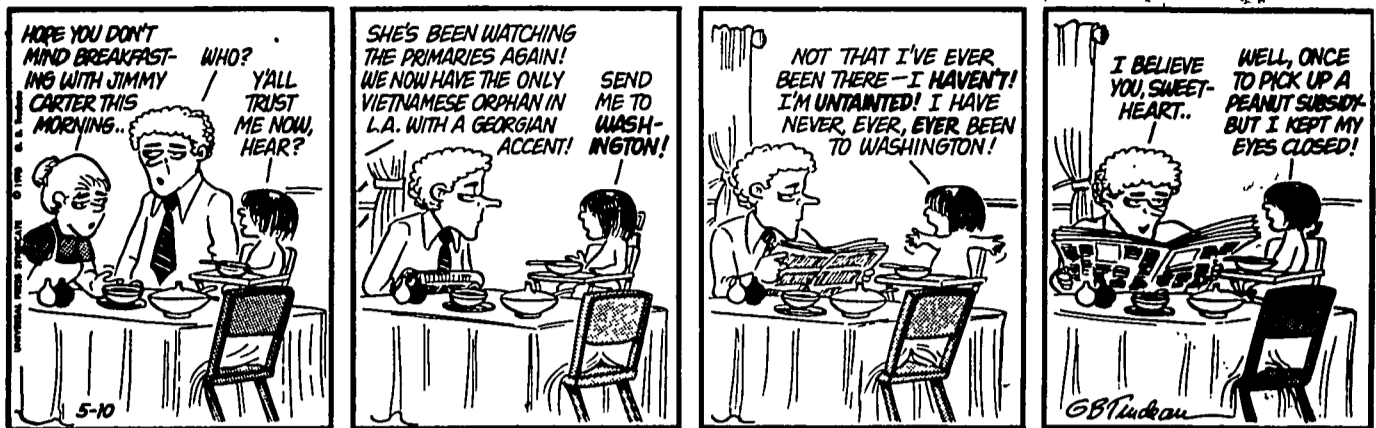


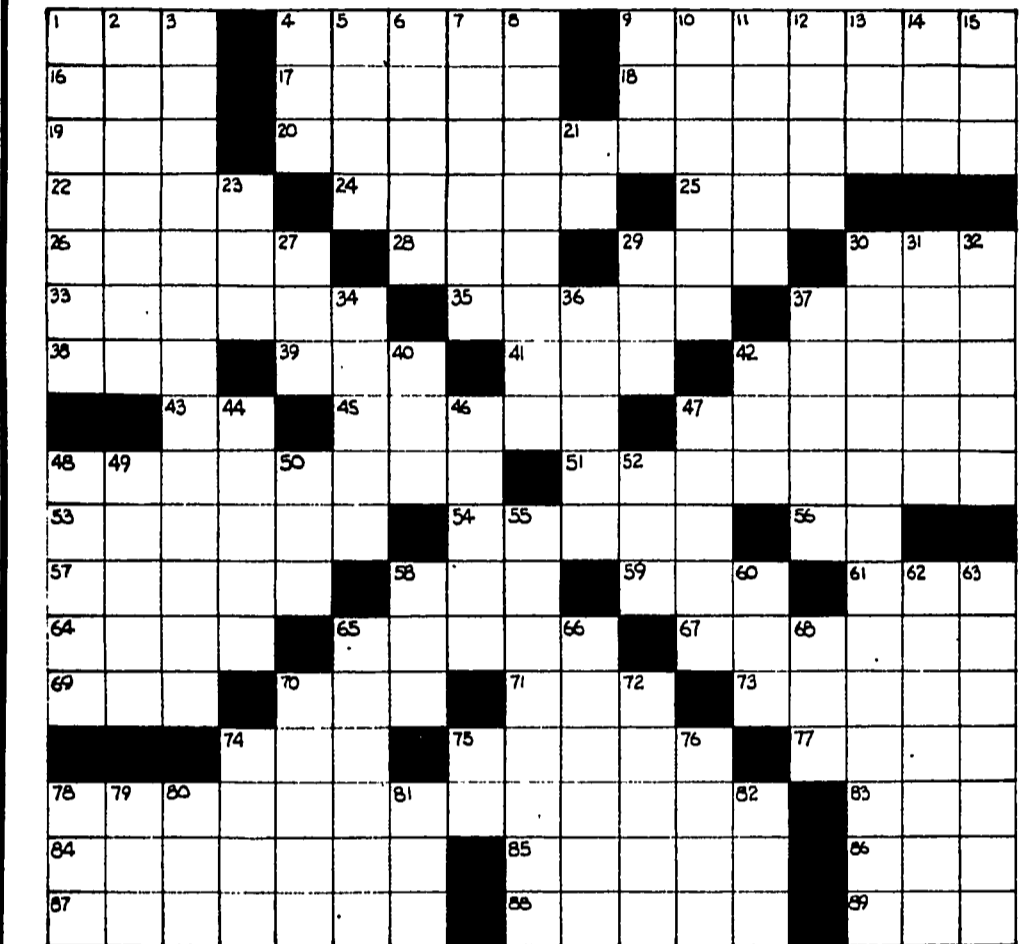
DOONESBURY



COMPLIMENTS OF THE PENN STATE BOOKSTORE, McALLISTER BUILDING AND ON THE GROUND FLOOR OF THE HUB

ROCK 'N' ROLL

By Mike Shenk



- DOWN
- 1 In a wide manner
 - 2 Plane attack
 - 3 One of the National Parks
 - 4 Make a mistake
 - 5 People born in late July
 - 6 Bargains
 - 7 Stake
 - 8 Irish symbol
 - 9 Evil
 - 10 Illinois city
 - 11 Have faith in
 - 12 Head; French
 - 13 Superlative suffix
 - 14 Highway; abbr
 - 15 Georgian or Ukrainian; abbr
 - 16 Halifax's province; abbr
 - 21 Weep
 - 22 Johnnie
 - 23 Caught you!
 - 24 Seats for grannies
 - 31 One who makes mistakes
 - 32 Change, as the Constitution
 - 34 Mechanical man
 - 35 — amie
 - 36 Strips of land
 - 40 City near Washington, D.C.; abbr
 - 42 Elegant; abbr
 - 44 Widows in cards
 - 46 Seaweed, for example
 - 47 Performed on stage
 - 48 Archie Bunker, for one
 - 49 — from the teacher
 - 50 The pope and followers; abbr
 - 52 Paddle
 - 53 Taking of attendance
 - 55 Resort
 - 60 — Maha!
 - 62 Orange flower oils
 - 63 Fulle
 - 65 Ancient Greek city
 - 66 Across —; in Europe
 - 68 Aging horse
 - 70 Foolish song
 - 74 — Mater
