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1963, the group has given the university over \$112,000 worth of gifts. The Steinway concert grand piano in Kenan Hall was given by the Friends. The Friends soundproofed a music room for the creative arts department. The group has donated to the library at UNCW's Institute for Marine Biomedical Research at Wrightsville Beach. They bought a computer printer for a student lab in the Cameron School of Business Administration. They gave the business school a videotape system. The math department received a computer from the Friends. The new electric typewriters in the library, which students use free of charge, were a gift from the Friends. UNCW's Museum of World Cultures has received gifts from the Friends. Other gifts went to the student radio station, Kenan Auditorium and the accountancy department.

And, of course, the TV and the donation toward the fitness trail.

How do the Friends raise the money to give so freely to UNCW? According to Connie Yow, they hold a membership drive each spring. The money they raise buys the gifts for the university. "But we are always looking for new members," says the Friends president. "We need more members, we really do," continues Yow, who indicates that now there are more than 300 Friends. "But in a city the size of Wilmington, that really isn't many people. Our membership dues are not much, considering what a good cause they're going to. And," she adds with a smile, "all contributions to the Friends are tax deductible."

Membership is open to anyone. Regular dues are \$10 a year; contributing memberships, \$25; supporting, \$50; and patrons, \$100.

Fulbright Professor Studies How Our Bodies Tell Time

Biological clock. Chronobiology. Circadian rhythms. These are strange-sounding words to the layperson. But to Dr. M. K. Chandrashekar, Fulbright professor at UNCW last fall, they have been a part of his life since 1960, when he accidentally discovered tidal rhythms in the activities of crabs he was studying as a graduate student at Madras University in his native India.

Chandrashekar is the first Fulbright professor to visit the University of North Carolina at Wilmington.

Chandrashekar was studying the basal metabolism of crabs when he realized that their activity was related to the tides, even though the crabs were in a tank in a laboratory. When he began plotting the activity of the crabs and the rise and fall of the tides, he discovered that there were very definite relationships between the two. The scientist has been working with the biological clock ever since.

Simply put, the biological clock is an organism's internal signal to sleep and wake. When put into a "chronocubicle"—a room with constant low light, no windows, and no indications of day or night—mice, for instance, will continue to act on their internal clock. They are more active at night, as though they sense when the sun goes down. Chronobiology is the study of this internal "clock."

"Chronobiology has very many implications, in such fields as medicine, agriculture, horticulture, psychiatry, and space research," said Chandrashekar. Through the study of time and its effects on people, doctors now know that certain drugs affect humans differently at different times of the day. According to the Fulbright professor, Wolfgang Engelman discovered the benefits of the mood-elevating drug lithium through chronobiology. Engelman worked with plants that opened and closed at odd times. By giving the plants lithium salts, Engelman was able to adjust their schedules. The plants didn't droop as much



Dr. M. K. Chandrashekar

The Friends of UNCW don't simply decide what to give to the university. They solicit requests from the campus community. They also work closely with the Development Office, to try to find out just what gifts would be most appropriate. "The Development Office has been just super in helping us," says Yow.

"We feel like we've had a good year in 1983," continues Yow. "The Friends want to be even more visible now. We realize that to do more, more people need to know about us."

If you want to know more about the Friends of UNCW, write to them at P.O. Box 3131, Wilmington, N.C. 28406. They'll be glad to tell you!



(Left to right) Bonnie Culbreth, Friends of UNCW president Connie Yow, and University Union director Linda Moore help "uncrate" the wide-screen TV that the Friends gave to the students as an early Christmas present.

after being given lithium salts by the scientist.

Humans now benefit from such research.

In agriculture and horticulture, chronobiology helps farmers and florists grow certain food and flowers out of season. "We can have roses in December," said Chandrashekar. According to the scientist, the Russians are exploiting day length for better stock breeding and wood production.

Professor E. Buenning, a plant physiologist with whom Chandrashekar worked in Germany in the 1960s, was the first to write about the physiological clock, as he called it in the 1950s. Buenning said that the daily clock is a yardstick of seasonal time measurement. Bird migration, for example, is based on the length of the day, not the weather. Weather varies, but the days definitely get shorter in the fall and longer in the spring. Birds are not fooled by cloudy days; they know that shorter days mean "fly south."

