

Squirrels erupt in Appalachia

**Failure of mast crop
triggers movements;
bears also hungry**

Almost by definition, ecosystems are self-regulating. In the long run, at least, populations of a species vary their numbers to keep in line with variations in abundance of species on which they depend for food.

In the short run, however, things can get out of whack. Now, as the result of such an imbalance, the bulk of southern Appalachia's gray squirrels are now in danger of imminent starvation.

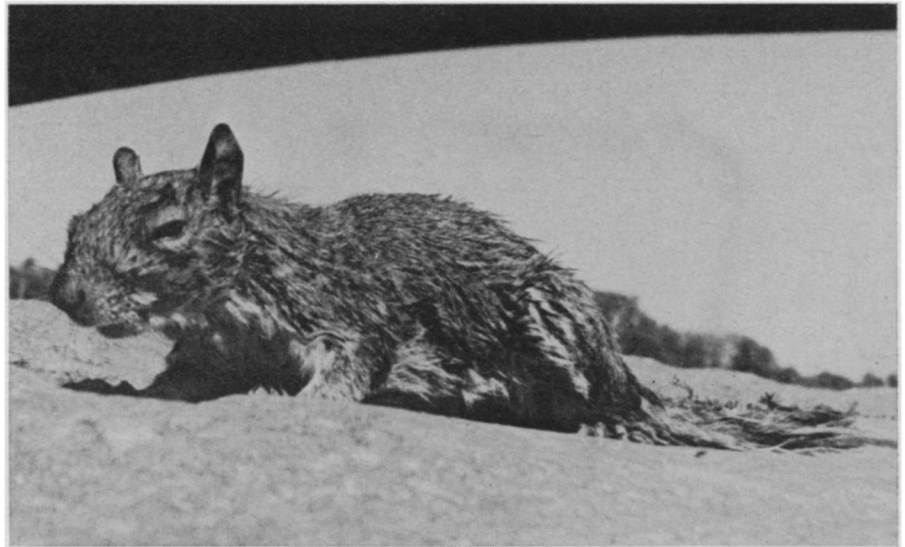
Few of this year's large squirrel population can be expected to survive the winter, because of the loss of most of their crop of winter food. Other of the region's animals, notably black bears, which depend on the same food crop, can also be expected to suffer heavily, and invade human campsites more vigorously.

An estimated 20 million gray squirrels are leaving their home territories and moving in all directions, apparently in a desperate search for food.

Normally strict landlubbers, gray squirrels have been reported swimming rivers and lakes and dozens have been found dead in the raceways of dams. Thousands are dying on the highways as they move from one area to another in search of acorns and beechnuts.

Robert Citron, director of the Smithsonian Institution's Center for Short-Lived Phenomena describes the situation as an eruption of an agitated squirrel population.

The area involved consists of the mountains of northwestern North Caro-



Bob Burchette/The Washington Post

Lemming-like, Appalachian squirrels are swimming lakes in search of food.

lina, all of Tennessee, northern Georgia and the Ozarks in southeast Missouri.

The action has been quite sudden, with areas that a few days earlier were teeming with squirrels suddenly emptied, and adjacent empty areas suddenly swarming.

At first, observers were puzzled by the fact that immediate hunger seemed to play no part in the mass movement. Walter Edmunson, district game protector for North Carolina's Western District, reports that there is ample food and that squirrels that died on the highway were "well fed, nice and fat, in good shape." Yet the animals were even entering buildings, evidence they were desperate for something.

The tentative explanation: In 1967 the mountain weather was good and there was a bumper crop of mast come fall. Mast is a collective term for beechnuts, acorns, walnuts and the like, the forest harvest on which squirrels absolutely depend in winter. Since they don't hibernate, they must have some kind of storable food to survive.

Because of the good mast crop, a large breeding population survived the winter in good condition and produced a bumper crop of young this year. Unfortunately this spring there was a late frost which caught the mast-bearing trees in bloom, and the crop was heavily damaged.

Throughout the summer the large population of squirrels fed on perishable summer food, knowing and caring



Wm. Bull

Black bears also face hunger.

nothing about the mast crop. When the first signs of coming winter awoke their nut-gathering instinct they found there were very few nuts to gather. Something akin to panic apparently set in.

The squirrels began moving out of their home territories, not driven by hunger but by an urge to find storable food. The urge is strong enough apparently to produce lemming-like determination to cross any obstacle, even the three mile width of Fontana Lake, N.C., a journey for which they are completely unequipped.

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No whispers from Standards

Evidence that the spring frost is the causative agent of the squirrel eruption comes from the fact that the phenomenon is confined to almost exactly the same area that was frost bitten. No eruption has been reported below about 34 degrees north latitude, roughly the front line during the spring cold snap.

Scattered reports north of the Carolina-Tennessee area indicate that there is unusual squirrel activity as far north as New York State. However, parts of the Blue Ridge in Virginia are reported to have a fairly good mast crop, with little evidence of squirrel movement.

Red squirrels are not involved in the movement. They live above the 3,000-foot level as a rule, where pines and not mast trees predominate, and they depend for winter food on pine seeds. Less sensitive to frost damage, the pine seed crop seems to be sufficient for the red squirrels' needs.