 - 75 Indo-Chinese language
 - 76 Hawaiian goose
 - 78 Mortar beater
 - 79 — Clear Day
 - 81 Parisian pronoun
 - 82 Fishing or lightning
- (answers to page 4 puzzle)

- ACROSS
- 1 Saloon
 - 4 Lancaster and lioness
 - 9 Sprints bread
 - 16 River; Spanish
 - 17 Affair
 - 18 Takes into custody
 - 19 Whale
 - 20 Meal accompanier
 - 22 Noah's vessel and others
 - 24 Sows together
 - 25 Enzyme
 - 26 — night
 - 28 Knight's title
 - 29 Hill dweller
 - 30 American caricaturist
 - 33 Little
 - 35 Coffee type
 - 37 Residence hall
 - 38 The middle of "lay down"
 - 39 Constrictor
 - 41 Oriental tea
 - 42 Bolivian capital
 - 43 You and I
 - 45 Stop a car
 - 47 Arouse
 - 48 Supply of money
 - 51 Puffin
 - 53 Untouched
 - 54 Mighty
 - 56 Tin, to a chemist
 - 57 Tin-can eaters
 - 58 — Paulo
 - 59 Prepare flax
 - 61 Oxlike antelope
 - 64 Elevator inventor
 - 65 German wheat
 - 67 Waitzes
 - 69 Decimal base
 - 70 Synonym for CUM; abbr
 - 71 College degree
 - 72 Years; German
 - 74 — carte
 - 75 — the hole
 - 77 Prison, in Old England
 - 78 Coney Island feature
 - 83 Isle; French
 - 84 Having life
 - 85 "— man put asunder"
 - 86 Rise; Old English
 - 87 Woody Allen movie
 - 88 Placed down
 - 89 Snake noise

