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**COVER:** Pawnee Indian star chart on leather hide. Scientists involved in archaeoastronomy are gaining insights into not only the extensive knowledge native peoples of the New World had of celestial patterns and movements, but of how this information was integrated into culture and society. See p. 90. (Photo: Von Del Chamberlain/Smithsonian)

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# LETTERS

**You certainly said it**

In his April 20, 1979 SCIENCE article cited in "Evolution: the Bottom Line" by Julie Ann Miller (SN: 7/7/79, p. 12), Sir Francis Crick said, "In 1976, I had no idea that a typical gene might be split into several pieces and I doubt if anyone else had." Actually, we had this idea over seven years ago and published it in 1972 in NATURE NEW BIOLOGY (Blattner, Dahlberg, Boettiger, Fiandt and Szybalski, Vol. 237, p. 236), suggesting that it might permit "synthesis of a single polypeptide chain from two distant genes, as in the case of antibodies containing a variable and a constant segment." Also in my review (W. Szybalski, in *Uptake of Informative Molecules by Living Cells* [North-Holland Publ. Amsterdam, 1972]), I suggested a "novel topological relationship between the DNA code and RNA message" with "some 'genes' having bipartite or multi-partite structure separated by 'dry runs' (present 'introns')." Sir Francis in his May 8 letter to me has generously acknowledged the omission, saying, "My apologies! You certainly said it. . . ." Thus, some brand-new ideas are perhaps not so new after all!

Waclaw Szybalski  
Madison, Wis.

**A roach is a roach. Or is it?**

In all his beginning classes, my entomology professor emphatically distinguished "roaches" from cockroaches. I can still hear him saying, "A roach is a fish. That's a cockroach, please."

You may thus understand my surprise at your

distinguished publication's July 7 cover, upon which the word roaches is used to refer to insects. Perhaps you should clarify this discrepancy.

Ron Royer  
Assistant Director  
Longlake Conservation Center  
Palisade, Mich.

(A roach is indeed a "silver-white European freshwater cyprinid fish with a greenish back," according to Webster's New Collegiate Dictionary. It is also, by the same source, a cockroach. —Ed.)

**Insect spray: Only some do it hot**

Thank you for passing along the response to the recent article (SN: 5/19/79, p. 330) that you had on our work on bombardier beetles. Specifically, it was a letter from [a man] who claimed that certain European ants can spray just as do bombardier beetles (SN: 6/30/79, p. 419). Actually, many insects spray like bombardier beetles, but none other than some very close relatives of the bombardier beetles themselves have the ability to discharge a fluid that is thermally hot.

I thought you might be interested in a picture that I took of a mound of the European *Formica rufa*, which I believe might have been the very same ant that your reader referred to in [his] letter to you [see below]. This picture shows the collective response of hundreds of ants to the tapping of their nest. If you have your face close to such a nest, you are likely to have a memorable experience. The concentrated formic acid that these ants discharge can induce an instantaneous pain on the exposed surface of the face, and on the eyes in particular.

Thomas Eisner  
Cornell University  
Ithaca, N.Y.



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