How did Chandrashekar end up at UNCW, when he'd had offers from Harvard and other internationally known oceanographic and research institutions? Well, he knew of the excellent marine biology program at UNCW. He knew of UNCW's Institute for Marine Biomedical Research at Wrightsville Beach. He knew there was a "cousin" of the crab he'd studied at Madras University off the coast of Wilmington. He knew the work of Dr. Robert George and his experiments in the deep sea. Chandrashekar wanted to do some work in the ocean's depths, and George could help. He wanted to study further why the tidal rhythms of crabs fade after three to five days; he couldn't perform his experiments at the land-locked Madurai University, where he currently works. He wanted to try to restore those rhythms in the laboratory, and he knew from its reputation that UNCW would be an ideal setting for his experiments.

One of the highlights of Chandrashekar's stay at UNCW was a five-day mission on the *Cape Hatteras*, a research vessel owned by Duke University. "I acquainted myself with the deep sea environment on this trip," he said. "I have never been on a boat such as this one, and never so far out in the ocean." The vessel carried Chandrashekar, George and several other scientists out about 150 miles, past the Gulf Stream.

It took Chandrashekar only seven days to begin his first experiment, after he arrived last fall. "I would like this to be a continuing program," said the scientist of his visit to UNCW. He has already invited George to Madurai University for the 1984 fall semester. "And I hope to come back one day," he said, indicating his pleasure over the apparent success of his experiments. Results, however, will not be known for some time.

"These things take much time, more time than most people imagine," explained the scientist.

Science takes time. And those of us at UNCW hope this scientist from India can find the time to return to UNCW. It would benefit all.



In an effort to promote a biotechnology seminar at UNCW, Dr. William C. Carlson (center), regeneration physiologist at Weyerhaeuser Co., and Dr. Mostafa M. Abo El-Nil (right), a biotechnologist also with Weyerhaeuser, appeared on the *Carolina in the Morning* program on WECT-TV6. Wayne Jackson (left) interviewed the scientists, who discussed biotechnology and what it might mean to Southeastern North Carolina. Biotechnology is using an organism or part of one to create a new product. The oldest form of the science is used in making bread, when yeast is added to flour and sugar and the mixture ferments into a new product, bread. The scientists were brought to UNCW by Ron Sizemore, assistant professor of biological sciences at UNCW.

Writing Got You Down? Some Pointers Will Help

Ever hear of graphophobia?

The word was coined by Rudolf Flesch, the well-known readability expert, to describe a condition common to many of us—the fear of writing.

We often see otherwise healthy business people suffer acute distress whenever they have to write a letter, report or proposal. And the prognosis is a dismal one without proper treatment.

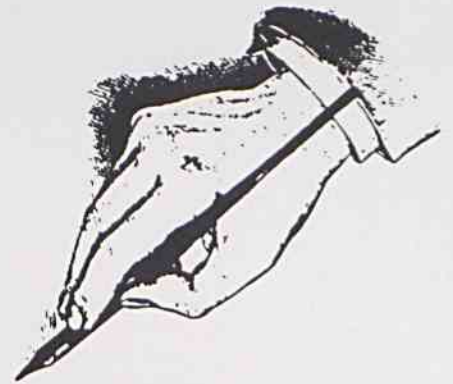
Even professional writers catch the bug from time to time. In fact, a woman in Los Angeles specializes in helping writers "unblock." Among her clients are screenwriters, novelists and journalists. A course she once taught at the University of California was called "Overcoming the Fear of Writing."

An Unnatural Activity

To understand the genesis of the problem, we have to realize that writing is an unnatural activity. It has to be learned. However, the first five or six years of our lives are spent learning how to talk. It isn't until we reach grade school that we begin to grapple with writing.

And then what happens?

Teachers grade us on how well we do. They render a judgment on our attempts to learn how



to write before we have begun to acquire the rudiments of this fragile skill.

Some even "teach" us that writing is a form of punishment. "Because you talked in class," they scold you, "you'll have to write a 200-word composition for homework."

Then when we get into high school and college, they continue to mark up our papers with negative comments that reinforce our earlier "lessons."

It's a tribute to the human spirit that we are able to survive this brutal treatment. But the damage is done. We have been conditioned to become defensive about our writing and shrink from the task for fear of being criticized again for trying.

By the time we are adults, we have internalized the critic and are consigned to struggle with it for the rest of our lives.

Fortunately, remedies are available.

Two Remedies Offered

Here's one borrowed from Flesch: "Do each writing job as if it were an informal talk to your reader. Don't start without notes—or at least specific ideas—on what you are going to say. And don't stop before you have said it."

Here's a modification I've used with some success: "Keep in mind that you can't be a creator and critic at the same time. Don't try to judge your efforts while in the act of writing. Get it all down