

Speaking of...

Speakers

When the National Science Foundation celebrated its 25th anniversary last spring, Caltech's Institute Professor of Physics, William A. Fowler, delivered a Happy Birthday address, "A Foundation for Research," describing some of the many scientific advances that have come about because of NSF support.

As we all know, Dr. Fowler is an articulate and a graceful speaker, but it remained for R. J. Mackin, Jr., Manager of JPL's Space Sciences Division, to remind us that Fowler sometimes speaks pure poetry. As evidence, Mackin has simply taken a short passage from Fowler's NSF address and, without changing the wording in any way, set it in verse form:

RESONANCE

The realization
That the red giant stage
Of stellar evolution
Involved helium burning
Which transforms helium
Into carbon and oxygen
Was just as far-reaching
As the discovery
That the main sequence stage
Involves the conversion
Of hydrogen into helium.
This understanding
Of the red giants
Led to the prediction
Of an excited state
In the carbon-12 nucleus.
This state
Was subsequently found,
And we now know
That it determines

The ratio
Of carbon to oxygen
That exists
In the Universe
And on which
All life,
Including ours,
So critically depends.
Without the resonance
In the first stage
Of helium burning
Provided by this state,
The final result
Of the burning
Would be all oxygen;
There would be
No carbon
From which to construct
Amino acids and proteins,
And where would we be?

William A. Fowler

Speaking of Fowler, he was awarded the National Medal of Science at a White House ceremony on September 18. This is the highest award of the federal government for distinguished achievement in the mathematical, physical, biological, or engineering sciences.

The National Medal of Science was established by Congress in 1959 and was first presented in 1963—to Theodore von Kármán, professor of aeronautics and director of the Guggenheim Aeronautical Laboratory at the Institute from 1930 until his retirement in 1949. Since 1963 the medal has been given to five other Caltech faculty members: Alfred H. Sturtevant, professor of biology, in 1968; John R. Pierce, professor of engineering, in 1971; Allan R. Sandage, staff member of the Hale Observatories, in 1971; A. J. Haagen-Smit professor of bio-organic chemistry, in 1973; and Linus Pauling, professor of chemistry emeritus, in 1975.



Caltech's Kellogg Radiation Laboratory gives a welcome home party for William Fowler, fresh back from Washington with his brand new Medal of Science.



The Throop Site

Old Throop Hall went down under the wrecker's ball in 1973, and the site where the grand old building stood has been barren indeed ever since. The original plan, approved by the trustees, was to build a broad concrete stairway leading down from the Millikan Library level to the Throop Alley level. But just as construction was about to start, a group of students and faculty asked for a moratorium on concrete, and offered a plan in which water would be the principal medium instead.

The end result is now on view. The plants have some growing to do, and the pools have yet to be stocked with fish and plant material, but the Throop site is now a miniature park, with winding paths, cascading brooks, quiet pools, and man-made rocks (manufactured on the spot).

One colorful feature of the site is a stately \$2,000 cedar decodar, donated by the Cleveland Wrecking Company to give Caltech students a permanent Christmas tree—replacing the one that Cleveland had to remove from the dome of Throop Hall when they started to bring the building down in December 1972.





Duchess arrives on campus in Phil Engelhauf's van—and finds, on an extensive campus tour, that a freshman physics lecture is not exactly a highlight.



Lions

Phil Engelhauf came to Caltech as a freshman last year, but he left his roommate and constant companion, Duchess, back home in Riverside until the end of the school year. Then, as a special treat, Phil brought Duchess to campus for an overnight visit, which included a chance to hear a freshman physics lecture by Ricardo Gomez (below). In class, and throughout her visit, Duchess was well-behaved, though occasionally bored, and always remarkably patient with the crowds that seemed to regard her as some kind of curiosity. After all, she is just an adolescent (about 20 months old) 200-pound lion who has been part of the Engelhauf family ever since she was a cub.

Duchess's visit to campus was not just an idle whim of Phil Engelhauf's. In fact, it made a good deal of sense as originally planned.

All year, Phil had been going to biology class. And all year the instructor, James Bonner, had been accompanied in class by his beautifully behaved schnauzer. To end the year, Phil thought he ought to bring *his* beautifully behaved pet to Bonner's classroom. But things didn't work out because Duchess balked at going into the biology building, and when Duchess balks—that's all, brother. So Phil had to go on to his next class, which was physics, and Duchess had no qualms about walking into the physics building—which is how she came to hear a physics lecture by Ricardo Gomez. □