

Threat to Serengeti

Most of an area vital to the Serengeti National Park ecosystem will be removed from its status as a conservation district and turned over to Masai cattle ranching and farming. The move could disrupt Africa's last great herds of wild grazing animals.

Actually the park itself does not comprise a true ecosystem. The Serengeti's herds of zebra, wildebeests, Thompson's gazelles and various other herbivores move in gigantic circular migrations to take advantage of seasonal grazing and water supplies.

From January through May the herds are concentrated in an area that has been known as the Ngorongoro Conservation Area. Before park boundaries were changed several years ago, the area was included in the Serengeti National Park. Dr. Bernhardt Grzimek, now director of the Frankfurt Zoo, made a study of migratory patterns and range grasses which showed that the conservation area contains most of the plains animals' preferred fodder plant species. Presumably it is thought that what is good for the wild animals is good for the Masai cattle.

At the center of the area is the Ngorongoro Crater, which is home for at least part of the year to many of the animals. The crater will remain protected.

But wildlife biologists are sure that farming and ranching will totally disrupt the migrations. The animals will either be forced to remain in the crater or the park, where they will overgraze the range, or they will be killed off as they compete with domestic animals and destroy crops during their migrations.

SAFETY

Alaska pipeline stipulations

The Department of the Interior has issued a 50-page book of stipulations which must be met by builders of the proposed Trans Alaska Pipeline System (SN: 10/4, p. 265). The line is designed to bring North Slope oil 800 miles across the state to the south coast port of Valdez. Ecologists have viewed the pipeline proposal with a jaundiced eye; oil in the line will have to be heated to keep it flowing, the heat will melt the permafrost, at the least a canal will form along the pipeline and at the worst the melting could reduce support of the pipeline until it ruptures. The canal or the 48-inch pipe itself could form an impassable barrier to Alaska's migratory animals, principally caribou.

It is pointed out that the tundra is a fragile ecosystem which could easily be disrupted by such a barrier or the pollution caused by construction activity surrounding its installation.

The Interior Department has the final say on TAPS as the line will have to cross public lands. The stipulations were issued after a lengthy study, which Secretary Walter J. Hickel says was necessitated by the magnitude of this project and its potentially harmful effect on Alaska's tundra ecosystems. He says the rule will insure that the wildlife and ecology of the Arctic will be unharmed.

Included in the stipulations are requirements that the pipeline be insulated from the permafrost to prevent melting, that its route must minimize damage to the

environment, that construction activities avoid polluting streams and that TAPS post a \$5 million bond from which any environmental damages will be recovered.

POLLUTION

Fish kills increase

The Federal Water Pollution Control Administration reports that an estimated 15.2 million fish died as a result of water pollution in 1968. This is an increase of more than 30 percent over 1967 deaths; part of this increase, FWPCA Commissioner David Dominick says, may be due to better reporting, but the bulk is a real increase.

The year's largest kill occurred when a petroleum refinery lagoon leaked chemicals into the Allegheny River. Four million fish died in this incident. Effluent from an overloaded sewage treatment plant in Mobile, Ala., caused the death of another one million fish, the second largest kill. Two-thirds of the fish killed had commercial value. About a tenth were game species.

Since the pollution fish kill census began in June 1960, 103 million fish have been reported killed in 2,830 pollution incidents.

INSTRUMENTS

Remote view for fishermen

A remotely controlled sea sled is giving fishery scientists an eye on the scene to observe the lives of marine creatures.

Called RUFAS, the Remote Underwater Fisheries Assessment System consists of a platform equipped with lights and television and motion picture cameras. The device was developed by scientists at the Bureau of Commercial Fisheries exploratory fishing and gear research base at Pascagoula, Miss., in cooperation with General Electric Co. Towed by a surface vessel, RUFAS can be positioned at any desired altitude above the ocean bottom, within the prototype's depth limit of about 300 feet.

Tests began during the summer off the east coast of Florida, photographing concentrations of the calico scallop. Storm damage to the instrument ended the tests, which should resume early next spring.

ECOLOGY

Snails plague Miami

A mini-plague of giant African snails (*Achatina fulica*) has infested areas around Miami, Fla., devouring tree bark, fruit, grass and even the paint on the walls of buildings.

Tens of thousands of the prolific creatures inhabit regions of nearby Hollywood and North Miami. State pest control officials have begun spraying with an insecticide mixture of metaldehyde and tricalcium arsenide; metaldehyde, a standard molluscicide, attracts the snails and subsequently poisons them.

The snails, however, are hermaphroditic—they have both male and female reproductive organs—which means that the infestation could re-emerge unless every last snail is destroyed.