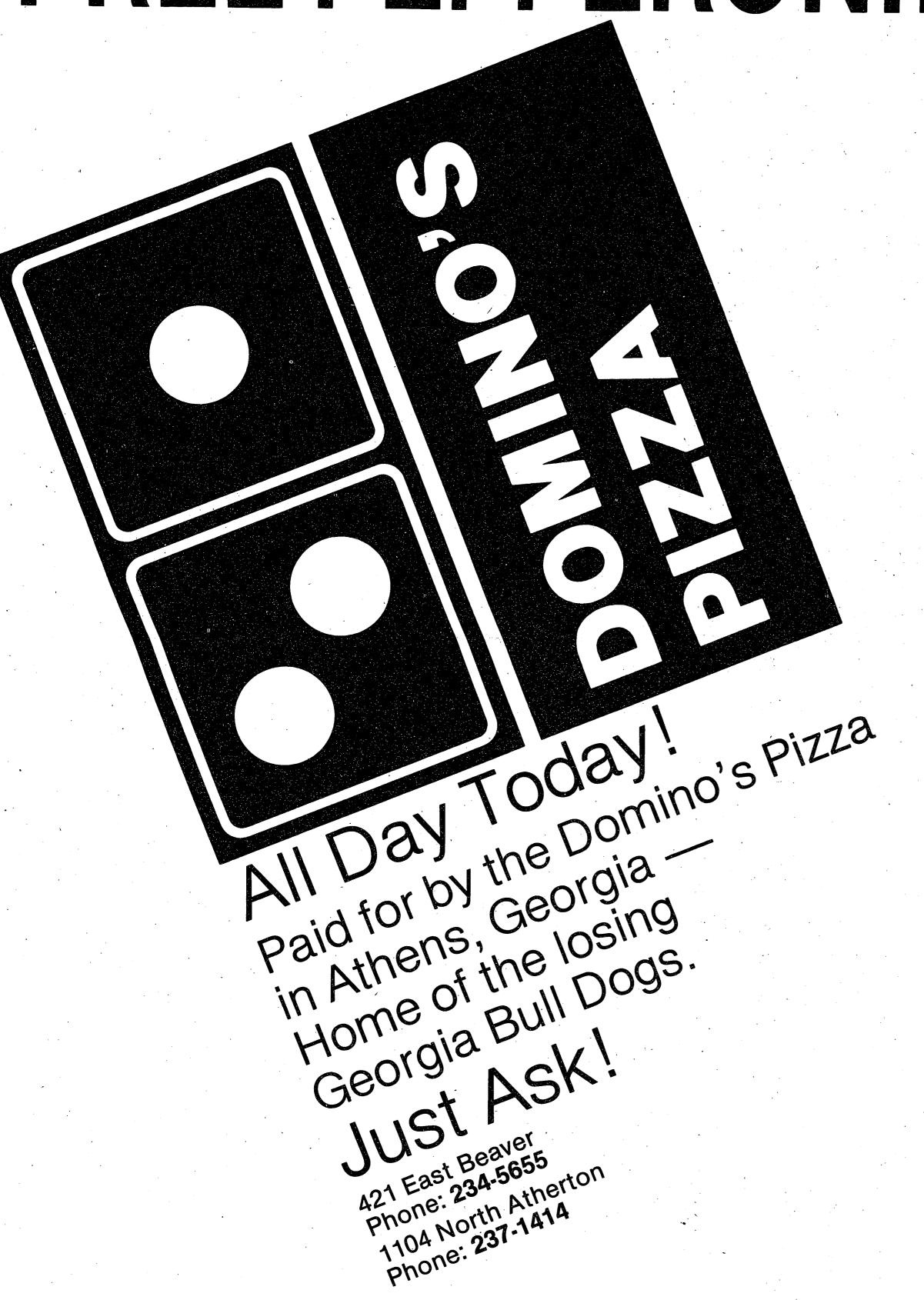
FREDEPPERONII



Acid rainfall level high in Centre County area

Collegian Staff Writer

In the past several years, the term "acid rain" has gone from being scientific jargon to one of today's most hotly debated environmental issues.

Industry, sportsmen, farmers, researchers and government officials have varying opinions of what - if anything - should be done about it. And it looks as if those searching for some agreement as to what exactly should be done are in for a long wait.

James Lynch, leader of a project that monitors acidity of rainfall for the Pennsylvania Department of Environmental Resources, said while all of state receives acid rain, most acidic precipitation falls on the region stretching from the southwest corner of the state to the central portion, which includes State College.

The sources of acid precipitation, many experts believe are the pollutants sulfur dioxide - from the burning of coal and other fuels in utility plants and smelters - and nitrogen oxides from automobile exhaust.

