

Thrip-toeing through tulips

Bugs're his business — and yours, too, because world's fate hinges on insects

On the second day of autumn, at a point almost midway between the North Pole and the Equator, John D. Lattin broke through the shallow underbrush and found himself on the Portland Mall. He was on foot. But he was safe and dry and sure of what to look for.

"They're here, don't worry," he said. "It's just a little late in the season."

Another winter was coming, and the forest, of course, had been gone for more than 100 years. Brickwork and pavement had covered the virgin soil. Buildings thrived, and buses rumbled through. But Jack Lattin, insect scientist, soon spotted some bugs alive.

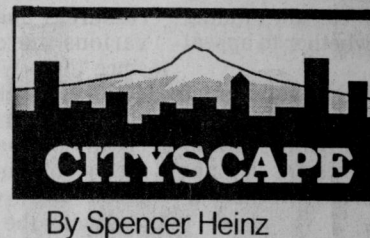
These were aphids in a sidewalk planter near Standard Insurance Center, 900 S.W. Fifth Ave. He obtained a magnifying glass from his pocket, squeezed in close and studied inhabitants of a leafside colony the size of a postage stamp.

"It's a pretty hazardous life here," he said. "A couple of them have been parasitized by wasps."

Despite those early deaths, he did not fear for the species. He said it had been calculated that a single female aphid in one year could produce progeny totaling 823 million tons — about 10 times the weight of all the people in China.

"The question is, why then are we not up to our armpits in aphids?" he said. "It's because other insects eat them."

They also die because of killer frosts, unfavorable winds and bus tires coming through, and precise-



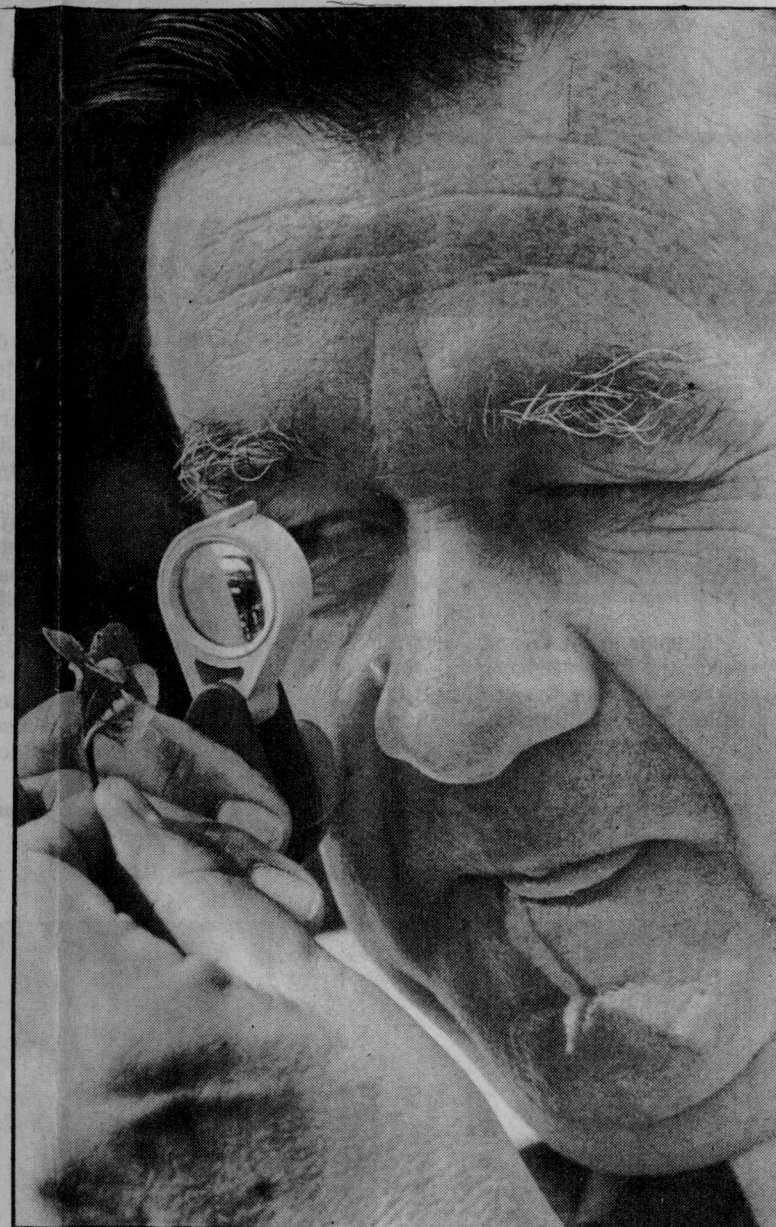
ly because of that delicate balance of nature, there is room for people on Earth. Most of those on the mall might notice only buses and buildings, but an entomologist will sense a finer texture. Nestled in the cracks are the organic levers of the world.

"If you want to connect the activities of insects and human welfare, it's exceedingly easy to do," Lattin said, and he referred to disasters in some countries around the world. "You can lose over 90 percent of the grain that's stored to pests. In that case, it may mean the difference between life and death."

Pests: Lattin uses the word only in a shorthand way. It is applied by humans on behalf of humans. In that limited ecological context, some insects are "pests," some are "neutral" and others are "beneficial." Which is which depends upon human perceptions of the moment.

"What's a pest is determined by our definition, not theirs," he said.

Lattin, 61, is a professor of entomology at Oregon State University. He has studied insects for 30 years. Among other activities, he is curator of OSU's Systematic Entomology Laboratory, which contains



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more than 2.5 million specimens representing at least 50,000 insect species from the Northwest and North America.

His continuing sense of wonderment at the diversity of insects takes him on frequent field trips, and on that particular autumn day, he found himself on the transit mall. And why not? Like people, some bugs live in the country while others get by in the city. The mes-

sage is that insects are almost everywhere whether people notice or not. And if a species disappears or exhibits certain changes, that might signal problems for higher forms of life.

"Insects are pretty sensitive indicators of what's going on around them," Lattin said.

His tools include vials for taking specimens, a stick to jiggle the leaves of trees, a rubberized nylon

Professor John D. Lattin, an entomologist with Oregon State University, examines aphids on leaves obtained during an excursion along the downtown Portland Mall.

"beating sheet" for catching what falls out and an "aspirator" — a device with tubes that enables him to suck the fallen bugs into a tiny jar. When he built his first aspirator many years ago, he forgot to cover the opening to the sucking tube with a screen, and the bugs arrived in his mouth. But now he knows the technique, and he recalled a springtime outing along the Oregon coast: "Off of one branch I got 285 bugs. You've got to really move fast."

While not so plentiful as in the woods, the existence of insects in a well-paved city was not limited to trees and planters. As he walked through the grass of Terry D. Schunk Plaza, leafhoppers zinged across his shoes. On a lodgepole pine tree, he found a whitish dot of an insect that feeds on needle juices. Back on the mall again, he inspected bumpers and license plates with little splat marks on them.

"There's some bits and pieces," he said. "It's a fly. That's the best I can tell you. He's had a hard life."

By the end of the afternoon, he had taken several specimens. Among them were the aphids. At this point, the whole colony still weighed only a small fraction of an ounce, as opposed to millions of tons, and he placed it easily into a vial and securely fastened the lid.

That was it for them.

The balance of nature was nothing to fool with.

But an entomologist on the mall had possibly saved the world.