

LETTERS

First-Hand Observers?

I enjoyed Culliton's article on the Shroud of Turin (News and Comment, 21 July, p. 235) and the letters of response in the 1 September issue (p. 774). I was especially intrigued by the letter from J. P. Ziller, P. Purcel, and M. Cul.

I must assume the editors are unfamiliar with the novel *Another Roadside Attraction* by Tom Robbins. The main character, with his wife, child, and pet baboon, runs a roadside zoo in Washington; the "other roadside attraction" is provided by a friend—it is The Corpse, smuggled out of the catacombs of Rome where the Catholic Church has had it stashed away for 2000 years.

The zookeeper is John Paul Ziller; his friend, who finds The Corpse, is Plucky Purcel; his pet baboon is Mon Cul.

Of course, if the letter is not a hoax. . . .

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It is comforting to learn that T. E. Robbins' illustrious protégées John Paul, L. Westminster (a.k.a. Plucky), and Mon are addressing such an important problem. Their speculations on the Shroud of Turin are more authoritative than most, of course, in view of the team's unique first-hand observations of the phenomenon it allegedly contains. Absence of their equally well-known collaborator Amanda from authorship of the letter is, however, somewhat disquieting. Perhaps she has dropped out of research and now is "... frenetically pursuing pleasure and wealth. . ." (News and Comment, 1 Sept., p. 797) along with the rest of us out here on the unstable margin of the continent. I certainly hope so. One final comment: which academic department at the University of California at Davis possessed the acumen to hire all three of these refugees from *Another Roadside Attraction*? A very wise move indeed. In any event, I trust they have been granted tenure.

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Marine Environments:

Recovery After Oil Spills

T. S. Wyman (Letters, 16 June, p. 1218) claims that surveys of major oil spills (he cites the *Torrey Canyon* and

Santa Barbara incidents) have shown that the affected areas "fully recovered in a surprisingly short time." We disagree with this claim, although it reflects current mythology.

While one could debate what Wyman means by "fully recovered" and a "short time," we are of the opinion that he has misinterpreted the facts. If "fully recovered" means a return to the status ante quo, including elimination of petroleum contamination, and if a decade is a long time, then we think that a proper reading of the literature will show that Wyman is incorrect.

Some of us have studied the after-effects of the *Torrey Canyon*, Buzzards Bay, and *Arrow* spills, and some of us have recently studied the *Amoco Cadiz* incident: we find it impossible to agree with Wyman's claim. A recent symposium was organized to address particularly the question of the potential of marine environments for recovery after oil spills. The two most noteworthy points arising out of the presented papers and discussion were the persistence of petroleum hydrocarbons in the environment and the evidence for persistent physiological and community disruption for at least a decade following oil spillage. The proceedings of this symposium are now published (1) and add several tens of papers to the scientific literature which supports our opinion.

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References

1. *J. Fish. Res. Board Can.* 35 (No. 5), Special Issue (May 1978).

Animal Rights: An Old Question

The recent flurry of interest in and concern for animal rights, animal consciousness, and the use and abuse of animals in biological, medical, and behavioral research (News and Comment, 7 July, p. 35) is undeniably a worthwhile, progressive endeavor. Moreover, if carried out in an atmosphere of judicious

understanding for all sides of this complex issue, such a "movement" can only lead to an improvement in the well-being of all animals, including humans. However, lest it be thought that this anti-anthropocentrism represents a contemporary novelty in science, I offer the following quotes from 100 years ago as testimony to the fact that concern for the welfare of animals in research is an issue of long-standing interest to biologists. First, from a speech by H. Newell Martin on the occasion of the opening of the biological laboratories at Johns Hopkins University in 1876 (1, p. 306):

I want to say, once for all, that here, for teaching purposes, no painful experiment will be performed. Fortunately, the vast majority of physiological experiments can nowadays be performed without the infliction of pain, either by the administration of some of the many anesthetics known, or by previous removal of parts of the central nervous system; and such experiments alone will be used here for teaching.

Moreover, it is obvious from the following quote (2) that then, as today, there was opposition to the use of animals in biological and physiological research:

It is not consistent with the genius of the American people to restrict the progress of scientific knowledge by legislation or otherwise. The anti-vivisectionists, or beastians, succeeded in seriously hampering physiological research in England, and endeavored to stultify their intelligence by driving it entirely out of the kingdom (3)]. In this they happily failed. It is not unlikely that similar attempts may be made in this country, especially in localities where physiological research has its few and poorly rewarded votaries. Frightful stories will be circulated as to the cruelties of the vivisectionists, and the statements of (?) able scientists will be adduced to the effect that vivisection is of no benefit to science.

These as well as other statements (4) make it clear that the central issue in the late 19th century was whether the pain inflicted by such research is less than that which it ultimately prevents: a noble, but impossibly difficult and unrealistic basis for judging the merits of specific research.

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References and Notes

1. H. N. Martin, *Pop. Sci. Mon.* 10, 298 (1877).
2. A. S. Packard, Jr., and E. D. Cope, *Am. Nat.* 17, 175 (1883).
3. The reference here is to an attempt by the British antivivisectionists in 1875 and 1876 to pass a tough bill against the use of animals in all scientific research. For a brief account of this attempt and Charles Darwin's response to it, see F. Darwin, *The Life and Letters of Charles Darwin* (Basic Books, New York, 1959), vol. 2, pp. 377-387.
4. A. S. Packard, Jr., and E. D. Cope, *Am. Nat.* 20, 254 (1886); 27, 26 (1893).