

# Squirrely Science

Richard E. Ecker. Ph.D.

Many scientists from my generation were the beneficiaries of what became known in the 1950s as "the space race." The Soviet Union had taken an early lead in that race when they launched Sputnik, the first earth-orbiting satellite. The U. S. political establishment had reacted predictably by opening the floodgates of funding for scientific research. It really didn't make much difference what kinds of research you were doing--or how competent you were as a scientist. For a few years, easy money was there pretty much for the asking.

However, this golden age of governmental largesse lasted only about a decade. By the late 1960s research money became more scarce and a lot of second-rate scientists suddenly found themselves scurrying to find research projects that could justify continued funding. It was during one of those periods that I happened one day into the electronics lab at my own place of work. As I talked with the technician, a strange-looking piece of equipment on his workbench caught my eye. It was a lead bar, about six inches long with a hole in one face and a electric cable extending from one end. What attracted my attention was not the device itself but the multitude of tooth marks that now adorned the soft metal.

"What in the world is that?" I asked the technician.

"It's the detector for a Geiger counter," he responded. "At least it was before the squirrel tried to eat it for lunch."

"Squirrel? What squirrel?"

"Oh. You haven't heard about the squirrel experiment?"

"No. Tell me about it."

He went on to explain that one of our resident scientists, fearing for his job due to budget cutbacks, had decided to try his hand at ecology, a field in which research money was still fairly plentiful. He had seen this squirrel that lived in a tree along the walkway to the cafeteria and decided he would try to document when the animal was in its nest in the tree and when it was out.

To make possible this earth-shaking discovery, the scientist had chosen to monitor the little critter using radiation technology. First he trapped the animal and implanted a radiation source under its skin. Then he had the electronics lab design a detector that would fit into the hole in the tree, where it would be activated by the radiation source in the squirrel. Finally he attached the cable from the detector to a recording radiation counter at the base of the tree.

In principle, the experiment should have worked. Regrettably, however, the man had not counted on the squirrel's attraction to the lead detector. After successfully indicating a few visits of the animal to its hole, the signals stopped and never resumed. When the frustrated investigator finally retrieved the detector from the tree, he found it as it now appeared on the bench before us--well-chewed and non-functional.

"What are you going to do?" I asked, fascinated by both the stupidity of the experiment and its bizarre outcome.

"We're making him another detector," the electronics man explained. "This time he's going to attach it to the outside of the tree."

But, when I returned to the electronics lab a week or so later, I was surprised to discover on the workbench there a well-chewed lead detector with a cable attached.

"Is that the same device I saw in here last week?" I asked.

"Nope." the technician replied. "That's the new one we made for him."

"You mean the squirrel went out and chewed a hole in that thing while it was tied to the side of the tree?"

The electronics man shook his head.

"The experiment didn't work with the detector outside the hole," he intoned cheerlessly. "The radiation source in the squirrel was just too weak to be detected under those conditions."

"So?"

"So the idiot put it back in the hole and the squirrel ate it again."

"I should think you'd be happy about that. Surely he's going to abandon that ridiculous experiment now and let you get on to other things."

"No such luck. He captured the squirrel again and implanted a new radiation source--one that is powerful enough to be picked up by a detector outside the tree."

When I had heard nothing new about the project for a number of weeks, I assumed that the investigator had finally recorded the data he wanted and was preparing to enlighten the scientific world concerning "one-squirrel" ecology. But then, one day while I was on the phone to the electronics lab, the technician inquired, "Oh, by the way, did you hear what happened to the squirrel?"

"No. Tell me."

"It seems that our friend was a little too ambitious in selecting the size of the radiation source he implanted that second time."

"So? What happened?"

"It not only killed the squirrel, it killed the tree."