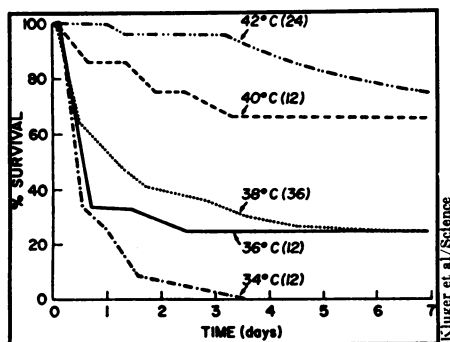


degrees K. The materials then exhibit a sharp decrease in ability to conduct electricity (that is become insulators) when cooled further. HMTSF-TCNQ, on the other hand, can continue conducting electricity from room temperature down to about .045 degrees K., nearly absolute zero. It is, therefore, the only organic material yet created that can act like a metal throughout a broad temperature range and does not become an insulator. □

Fevers: A means for survival?



Infected lizards kept at higher temperatures were more likely to survive.

A burning fever may be the body's way of killing bacteria, a team of University of Michigan medical scientists report. In studying the effects temperature has in controlling disease in lizards, Matthew J. Kluger and his colleagues at the University of Michigan Medical School discovered that when lizards are inoculated with live bacteria, their body temperature rises, and their chances of survival increase.

Lizards have advantages over mammals in such a study. A lizard's body temperature fluctuates according to its surroundings, and the animal's temperature can be controlled under a wide variety of experimental situations.

The physiologists found that lizards, once exposed to fever-causing bacteria, survive significantly more often if their body temperature is maintained at an elevated level (40 to 42 degrees C.) for 24 hours. This leads them to conclude in the April 11 *SCIENCE* that "fever following a bacterial infection is beneficial to the host." Since lizards maintained at 40 degrees C. had more effective defense systems against bacteria than those in cooler environments, Kluger says a reduction in temperature may reduce the host's ability to fight infection. If fever evolved as a mechanism of defense, its function should be similar in mammals. If that is the case, then widespread use of antipyretics to lower the temperature of people with moderate fevers should be reevaluated, the researchers conclude. □

April 12, 1975

Panel urges new wildlife management

A group of distinguished biologists and wildlife managers, meeting last weekend near Washington, has produced a new set of scientific guidelines for the management of wild resources. Specifically, they found that the concept of maximum sustained yield—harvesting as much of a wild species as possible on a continuing basis—needs updating and should not be codified as the last word in resource management by the current Law of the Sea Conference or in legislation pending before Congress.

Noting that past attempts to manage the exploitation of wild animal and fish resources had led to "gross depletion" of many species, the panel announced a new set of general conservation principles, which organizers hope will be incorporated into law and international agreements. Around 30 wildlife experts from universities and government laboratories in the United States and Canada came to the conference, sponsored by the World Wildlife Fund, the Council on Environmental Quality, the Ecological Society of America and the Smithsonian Institution. The official report will be made public next week.

SCIENCE NEWS was present at the meeting and obtained a draft copy of the report, in which four general principles were laid out for future wild resource management: Rather than concentrating on just one species in setting hunting and fishing quotas, managers should concentrate on maintaining species balance within an ecosystem, the panel recommended, including minimizing the risk of irreversible change and keeping open as many options as possible to meet future needs. Decisions should include adequate safety factors, to allow for gaps in knowledge and inevitable institutional imperfections. Waste of other resources, including energy, should be avoided in determining how best to harvest wild species. Before exploitation begins, careful surveys should adequately determine the extent of a resource, and continuous, publicly available monitoring should accompany its use.

Most cases of overexploitation—such as that which caused the decline of the great whales—have resulted from institutional inadequacies, rather than lack of a good theoretical management base. But the scientists were concerned that in the current rush to create new commissions and reach new international agreements, the latest scientific knowledge about vast, though fragile ecosystems might be ignored. Conventional wisdom has held that maximum yield is produced when the population of a species is hunted or fished to a population level about half that originally present. The panel's report calls this

concept of maximum sustained yield "simplistic," since it does not take into account age distribution of a catch, growth rates and social order of a species, or the effects of one species on another. Destruction of a predator, for example, may lead to an overabundance of its prey. But worse, the concept has too often been used as an "argument for brinkmanship," says Sidney J. Holt of the United Nations Food and Agricultural Organization. Instead, he said, it should be the "boundary of exploitation, rather than the goal."

Conference organizer Lee M. Talbot told conferees he hoped their meeting would help prevent out-dated management ideas from getting "set in concrete," through new legislation. He and Holt are working on a modified version of the panel's conclusions to be presented to the Law of the Sea Conference in Geneva. So far, however, that meeting has failed to solve the basic problem of how new management regimes would be enforced. □

The Thin Edge

Public television has aired several programs in recent months that prove television can be educational, entertaining and popular at the same time. *The Ascent of Man*, *Nova* and *Civilisation* are prime examples. Last week the Public Broadcasting Service opened a new series, the overwhelming response to which suggests that certain forms of educational programming may have a much larger audience appeal than has generally been believed. The series, called *The Thin Edge*, deals with mental health problems.

The first hour-long program of the series discussed depression. It was well made, highly informative and interestingly presented by host and executive producer David Prowitt. It was shown on 253 stations, 136 of which had local follow-up programs during which viewers could call in and have questions answered on the air. At WNET in New York, where the series was produced, all available phone lines were tied up for several hours. The phone company there estimates that at least 150,000 people tried to get through. The program was so successful, in fact, that it has already been purchased by a commercial distributor (Medcom in New York) and will eventually be available as educational material for schools and doctors.

The remaining four programs in the series will be shown on alternate Monday nights. They will examine: *Aggression*, April 14; *Guilt*, April 28; *Anxiety*, May 12; *Sexuality*, May 26. □

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