Chemical may snuff smog

By FRANK BRODY for the Collegian

The days of photochemical smog may soon be over. No longer will you have to feel guilty about polluting the air with your car and no longer will massive pollution conditions hang like a life-choking noose over major American cities.

Here in the clean, quiet environment of Happy Valley, Julian Hecklen, chemistry professor and a member of the Center for Air Environment Studies group at the University, has come up with a bona fide cure for smog.

The new "miracle" drug is diethylhydroxylamine, DEHA for short. "We want to release DEHA from helicopters and point sources on highways," Hecklen said. "If we can fill the air with DEHA, we can keep the smog away."

So far, DEHA has shown no detrimental environmental effects and may prove to be a major breakthrough in air pollution control.

Hecklen explains that photochemical smog is set off when hydrocarbons and nitrogen oxides that are released by cars, trucks, factories and other sources react with sunlight. Reactive molecules are then created, called "free radicals."

Having an odd number of electrons, a free radical is unbalanced; it seeks out other molecules and reacts with them, forming new radicals. The new radicals in turn seek other molecules and a chemical chain reaction is started that soon engulfs an entire metropolitan area in harmful fumes.

DEHA stops this chain reaction by effectively removing these free radicals. In the process, DEHA produces two chemical by-products, acetaldehyde and nitroethane.

Acetaldehyde is harmful, but the amount produced by DEHA is much less than the amount normally present in the

photochemical smog that DEHA eliminates. Using DEHA, then, would result in an overall reduction of acetaldehyde in the air.

The other by-product, nitroethane, is harmless.

DEHA also destroys ozone, another ingredient of photochemical smog.

Hecklen said that DEHA would not affect the protective ozone layer in the upper atmosphere. It could also be controlled so as not to cut into the normally required level of ozone in the lower atmosphere, he said.

Hecklen said that DEHA has definite advantages over pollution control devices now being put on cars.

First, it's about 100 times cheaper — whereas it would cost \$30 to operate all cars in the United States with anti-pollution devices, spreading DEHA into the air would cost only about \$400 million a year.

Also, DEHA would not have to be used across the whole country — it could be concentrated where the smog is concentrated, in the big cities. DEHA gets rid of photochemical smog from all sources, not just cars.

In addition, car devices emit sulfuric acid and "may actually do more harm than good," according to Hecklen.

He further claimed that DEHA will reduce the formation of sulfuric acid from sulfur dioxide that's already in the air.

DEHA could be put into use almost immediately, whereas it would take 10 years to outfit all American cars with anti-pollution devices. DEHA is odorless and colorless when used in the proper concentrations. Hecklen explained that when the concentration of DEHA starts getting too high, you begin to smell it — "It's like a built-in safety device, warning you that there's too much in the air."

Tests are currently being made to

determine possible biological side effects of DEHA. We've been exposing rats to the stuff for nine months now, at dosages 200 times what we'd be using to de-pollute big cities," Hecklen said. "They've been given 500 years worth of exposure to it and still we see no significant problems."

The University of Texas Medical Center is now conducting its own tests on DEHA, trying to find out what genetic mutations it might cause. Hecklen said he'll know the outcome of these tests in about a month.

