Penn State Graduate

Students' Projects

Get Lift From NASA

Penn State's College of Agricul-

tural Sciences are finding "out of

this world" support for their ter-

restrial research projects. The stu-

dents have been awarded NASA

Space Grant fellowships for the

in the world does your research

have to do with NASA?'," says

Charles Ruffner, graduate student

in forest resources. Ruffner is

studying how humans affect the

mixed oak forests of Pennsylvani-

a's Allegheny Plateau by examin-

ing long-term climate and vegeta-

tion changes. These changes are of

interest to NASA with respect to

current trends in global warming

Other students receiving grants

·Carter Miller, graduate student

in horticulture, is examining how

fertilizer use can be minimized for

efficiency while also improving

the ability of plants to grow and

dent in plant physiology, is study-

ing underground pests that feed on

tree roots. She is focusing her

research on tree species that are

important to Pennsylvania's eco-

nomy and ecology, such as apple

trees. She also is examining the

protective chemicals released by

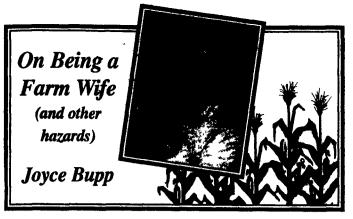
·Christina Wells, graduate stu-

react to environmental stresses.

and pollution, Ruffner says.

"I often get the question, 'What

1997-1998 academic year.



This is war.

When it comes to co-existing with animals, we have enjoyed our years here on the farm relatively free of the people-animal conflicts that we periodically hear or read about elsewhere.

But, this is war.

Unlike many parts of the state, we are not plaqued with herds of deer maurauding our young corn or gobbling up our alfalfa. (Thank goodness, because there isn't much of either in this almost rainless summer.) Nor have we ever—unlike our son when he spent a year in a mountain valley house during his last year at Penn State—watched black bears visit our fields and flatten large patches of corn.

And, only one pair of Canada geese settles here at a time. And they have always remained at the pond or around the meadow, and then departed as soon as their gosling were raised and airborne, thus posing no problem of any sort.

Rabbits are a bit more plentiful this year than in some past, perhaps because our burdgeoning fox population of recent years seems to have been brought under control by a local fur trapper. The relatively few bunnies we see hopping around the fields, and occasionally up through the back yard, remain just novel enough to be a pleasure to watch.

Squirrels, which once only

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FARMS — FEED MILLS

could been seen along the edge of the neighborhood wooded housing development, did move into the backyard after the extremely severe/blizzard-prone winter of a few years back. While they gobble up sunflower seed from the feeders by the pawsful, they are still too few in number to be a problem.

We are grateful that there are no herds of elephants dancing across our safari grounds, no alligators have ever been spotted hulking around the pond, and we've never had an escaped boa constrictor turn up in the bathroom or gobble up one of our pets (Thank goodness!). Recent news blurbs report a rash of adventurous boa constrictors lately, it seems.

But now, this is war. See, there's this matter of the garden groundhogs.

Our groundhog population has exploded into an army the last year or two, possibly somewhat a result of few foxes. A sharp-shooter neighbor keeps his hunting skills honed on these rodents which can chew up a quarter-acre of soybeans each and dig tractor-

jarring holes quicker than a backhoe operator running in high gear. We've spent considerable time and money on elimination attempts of these crop-gobbling nests.

But all our efforts have come to naught around the garden. And while the resident woodchucks nibbled my peas last year, they have now taken on the really good stuff. We suspect it has to do with the dryness of their normal grazing grounds, but every tomato that began to turn bright orange turned up with a big hole chewed out of its side. Green tomatoes weren't off limits, either. One day I draped the back half of the tomato row in plastic netting. The holeytomatoes disappeared.

For about a week. Then an occasional chewed tomato turned up, along the edges of a stalk or a spot not covered by the nylon netting. Still, I could live with sharing a few, and figured I'd won that battle.

But his is REALLY war.

Last week, I found the first ripe cantaloupe in the patch I've carefully tended and handwatered, a nice, big, fat, juicy one. With half of it gone and telltale teeth marks scalloping the remains just as neatly as if it had been decoratively carved. After the third chewed cantaloupe, I draped more yards of net wrap around the melon patch. When I found the fourth, I threatened to go ballistic. Unfortunately, I've never learned sharpshooting and don't have time to go pistol-patrolling through the garden round-the-clock.

This is war.

D'ya suppose any of those adventurous boa constrictors might have a yen for fresh groundhog? UNIVERSITY PARK (Centre tree roots to defend against such Co.) — Four graduate students in pests.

•Michael Demchik, a graduate student in forest resources, is observing the decline of Northern Red Oak in southwestern Pennsylvania. His project focuses on how soil toxicity from acid rain affects the decline. He also is examining how tree regeneration is affected by limiting deer access to oak seeds and seedlings, and by adding agents to soil to offset acid rain deposits and improve soil chemistry.

"The stipend helps to support and enable students to pursue research," says Geraldine Russell, assistant director of the Pennsylvania Space Grant Consortium, which is based at Penn State. "The funds can be used to defray the cost of travel, child care or other needs."

NASA provides a total of \$100,000 a year in support for the fellowship program, which began in 1989. Of 10 new grants being awarded this year, two were available to all University students meeting the criteria and the other eight were available to students in the four technical colleges — the Eberly College of Science, the College of Agriculture Sciences, the College of Engineering and the College of Earth and Mineral Sciences

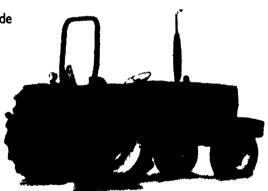
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