

# Science<sup>®</sup> News

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**COVER:** Fossilized leaves from the Smithsonian collection. Both of these are extinct plants over 40 million years old. Although they were found at high altitudes in North Dakota and Wyoming, they are relatives of tropical and subtropical plants now found only in South America. They are evidence of vast climatic changes. See p. 42. (Photos: Leo J. Hickey)

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# To the Editor

## Babies' awareness-III

Mrs. Westman (SN: 6/1/74, p. 347) has just provided a fine example of the attitude Mrs. Carter and I were criticizing (SN: 5/11/74, p. 299). I don't recall that either of us attacked the scientific method (in which I gather all three of us were trained) itself, but merely the habit of discounting observations made by "unscientific" methods or persons.

Actually, I made a great many observations and tests on my infant daughters, beside those I specifically mentioned, and came to much the same conclusions as Ms. Carpenter (SN: 4/6/74, p. 222); but no one would believe them then, because 25 years ago science didn't believe babies were aware. In the same 25 years, science has "proved" a great many things about human behavior, which I disagreed with and which have subsequently been modified. Science isn't infallible, nor are tests; and insight and observation in the laboratory can often be misleading about behavior under more natural conditions. While I agree with Mrs. Westman on the need for (much belated) precise studies of infants, I do not agree with her that strict laboratory tests are the only way of arriving at exact knowledge of human or animal behavior.

(Mrs.) *Otis Kidwell Burger*  
New York, N.Y.

## Benefits of the pill

Re "Birth control pills: More controversy" (SN: 6/1/74, p. 352), does Philip Corfman consider pregnancy to be one of the menstrual disorders whose incidence is reduced by oral contraceptives? If so, I am interested to see that he classifies said condition under "trivial events." If not, has it occurred to him (or to the Royal College, for that matter) to consider balancing the "rather serious events, such as strokes" against other rather serious—and more common—events: pregnancies?

Most pill users have decided that the small risk of blood-clotting diseases and strokes is more than counterbalanced by the benefits of avoiding an unwanted and hence potentially socially and psychologically, as well as physically, hazardous pregnancy. The question to be considered is not, "Do the trivial benefits of oral

contraceptives outweigh the serious risks?" but rather, "Does the cheap, simple, and effective prevention of conception—and hence the substantial risk of death due to pregnancy and childbirth—outweigh the minuscule chance of death due to strokes or blood-clotting diseases?"

*Susan E. Weaver*  
Livermore, Calif.

## A Russian invention

I am confused by your application of metric system units with regard to the surface pressure on Venus (SN: 3/16/74, p. 176; 93 kg/m<sup>2</sup>). In engineering school, we were taught that there were two systems of metric units, mks and cgs. The text we used, *Principles of Physics I*; Sears, defined pressure as the force per unit area. In the same text force is expressed in newtons or dynes, mass in kilograms or grams and pressure in newtons/m<sup>2</sup> or dynes/cm<sup>2</sup>. In your article it appears that pressure is expressed in mass per unit area instead of force per unit area.

*Walter L. Rees*  
Glen Ellyn, Ill.

(In the first place we made an error. It should have read kg/cm<sup>2</sup>. And that's how the Russians do it. Evidently they don't read Sears.—Ed.)

## Lobster immunity

In "Proteins and Metals Stick Together" (SN: 5/18/74, p. 324) it is stated that "all vertebrates and only vertebrates make antibodies." In "Immunizing lobsters" (SN: 5/25/74, p. 338) it is stated that "they have successfully immunized the spiny lobster against the disease, using a live attenuated strain of the bacterium." Doesn't this method of immunization require the lobster to make antibodies against the attenuated bacterium? The lobster is not a vertebrate. If so, one of the statements appearing in your magazine must be incorrect. Please clarify this apparent contradiction for me.

*Gray Johnson, R.Ph.*  
Gainesville, Fla.

(Apparently the work with the lobster is new. Gjaever was quoting the older opinion.—Ed.)

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