Through a series of complex chemical reactions these pollutants combine with atmospheric moisture to form Lynch said rain received in this part of the state is more

acidic than any other part of the United States, with a pH The lower the pH, the more acidic the rain. A pH of 7 is neutral. A pH of 5.6 is considered normal for rain.

monitors rainfall for that department, agreed that the pH of the region's rain is the lowest in the nation, but he pointed out that the effect of acid rain depends on the local

The low pH rain doesn't affect the Centre Region's surface waters as much as other areas because the limestone and dolomite deposits in the valleys neutralize most of it, Holian said.

But the Poconos and New York's Adirondacks are not as fortunate. Their lakes and streams are acidic enough to kill many kinds of fish. While central Pennsylvania lakes are buffered against large pH drops, streams have shown pH values between

5.0 and 5.5, with a few in the 4s, said Dean Arnold, leader of the Cooperative Fish and Wildlife Research Unit at the University. "Our trout streams are in trouble," he said.

Different fish species have different pH limits in which hey can survive, said Arnold, who has been involved in acid rain research since 1974. But even if the water is not acidic enough to kill the fish,

it can affect their growth and reproduction. Tests done in laboratories may show a species resistant to a certain pH level, Arnold said, but when put into a stream of the same pH it may be unable to reproduce and

the population dies out. Recent research suggests that in acid rain environments, some trees grow more slowly and many plants

hall of the Music Building.

The School of Music will present

• The Graduate Student Associa-

tion will sponsor happy hours for

graduates and guests from 4:30 to 6

• The Office of Student Activities

will sponsor an eight-ball tournament

at noon tomorrow in the HUB Billiard

Room. Entry fee is \$2 and the first 32

entrants will receive a free T-shirt.

The first place winner will be eligible

to represent Penn State at the region-

damaging in crops such as lettuce, where the leaf is

soybeans raised in acidic conditions was shown to de-More tests are needed to determine the long-term effects on plants, he said.

Acid rain can also adversely affect drinking water by leaching harmful metal ions from the soil and pipes and carrying them into the water supply, Arnold said. These metal ions, such as copper, lead and aluminum, become more soluble in acidic water, enabling them to travel with the water.

Rosa de Pena, University professor of meteorology, said 70 percent of the acid precipitation is a result of sulfur dioxide, while 30 percent comes from nitric oxides. The pollutants can be carried hundreds of miles before falling to the earth. De Pena, Holian and others in the meteorology department are working on techniques that would determine where the acid rain falling in one area

picked up its pollutants. Holian said that sulfur dioxide, which has an atmospheric residence of three to five days, could come from as far as 700 miles away — all the way from St. Louis, for

Lynch said the major pollutant for this area is probably the Ohio River Valley, with some additional pollutants coming from local industries. He added, however, that "there is little concrete data -

Building. Bring your sneakers.

• The Penn State Thespians will

hold auditions and crew sign-up for

their production of the childrens'

show "Playground" from 7 to 10

Sunday night in Schwab Auditorium.

Roles are available for five women

Yachad, Penn State Friends of

Israel, will show a slide show on the

physical landscape of Jerusalem at

Dry deposition, the falling to earth of sulfur dioxide and important, Arnold said. Also, the nutrient content of nitrogen oxides as dry particles, was once thought to be insignificant but is now seen as a substantial contributor to the problem. Dennis Thomson, University professor of meteorology,

said dry deposition of pollutants can amount to anywhere from one-tenth to four times as much as acid rain. Dry deposition may pose a more serious threat to plants.

When acid rain falls on a plant at the beginning of a storm, it is usually washed off by more neutral rain later in the storm. Dry deposition, however, can stick to a plant leaf for days, the longer exposure causing greater dam-

"But this is a matter of some controversy," he said adding that more research is needed. Some question exists to whether the pH of rainfall has been decreasing in the recent past. Lack of long-term data prevents researchers from determining trends. De Pena said published data suggests a decrease in the pH of precipitation since the 1950s, but the data is not

She said the acid rain problem is serious enough to warrant trying to reduce pollution levels, "but how to do that is another problem.'

