Letters

Our Ears Do Deceive Us

In "Perceptual restoration of missing speech sounds" (23 Jan., p. 392), Warren notes that "our illusory perception of the speaker's utterance rather than the stimulus actually reaching our ears—reflects characteristics of speech perception which may help us understand the perceptual mechanisms underlying verbal organization." Perhaps. In a book published in 1899 William James said (*1*):

> When we listen to a person speaking or read a page of print, much of what we think we see or hear is supplied from our memory. We overlook misprints, imagining the right letters, though we see the wrong ones; and how little we actually hear, when we listen to speech, we realize when we go to a foreign theatre; for there what troubles us is not so much that we cannot understand what the actors say as that we cannot hear their words. The fact is that we hear quite as little under similar conditions at home, only our mind, being fuller of English verbal associations, supplies the requisite material for comprehension upon a much slighter auditory hint.

We've had 70 years to understand the phenomenon, and still we don't.

JOHN R. PIERCE
Bell Telephone Laboratories, Murray Hill, New Jersey 07974

Reference

1. W. James, *Talks to Teachers on Psychology and to Students on Some of Life's Ideals* (Holt, New York, 1899), p. 159.

Don't Overlook Berkeley

In his report on pesticide research (12 Dec., p. 1383), Joel R. Kramer writes: "But university research in biological controls is meager, with one exception—the University of California at Riverside, which has a full department of about 40 people studying biological control and scoring several successes."

Anyone knowledgeable in biological control (including D. A. Chant) knows that there is also a Division of Biological Control at Berkeley, which is training undergraduate and graduate students, conducting applied and basic research, and "scoring successes." Kramer's oversight is understandable since the organizational structure of the University of California is confusing even to some of us within the system. What really matters is that the University supports strong biological control units on major campuses, Riverside and Berkeley.

I perhaps should not have been bothered by the inadvertent "put down" of Berkeley, but as the Division's current primary parasite I feel duty bound to my colleagues to set it straight with the world that they are not ". . . individuals here and there. . .working in a wilderness."

ROBERT VAN DEN BOSCH
Division of Biological Control, University of California, Berkeley, 1050 San Pablo Avenue, Albany 94706

Our Fragile Environment

The quality of the environment, ecology, and pollution problems have recently become matters of concern everywhere. My own personal explanation for this outburst of interest may be peculiar to myself, but I would like to know whether my explanation sounds a responsive chord in the minds of others. I date my own reawakening of interest in man's environment to the Apollo 8 mission and to the first clear photographs of the earth from that mission. My theory is that the views of the earth from that expedition and from the subsequent Apollo flights have made many of us see the earth as a whole, in a curious way—as a single environment in which hundreds of millions of human beings have a stake.

One view in particular is awe-inspiring—with Africa in the foreground and the whole profile of the Mediterranean very clear. One stares at the whole Mediterranean, looking from outer space much as in an atlas, but *not as a drawing*. Much of our most commonly taught history centers around that little sea, a mere patch of the hemisphere, which once seemed to its inhabitants to be the whole world.

Looking at the blackness beyond the sharp blue-green curve, trying to see even the place where the thin envelope of atmosphere and the solid earth meet, the curious word "fragile" comes to mind. To be on the earth and think of it as fragile is ridiculous. But to see it from Out There and to compare it with the deadness of the Moon! I suspect that the greatest lasting benefit of the Apollo missions may be, if my hunch is correct, this sudden rush of inspiration to try to save this fragile environment—the *whole* one—if we still can.

JOHN CAFFREY
American Council on Education, Washington, D.C. 20036

Perils of Disease—II

Jukes (Letters, 9 Jan.) must know that a nonresidual quick-knock-down aerosol containing (for instance) pyrethrum is more effective in controlling insects in internal spaces in aircraft than are slow-acting residual halogenated hydrocarbons. The curious logic he uses to arrive at his punch line, "I prefer DDT to yellow fever," shows him to be more interested in propagandizing on behalf of DDT than in the problem of aircraft-borne insect vectors of tropical disease. I would rephrase his punch line thus: I prefer to be without both DDT and yellow fever, which might be possible today if Jukes would pipe down.

ALAN R. LONGHURST
University of California, San Diego

On a trip from Costa Rica I was reminded of Jukes's letter and Marx's earlier letter (14 Nov.). Marx pointed out that passengers aboard all international flights entering the United States are being subjected to spraying with DDT by order of the U.S. Health Service. He further indicated, quite correctly as I have noted myself, that such spraying is not really effective in killing hitch-hiking insects aboard aircraft.

In his reply, Jukes implied that Marx was both naïve and wrong in his assumption that DDT was being used ("to the public, all insecticides currently are DDT"). After citing a source over a decade old, Jukes added, "I prefer DDT to yellow fever."

During my flight from Central America, I was forced to breathe sweet-scented