Meanwhile, Hecklen has to worry about the Environmental Protection Agency (EPA), which isn't too enthusiastic about his discovery. The EPA is concerned that DEHA doesn't get rid of carbon monoxide, an active smog ingredient.

According to Hecklen, though, the carbon monoxide problem is really a "phony issue."

"Carbon monoxide isn't the main polluting agent," he said. "In fact, the big coastal cities have almost completely licked the carbon monoxide problem already."

The EPA is also worried about the dispersion characteristics of the chemical. But Hecklen claimed that DEHA will not continuously build up to toxic levels.

"When we find that concentrations are getting high, we'll just quit pumping it out," Hecklen said.

Hecklen is concerned about the public's reaction to having DEHA sprayed into the air. In southern California, for instance, many people refuse to allow their water to be fluoridated. He says he wonders how they could be convinced to let DEHA infiltrate their air.

"Hopefully, Hecklen said, "they'll realize that air pollution is a more serious threat than tooth decay."

WPSX to televise graduation

WPSX-TV, Channel 3, will telecast the Spring Term Commencement exercises. The delayed telecast is scheduled for approximately 10:15 p.m. May 29.

Graduation will take place at 10:30 a.m. May 29, in Beaver Stadium. The speaker will be Sarah Caldwell, artistic director of the opera company of Boston.

There will be a picnic for Blue Band members from 3:30 p.m. to dusk on May 12 at Sunset Park. Members should hand in \$1 to 263 Chambers before 5 p.m. today.

The Concert White Band will present an outdoor pops concert at 6:30 p.m. today in the Herman G. Fisher Plaza.

Arts exhibits from the "Saturday Morning Art School," will be on display from 9 a.m. to 8 p.m. from today until May 13 at the Schlow Memorial Library. The school is taught by students in Art Education 489.

Joanne Farr, sex therapist, will speak on "Body Image" at 8 tonight in Irvin Hall lounge.

The Penn State Folk Festival is taking place all week. Today's events are a women's workshop from 2 to 5 p.m. in the HUB Ballroom and a coffeehouse from 8:30 to 10:30 p.m. also in the HUB Ballroom.

The Free U needs summer course leaders. Anyone interested come to 223 HUB or call 863-0038.

There will be a meeting for anyone interested in promoting the People's Bicentennial Commission July 4th March at 9 tonight across from the HUB desk.

Per F. Scholander, professor of physiology at the University of California at San Diego, will present a seminar, "The State of Water in Osmotic Pressure," at 4 p.m. today in 101 Althouse lab.

A fashion show of summer styles, "Bikini Season Is Just Around The Corner," will take place at noon today in Kern lobby.

Alpha Phi Omega Fraternity will meet at 7 tonight in 304 Boucke. A short Board of Review meeting will follow.

The Folklore Society will meet at 7 tonight in 324 HUB.

Eco-Action's final meeting of the term will feature a film, "John Muir's High Sierras," at 7:30 tonight in 319 Boucke. Elections and petition day organization will follow.

Many, many thanks to the Brothers and Pledges of TEΦ for the greatest Spring Week we've ever had. Special thanks to the little sisters and J.A.R.

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Student Teaching Forum

Tuesday, May 11, 1976
8:00 - 9:30 P.M.
in rooms 320, 321, 322 HUB

(Come rap with veterans of the Winter '76 Student Teaching experience.)

ARHS

Information

BEFORE YOU LEAVE!

Refrigerators: your chances of obtaining a refrigerator for next year will be greatly enhanced if you submit a refrigerator request card before the end of spring term.

Checking Out: Be sure you check out before you leave for the summer. Your roommate cannot check out for you. Also, be sure to leave your summer address on the check-out sheet so that any incoming mail can be promptly forwarded to you.

Graduating?: Seniors needing living and storage accommodations during the week before graduation can make such arrangements with their housing supervisor.

If you have any questions while you're away, call or write ARHS.

Have a nice summer!

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