Ross Bender, chief naturalist of the Great Smoky Mountains National Park in the heart of the squirrel eruption, says mass squirrel movements have happened before. In two or three instances in the last decade, gray squirrel migrations have followed a mast crop failure, though he believes the current stirrings are larger.

Squirrels, Bender says, always follow a good mast crop with a population surge that is brought about in part by better breeding success. He says litters may average 5 to 7 young in a year of plenty, yet only one, two or three young in a lean year. Displacement tends to occur when a good year is followed closely by a lean year, giving the breeding regulatory mechanism too little time to adjust to lowered food supplies.

Gray squirrels are not the only animals which eat mast. Deer, turkeys, and wild boars are among those which dine on the forest harvest. Presumably they too are feeling the pinch, though since they eat many other kinds of food as well they are not in as narrow a strait as the squirrels.

Another forest denizen, the black bear, also loves mast. Bears don't hibernate any more than squirrels do, they simply sleep most of the time in cold weather. Thus they too need a food store, which they obtain in the form of a thick layer of fat before retiring to their dens. They stuff themselves on mast to build up this fat.

Bender says that there has been an increase in cabin break-ins by bears in the park, as well as increased attention to garbage cans and campers' chow packs. He attributes the increase in bear misdemeanor to the mast shortage, but says campers and picnickers should have little to worry about if they avoid smelly foods like bacon and keep other food in tight containers as far as possible out of the bears' reach.

Approximately 8 million people in the United States have a hearing problem, according to the Public Health Service. Half of these are 65 or older.

Some four million people have a hearing loss sufficient to require a hearing aid but do not have one. Of the 400,000 who buy hearing aids each year, more than 95 percent purchase from a hearing aid dealer; half without any prior medical advice.

And there are 300 to 400 different hearing aid models on the market, according to the Consumers Union, Mount Vernon, N.Y. Its president, Colston Warne, says people who need a hearing aid are awed by the high cost, bewildered by the variety of models available, and confused by the exaggerated and conflicting claims made for them. "All sorts of professional and quasiprofessionals," he says, "ranging from physicians certified as ear specialists to high-pressure salesmen, are ready and eager to advise the hard of hearing in their choice. Thus it is difficult for the consumer to reach a sound judgment."

While the consumer is befuddled for lack of information, the Veterans Administration, thanks to research done for it at the National Bureau of Standards, has all the information on hearing aids that a layman would need to select one intelligently. But the VA refuses to make a public disclosure of its data. Court action to force the VA to release its information is pending.

Meanwhile, the hearing aids industry and health experts disagree over what ought to be done.

Government sources cite as the major problem a lack of sufficient professional personnel to advise on hearing aid selection. There are about 2,000 audiologists, while 40,000 are needed, and 4,900 board-certified otolaryngologists, with 15,000 needed. Present-day speech and hearing facilities cannot accommodate much more than 10 percent of all persons buying hearing aids each year. Some 96 major cities in the U.S. do not have a single hearing aid center.

Surgeon General William Stewart lists possibilities for Federal action including model laws to cover the dispensing of the aids, and a program for testing hearing aids and audiometers and disclosing the information to the public.

Industry spokesmen, on the other hand, describe the present system for dispensing hearing aids as more than adequate. Samuel Lybarger, President of the Hearing Aid Industry Conference, the industry's trade association,

says, "We believe the U.S. Public Health Service figures testify to the success of the system. The service says 93 percent of hearing aid wearers who use their aids constantly are satisfied with the performance."

Lybarger points out that fitting someone for a hearing aid is still more of an art than a science. And he recommends getting competent medical advice before buying one.

Consumers Union's Warne feels that the real problem for the consumer in selecting a hearing aid is that there isn't enough information available to him to tell whether, for example, a \$100 version will do rather than the \$350 model. Warne says the Veterans Administration has rated all hearing aid brands based on test data supplied by the Bureau of Standards, and that the VA uses this data in selecting hearing aids for veterans. Warne claims the VA has steadfastly refused to make its data available to Consumers Union; nor will NBS release its data, having been pinched between consumers and industry before when it attempted to make public its evaluations of consumer products.

Warne asks, "By what authority should the Government be able to employ its scientific resources to aid one group of consumers—veterans—while denying these very resources to all others?"

A Consumers Union suit is pending in Federal court in the Southern District of New York to force the VA to make a public disclosure of its hearing aid evaluation data.

While such conservative quarters as the Wall Street Journal are in agreement with Consumers Union in its battle with the VA, Senator Clifford Hansen (R-Wyo.) is not. He says that if the VA disclosed its data, the action would set a precedent for the Government to disclose test data on any and all products. "The Federal Government would be looked upon more and more as the final arbiter in determining what is the best buy, and what best serves the purposes of the consumer," he says.

Senator Frank Church (D-Idaho), chairman of a subcommittee of the Senate Special Committee on Aging that recently looked into the hearing aid situation, says that "Regulation of industry is always a last resort after other measures fail. I think that basically we have a consumer education problem here. We should find out how the Federal Government—possibly working with private industry—can help the people get the facts they need."