department similar to California's Office of Appropriate Technology.

In addition, the House has already increased the proposed solar budget $160 million — including $20 million for wind and $75 million for photovoltaics. Senate action has similarly resulted in increases of $20 million for wind and $30 million for photovoltaics thus far. Many feel Carter's offer of an additional $100 million for solar will look more like a $200 million increase before Congress lets go of the budget.

Among other major spin-offs of Sun Day, Hayes described formation of two national organizations to promote a change in the political and social climate affecting solar energy development. The Solar Lobby, which should get underway within the next few months, will represent consumers on Capitol Hill. The Center for Renewable Resources will assemble a "talented pool of experts" to scrutinize policy and government expenditures, and train grassroots organizations to coordinate their efforts for effective action. Both will operate out of Washington and draw on the experience and membership of Sun Day's coordinators.

One of the center's first activities will be to identify the principal barriers to solar energy on a regional basis. Hayes says the center already has the money to hold meetings this year in every state. Findings should be presented at a national meeting it hopes to sponsor next year. In addition, Hayes said he hopes the center will help shape the national "overall solar strategy for speeding use of solar technologies" also called for by Carter in his Sun Day address.

In *The Solar Energy Timetable,* a 40-page report issued last month by the Worldwatch Institute in Washington, Hayes outlined the type of commitment he thinks governments must make soon for a transition to a solar-dominated post-petroleum age. "Failure to begin building the equipment, establishing the infrastructure, and educating people in the skills needed in a solar era will only increase the cost and disruption of the transition and decrease the likelihood of its completion within five decades," he writes.

Is that transition necessary? The President's Council on Environmental Quality thinks so and stated why in explicit terms last month with publication of a 52-page report, *Solar Energy: Progress and Promise.* "[W]e can now say with assurance," it said, "that solar energy...is in fact our best hope" for transition to that post-petroleum age. □

Snail darter: Winning battle but losing war?

A heated battle still rages over whether fewer than 300 tiny fish should halt completion of a $116 million dam. The fish are snail darters, three-inch-long minnows whose critical habitat is endangered by the Tellico Dam on the Little Tennessee River near Knoxville. As the Endangered Species Act is now written and interpreted, no government project may jeopardize an endangered species or its critical habitat; if an "irresolvable conflict" arises, the species wins. But the notoriety and issues spawned by the snail darter case — now before the Supreme Court — have served as a catalyst for legislation that could change that.

An amendment to the Act, introduced by six senators last month, would cast irresolvable conflicts into the hands of a seven-member interagency-review committee (which at press time seemed likely to comprise the Secretary of Agriculture, Secretary of the Army, chairman of the Council on Environmental Quality, Administrator of the Environmental Protection Agency, Secretary of the Interior, Secretary of the Smithsonian Institution and Secretary of Transportation). It would take the vote of at least five to exempt a project from provisions of the Act.

There would be three criteria for which an override could be considered: when "there is no reasonable and prudent alternative," when "the project is of national or regional significance," or when "benefits of [an exemption] clearly outweigh...conserving the species or its critical habitat, and ... such action is in the public interest."

"In my opinion the Endangered Species Act is under a frontal attack right now," says Dave Conrad of the American Rivers Conservation Council in Washington. His and other environmental groups have been expecting such a confrontation for a long time. They also are not very optimistic about chances that the proposed amendment will be defeated.

The Act, which is due to expire at the end of the next fiscal year, must undergo budget review for reauthorization before May 15 of this year; it has cleared the House, not the Senate. Many observers feel chances of the Act emerging unscathed from congressional oversight this year are "near zero" and that the proposed amendment represents a "reasonable compromise" to more radical changes that may be proffered.

But many environmentalists fear that if a loophole is written into the Act whereby protection of endangered species may be overridden, agencies may not try too hard to resolve or mitigate conflicts in the first place. Then each challenge could result in elimination of one more species from this planet, they say. □

Man-made superconductor

A man-made superconductor is not necessarily news. A number of superconducting alloys and compounds are man made in the sense that it takes precise technology to produce them, but a man-made element that is superconducting is new. It is americium, the first transuranic element to show superconducting properties, as reported by James L. Smith of the Los Alamos Scientific Laboratory and Richard G. Haire of Oak Ridge National Laboratory in the May 5 SCIENCE. Americium becomes superconducting at 0.79° K, less than a degree above absolute zero.

Americium is man made in the sense that it is one of the heavy radioactive elements not naturally found on earth. It is the first radioactive element to show superconducting properties; all other known superconductors are stable isotopes. It is also somewhat surprising that americium is listed in the periodic table with magnetic elements. Magnetism and superconductivity are usually incompatible. □

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