



BY STEWART ALSOP

## DR. CALHOUN'S HORRIBLE MOUSERY

**WASHINGTON**—It was a lovely day—much too lovely to spend in an office. In fact, it seemed a perfect day to visit Dr. John Calhoun's mousery.

Dr. Calhoun is a distinguished ecologist, who works for the National Institute of Mental Health. His laboratory is located out beyond the suburbs, in rolling Maryland farmland. I had heard that Dr. Calhoun was conducting some fascinating experiments on the effects of overcrowding on mice. The experiments were fascinating, all right, but they spoiled that beautiful day for me.

Dr. Calhoun is a smallish, cheerful man with bright blue eyes, a goatee and mouse-colored hair that looks as though it had never been combed. His chief interest, he soon made clear, is not in mice but in men.

What was happening to the human race, he said, was really nothing new. "There have been ten doublings of the human population in the last 4 million years, and each doubling required half the time of the previous doubling." The trouble is that the doubling process is now down to about 40 years, and next time round it will be down to about twenty years.

Dr. Calhoun estimates that the world will be nudging the "upper threshold" of population, at the present rate, around the years 2008 to 2010. After that, population simply can't continue to go on growing as it has since the days when men lived in little hunter bands 40,000 years ago. Something will have to happen to stop the growth.

### FAMILIAR

All this was familiar, and because familiar, not really disturbing. But then Dr. Calhoun led me upstairs to his mousery, and gave me a horrible glimpse of what may be, after all, just around time's corner.

Dr. Calhoun's mousery consists of a series of big steel-sided boxes, equipped to provide their occupants with everything the most affluent mouse might want. There are comfortable nesting boxes, fine crawl spaces up the sides of the box, and unlimited food and water. There is only one thing wrong with this rodential paradise. There are too many mice in it.

With some 2,300 mice in a box 9 feet square, there are about sixteen times as many mice in the box as occur under the most ideal natural conditions. Peering down from the sides of the box at the squirming, flowing mass of tiny

bodies, smelling the rank mouse smell, which is at first overpowering, I had a strong impulse to get out again, into the sunlight. But Dr. Calhoun started to explain his experiment and I stayed, fascinated and appalled.

The mice, as soon as they were put into the box, established their hierarchy, or pecking order, Dr. Calhoun explained. The top mice—the rodential bourgeoisie—established themselves with their consorts in the higher nesting boxes, nearest the food and water. Lower-grade mice found less desirable nesting sites. The lowest of all—the proles—were the mice who found no nesting sites at all. They swarmed over the bottom of the box—sad, scruffy little animals, mostly rejected males, a few viciously aggressive females.

### WITHDRAWAL

All the mice are afflicted in varying degrees with what Dr. Calhoun calls a "withdrawal syndrome." Only the proles on the open floor retain the capacity for "little bursts of violence," Dr. Calhoun said. "They chew on each other, and the ones being chewed on don't run away." He pointed out a couple of mice on the floor, and sure enough, one was gnawing on another's bottom, while the other sat passive.

The withdrawal syndrome of the mice bourgeoisie takes a different form. These mice become what Dr. Calhoun calls the "beautiful ones." Dr. Calhoun picked up two of the beautiful ones, and two of the proles, and held all four in one hand. The difference was obvious. The proles were scruffy and chewed up—one had lost half its tail—while the beautiful ones were sleek, unharmed and utterly passive.

Enzyme tests, Dr. Calhoun explained, have established that the beautiful ones are "completely unstressed." They simply eat, drink and sleep—and do nothing else. They build no nests, they never fight, they never forage, they rear no children, and they neither copulate nor conceive. They have ceased to be mice, in the same sense that a man who performs none of the functions of a man has ceased to be a man.

"We've had no live births for six months, and no conceptions for almost as long," said Dr. Calhoun. Perhaps as a result, many females take over a male role, becoming hunters and aggressors. Dr. Calhoun suspects there is an actual endocrine change.

"Aren't we maybe seeing the phe-

nomenon of the beautiful ones, already, in the dropout, drug culture?" I asked.

Dr. Calhoun replied that he could give no scientifically provable reply to my question, but rather to my surprise, he did not think the question ridiculous. He led me on to a couple of uncrowded mouse boxes—the mice in these boxes were the carefully culled survivors of overcrowded mouse populations. Their fellows had found the release of death in the "carbo-box," a mouse Auschwitz filled with carbon dioxide.

In one of the boxes, six survivors, terrified of the unaccustomed surrounding space, huddled together, clinging to each other desperately as though in a great cold. In another, a male mouse—the dye on his fur identified his sex—viciously attacked first one female, then another. In nature, Dr. Calhoun said, a male never attacked a female.

The experience of overcrowding, he explained, did something to the "programming" of the central nervous system of the surviving mice. It remained to be seen whether these survivors would reproduce. In three similar experiments with rats, there had been no reproduction at all.

### DIFFERENT

Thinking back on my afternoon at Dr. Calhoun's mousery, I recalled two remarks I had heard during a visit in May to Yale University. John Hersey, distinguished novelist and master of Pierson College, had said that there really did seem to be something different about this generation of the young. Perhaps one reason, he said, was "the sense of crowding—the feeling of too many elbows." William Kesen, a brilliant psychology professor, agreed, and added that today's young had "an odd sense of futurelessness—they never seem to want to talk about their own futures at all."

It is very farfetched, no doubt, to see any connection between these remarks and Dr. Calhoun's experiments. But the fact remains that this generation of the young, unlike their elders, will live to see Dr. Calhoun's "upper threshold" reached. Is it possible that when the threshold is reached, population growth will be ended, not by birth control or the bomb, but by the mysterious and terrible process that ended all reproduction in Dr. Calhoun's horrible mousery? Is it possible that the young have some sort of subconscious prescience of what lies in store?