

# A&M Meteorologists' Worry Is Still Houston's Dirty Air

Study of Houston's air pollutants and their distribution by Texas A&M scientists will continue into 1970 under a \$53,028 Public Health Service grant.

Directed by A&M meteorology professor John F. Griffiths, the investigation has been in progress since mid-1967.

He said third-year work will emphasize the microscale as more immediately applicable to

the Houston area. Previous studies were on the mesoscale, a meteorological term used in reference to an area 10 to 100 miles in diameter.

"We will look more during the coming year at microscale problems, such as carbon monoxide from automobile exhausts, its buildup and dispersion near downtown freeways," Griffiths said.

The time and space study of atmospheric pollutants is perfecting suitable diffusion equations that can be used in air pollution studies for any area.

Development of the equation will enable scientists to insert meteorological information and pollution source strength to determine where the pollutant goes and its concentration at various levels, ground and aloft.

Samples to determine types and strengths of pollutants are taken in the air by specially-equipped helicopter. City climate, weather conditions, nature and source of pollutants and topography are taken into account in using the model equation.

Working with Griffiths during the current year will be a visiting professor from England and a new faculty member, Dr. Dennis Driscoll. He is coming to A&M following completion of doctoral studies at the University of Wisconsin.

Prof. Gordon Manley is professor emeritus in environmental science at England's University of Lancaster.

Griffiths returned to the work earlier this year from faculty development leave in Nairobi, Kenya, for work on a book covering East Africa climate. Filling as principal investigator during his absence was Dr. Darryl Randerson. Originally from Houston, he derived the model equation.

## A&M's Microform Unknown To Most

Few users of Texas A&M's library know there is a ninth level in the stacks, in a 17-by-22 foot room in the third floor Special Collections.

The library's microform collection is located there.

"If all the material contained in this collection were housed by the library in original printed form, it would probably require more space than one of the new building's main floors provides," commented Jack Smith, assistant director for public services.

Printed material reproduced photographically on microfilm, microfiche, microcard and microprint are filed in the collection.

Not currently listed in the public catalogue on the first floor, the materials are available on a "help yourself" basis during all hours the library is open. Fifteen readers in a nearby room enlarge images to readable size.

Special collections is open only from 8 a.m. to 5 p.m., explained Mrs. Evelyn King, special collections librarian.

Microforms include 130 newspaper titles, including the London Times from 1785, Houston Post since Aug. 19, 1880; Dallas Morning News since the turn of the century, the Wall Street Journal, Christian Science Monitor, New York Times and the

old Houston Telegraph and Texas Register, the state's first important newspaper.

Back issues of the Battalion and Bryan Daily Eagle also are microfilmed for reference.

"The library couldn't have some of these publications except in microform," Mrs. King noted, pointing to Spanish Archives of New Mexico (1621 to 1821), Bexar Archives of the University of Texas (1730 to 1803), some "Presidential Papers" guided and indexed in the collection and a few early copies of the Mexican Citizen, published in La Villa de Austin in 1831.

"Besides space savings and having materials on hand not obtainable by the library in any other way, this form of holding is more durable," the special collections librarian said.

Newspapers, printed on poor quality paper, quickly become brittle. Bindings of regular hardcover books deteriorate and must be redone occasionally. Savings in periodicals binding is considerable. The library division has Life, Saturday Review and Ebony on film.

Cost of microfilmed material is reasonable and projection-type readers are relatively trouble free, Mrs. King added.

## THE BATTALION



NEW ADDITION

Researchers started moving into the new addition to A&M's Nuclear Science Center Monday. The new addition is one-story, split-level, with two large laboratories on the first level and three chemical labs, one counting lab, two offices and a conference room on the second level.

## 'Head-Hunting' On Campuses

"Head-hunting" flourished in the face of college campus disorders in 1968-69.

Recruiting for college graduates at the bachelor's degree level rose to an all-time high during the period, according to Robert C.

Reese, Texas A&M placement director.

A&M is one of 135 colleges and universities which annually participate in the College Placement Council's Salary Survey. Bachelor offers reported in the

CPC Survey went up to 11 per cent over last year and nine per cent over 1966-67, the former peak year, Reese reported. Volume at the master's and doctoral levels continued to decline, dropping 35 and 41 per cent and 31 and 43 per cent, respectively, for the last two years.