Until more research is done, Thomson said it will be difficult to give industries guidelines on decreasing pollut-

Thompson. Officers were unable to

• Fred Burns, supervisor of pre-

sentation services, 1 Willard, told

University police yesterday that an

overhead projector was missing from

101 HUB during Fall Term. He also

reported a slide projector missing

from 105 Sackett since Dec. 16. The

value of the missing items is esti-

• James Grace, 108 Ferguson, told

University police Wednesday that his

mated at \$660, police said.

locate the person, police said.

collegian notes

• The Penn State Thespians will The canoe division of the Penn meet at 1:30 Sunday afternoon in 307 State Outing Club will have a pool session from noon to 2 Sunday afternoon in McCoy Natatorium. Begin-

tonight and 5 Sunday afternoon at 103 E. Hamilton Ave. • The student counselors are available for general information, personal counseling or referral advice. Stop by 135 Boucke or call 863-2020 4 p.m. to midnight Monday

through Friday or noon to 8 p.m.

Allegheny

Women's Center

related counseling

Write a letter

Mon-Fri 9-5 Sat 10-4 Call collect 412-362-2920

abortions

free pregnancy and

Saturday and Sunday.

• The Krishna Yoga Society will

hold a free vegetarian feast at 7

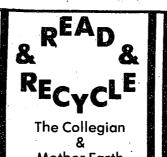
• Chi Alpha Christian Fellowship will meet at 7:30 tonight in the Eisenhower Chapel loft.

• The State College Area Music Guild will present a free concert at 2:30 Sunday afternoon in the First Presbyterian Church, Bellefonte,

• The Badminton Club will meet to

discuss the upcoming match with Mansfield State at noon Sunday in 126 Any Golden Key member inter-

ested in helping with the College Bowl please leave your name and phone number at the HUB Desk



Attitude Adjustment Hours 4-7pm

with Dave Parry

BRICKHOUSE TAVERN

The Bobcat

Saturday Night

Thank You.

Traditional Christmas Dinner Friday, January 7th at 7:30 p.m. Anyone interested call: Joe 23
Linda 23
Khrystos Razhdayetsa! 237-6060 238-4243

Slavite Yoho.

The Penn State Ukrainian Club

al competition. Entries received after 4:30 Sunday afternoon at the HUB

police log

conclusive.

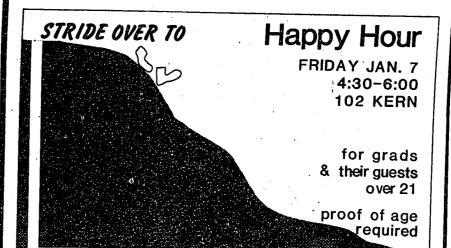
 The mountaineering division of The State College Police Departorganist Barbara Harbach-George in the Penn State Outing Club will hold a ment reported Wednesday that Midrecital at 8:30 tonight in the recital fixed rope climbing and rappelling State Bank, 243 E. College Ave., reclass at noon Sunday in 8 Intramural ceived forged checks totaling \$900 in November and December. An investigation is continuing, police said.

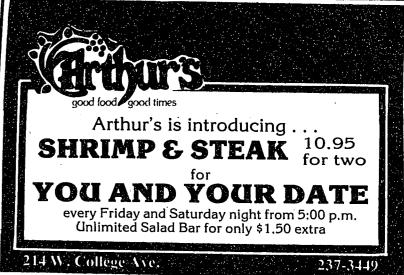
> • State College police reported yesterday that a coat, books and calculator owned by Vinh Long, Snyder Hall, were missing from 159 S. Garner St. The value of the missing items is estimated at \$125, police

briefcase and its contents were miss • Katy Gavaghan, 263 Thompson, ing from his office. The value of the told University Police Services yes- missing items is estimated at \$110, terday that an unescorted male was police said. cracking a whip on the second floor of

Attention Liberal Arts Students We need student volunteers January 25, 26, 27 for the Liberal Arts College Phon-a-thon

call: 865-2545 for info 11205







kinko's copies

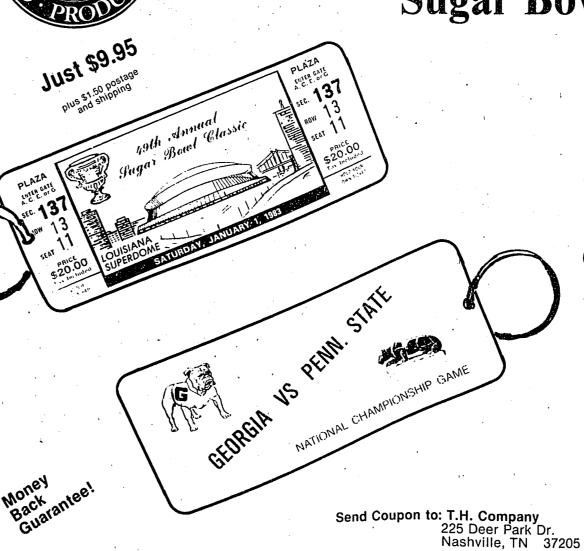
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