

BIOLOGY

Sino-American insect swap

Green lacewigs, predatory mites and parasitic wasps make a strange gift from China. They can hardly compete for popular interest with the pair of pandas (or with the cranes and parrots expected to be given soon to the National Zoo in Washington). But the latest biological acquisition may prove the greater boon in the long run. The insects, brought from China by scientists of the U.S. Department of Agriculture, are natural enemies of crop pests. The lacewigs are expected to attack cotton and tobacco pests, the mites to prey on other mites that harm vegetables and citrus and the wasps to parasitize gypsy moths and other forest caterpillars. Joan Wallace of the USDA explains that because many of the insect pests destructive to U.S. agriculture are not native to this country, scientists must go overseas to find the pests' natural enemies. Scientists at three universities plan to study the Chinese insects under quarantine conditions for at least a year before beginning any field tests. The USDA scientists who brought back the insects did not go to China empty-handed. They took their hosts U.S. wasps parasitic on aphids and caterpillars. These wasps may be useful in China's pest management program. Wallace says the two countries are exploring possibilities for collecting other natural enemies of insect pests and arranging cooperative research on biological controls.

Quick-snacking anteater avoids attack

Fast food makes good sense for the giant anteater. Settling down for a leisurely meal at a termite mound would only invite attack by biting, and sometimes chemical-spraying, insects. When the fierce soldier insects rally their forces, the anteater moves on, says a Harvard University biologist who for a year has been tracking anteaters from one termite mound to the next in a national park in central Brazil. Kent Redford reports that an anteater devours thousands of insects a day by snacking at different mounds. Redford stays downwind as he follows his subjects, because the giant anteater has a keen sense of smell. "If one approaches a termite mound, it will walk around sniffing at very particular places, moving the tip of the nose up and down," Redford says. The animal will then scratch a hole in the mound with the long, curved claws of its front legs and dart its sticky tongue in and out of the hole as fast as 160 times per minute. The sticky tongue brings into the anteater's tubelike mouth more than just insects, Redford finds. "They ingest an enormous amount of non-digestible material—a lot of sand, leaves, gravel, sticks, stones—because when you lay 22 inches of tongue out on the ground you're not only getting ants and termites but anything else that's going to stick," he says. Redford suggests that the indigestible material may help an anteater's strong stomach muscles to grind its food. The insect diet is sufficient to support a sizable animal. The giant anteater, *Myrmecophaga tridactyla*, can weigh almost 90 pounds and be 7 feet long including the tail, plus a 2-foot length of tongue.



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SCIENCE & SOCIETY

Dirty water and muddied reporting

As part of a 1976 legal settlement, the Environmental Protection Agency agreed to develop a program to control toxic-pollutant discharges to waterways; the agreement included a requirement to set abatement standards based on "best available technology economically achievable (BAT)." The consent decree also ordered EPA to identify by July 1, 1981, which waters might require additional measures — beyond institution of BAT — owing to how serious contamination proved to be. In addition, EPA was asked to identify which of the 65 toxic pollutants it regulated might require more extensive controls than those originally foreseen to clean up large (geographical) problems.

The list, issued July 27, identified 34 waterways and 12 pollutants for which additional controls appear needed. Rivers cited finger some of the largest industrial centers in the nation. Among the listed pollutants, cadmium, chromium, copper, cyanide, lead and silver were singled out for threatening mainly aquatic life. Arsenic, mercury, polychlorinated biphenyls and phthalate esters were identified as presenting their main threat to human health. Phenols and 2,4,6-trichlorophenol taint fish flesh and drinking water. Specific strategies to control the pollutants and to clean up the particularly contaminated streams are required by December 31.

Though news accounts have characterized the 34 waterways listed as the nation's most polluted and as a health threat, "this is not what the EPA list means," the agency clarified last week. The list was compiled not from water samples but from pencil and paper estimates of contamination, based upon what is known of the industries that discharge to these waterways and the quantities of chemicals they discharge. As a result, EPA cannot yet certify that serious contamination exists. However, now that the targets are established, EPA will begin sampling from the streams to determine whether dangerously high levels of the toxic pollutants are actually present.

News briefs

- George Keyworth (SN: 7/18/81, p. 45; 7/25/81, p. 59) won Senate confirmation, July 24, as the President's science adviser and as director of the Office of Science and Technology Policy.
- A federal court jury held Rand McNally, a textbook publisher, liable for personal injuries received by two students performing a textbook chemistry experiment, according to the July 27 CHRONICLE OF HIGHER EDUCATION. A member of the plaintiffs' law firm is quoted as saying, "The implications are incredible. This was a case involving a junior-high-school textbook, but consider what it means for publishers of medical or engineering books." Out of court settlements totaled \$1 million.
- Louisiana became the second state, on July 22, to require the teaching of creationism in public-school science classes. Earlier this year, Arkansas enacted a similar law. Georgia may follow suit next January.

Judge blocks Watt's offshore oil leasing

Moves to accelerate the leasing of offshore tracts for oil and gas exploration by Interior Secretary James Watt were thwarted, at least temporarily, by a California federal-district judge last week. Under the Coastal Zone Management Act, state approval is required of federally administered projects that directly affect a state's shoreline. Watt contends that the leasing process itself does not impact beaches, so leasing should be exempt from state-approval requirements. The judge considered leasing the first stage in oil exploration — something California wants prohibited in these tracts, citing environmental reasons. Watt has vowed the ruling will be appealed.