Council data are based on actual offers made to male students at the three degree levels at representative institutions, Reese added.

Of 16 types of employers covered in the bachelor degree study, only four made fewer offers than in the former 1966-67 record year. Reese said public accounting firms, continuing a trend of five years, recorded the largest dollar value increase. They raised their average offer 10.7 per cent since June, 1968, and 20.3 per cent since June, 1967.

Largest increases in beginning salary offers thus went to accounting majors. They are being offered a monthly average of \$761. Next in gains was physics-chemistry-mathematics, to \$784.

Reese indicated chemical engineers were third in gains but receive the highest average offer — \$849 — at the bachelor level. Electrical engineering was second dollar-wise at \$826.

Average for technical students rose 6.8 per cent to \$819. The non-technical students average, pulled up by the sizeable accounting increase, advanced 8.2 per cent to \$711.

Though volume dropped at the advanced degree levels, gains in dollar averages were made. At the master's level, increases approximated those at the bachelor's level. Doctoral level dollar increases were more modest, Reese noted.

## Eckard Relected IE Council's VP

Connie Eckard, director of publications for the Association of Former Students, has been re-elected vice president of District 5 of the International Council of Industrial Editors.

Eckard was renamed to his second term as vice president of the district which encompasses seven southwest states. He is a 1957 graduate of Texas A&M with a BA degree in English.

Prior to his A&M post, Eckard was in internal communications manager for Texas Instruments, Inc. He has served on the board of the Dallas Industrial Editors Association and was DIEA editor of the year in 1965.

He was general chairman of the 1968 ICIE Conference. The election took place at the annual conference in Boston, Mass.

ICIE is the largest professional organization for men and women serving in the field of industrial editing. More than 3,500 member editors are responsible for more than 10,000 company publications reaching 300 million readers.

## Life Science's 'Fishing Hole' Tells Where The Fish Went

Texas A&M's \$84,000 "fishing hole"—technically called a computerized monitoring unit—could be the fisherman's dream come true.

It tells which way the fish went, or is going, explained Dr. Herman Kleerekoper, a Canadian

zoologist who employs computers in fish behavioral research.

"We have already analyzed—rather extensively—components of locomotion," Kleerekoper said.

"A variety of practical problems we hope to know more about concerns how the fish move

about," he added.

"You have to first know what is going on," Kleerekoper continued.

He joined A&M's Institute of Life Science last year after 20 years at McMaster University in Canada. He was joined here by five graduate students.

Kleerekoper said he is using the fish to unravel some of the problems of migration and "how they find their way around."

"We want to see how fish move about," he described. "Then, we want to see how they respond to such things as odor, light, temperature and currents, for example."

"We want to know what environment means to him," he said. This is being accomplished through a sophisticated, monitoring technique.

The fishing hole, a 4,000-gallon, 256-square-foot tank, has 2,000 photoelectric cells built into the floor. Lights placed above the tank cast the fish shadow on the cells which form part of an electric circuit connected to a small computer.

Kleerekoper explained the computer figures out the position of the cell passed over by the fish.

"It then makes a number of calculations which give the speed at which the fish swims and its direction as well as angle of turns," he said.

The results are recorded on magnetic tape and typed.

Kleerekoper said his graduate students are studying the effects of smell, hormone influences on locomotion as applying to seasonal behavior and social aspects—whether a fish reacts differently alone and when other fish are present.

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### THE GRADUATE COLLEGE

Final Examination for the Doctoral Degree Name: Seeker, William Albert Degree: Doctor of Philosophy in Education Administration Dissertation: POWER STRUCTURE AND SCHOOL BOND ELECTIONS. Time: July 9, 1969 at 3:00 p. m. Place: Room 112, Bagley Bldg. George W. Kunze Dean of Graduate Studies

### ENGLISH PROFICIENCY EXAMINATION

The English proficiency examination required of all junior students majoring in Education will be offered from 4:00 to 5:00 p. m. on July 9 (Wednesday). Students may take the examination by reporting to Academic 402. Examinees should bring pen, pencil, dictionary and composition paper. 12943

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