Letters

An Unexpected Nuclear Spin-off

May I call attention to the *Atlas of the Domestic Turkey* (Meleagris gallopavo): *Myology and Osteology*, by E. B. Harvey, H. E. Kaiser, and L. E. Rosenberg (U.S. Atomic Energy Commission, WASH-1123, TID UC 48, 1968; xi + 247 pp., 85 figs.). This is another publication in the AEC's controversial WASH series, which also includes, for example, WASH-740, "Theoretical Possibilities and Consequences of Major Accidents in Large Nuclear Power Plants"; WASH-1083, "Current Status and Future Technical and Economic Potential of Light Water Reactors"; WASH-1099, "Reactor Fuel Cycle Costs for Nuclear Power Evaluation"; and WASH-1141, "Safeguards and Nuclear Materials Management."

Many have been concerned that the AEC, in this time of slack in the nuclear industry (a period which began in the mid-1960's)—this time when problems are few and funds are abundant—would not rise to the challenge of defining a new role for itself. These skeptics have not reckoned with the active, fertile minds that populate the AEC's Division of Biology and Medicine. As an anatomist, this reader can hardly contain his enthusiasm over the possibility that WASH-1123 portends a new, and possibly major, area of interest, a possibility given further credence by the recent report of other avian research. I refer, of course, to the pneumatic chicken-cannon described briefly in *Environment* (January/February 1971, p. S-4).

The work itself is a most complete atlas on the subject of the domestic turkey. To quote the preface, "This Atlas is designed to bring into one publication labeled drawings of the muscles and bones of the domestic turkey, *Meleagris gallopavo*, an important member of the gallinaceous birds." The drawings are of excellent quality, clearly labeled, and adequate in number. As an aid to the comparative avian anatomist, an extensive table of Bird Muscle Synonymies is provided relating the muscles of the turkey to other works on the muscles of the dove, the whooping crane, the chicken, and the raven. The obvious omission of the ostrich, the penguin, and the Rhode Island Red only suggests the potential fertility of this research field. The osteology portion of the report is similarly complete and lucid. The report is indexed, appropriately bound, and more than sturdy enough to withstand the rigors of expected use.

The authors close their introduction thus:

> An atlas of the myology and osteology of any species does not in itself help to resolve questions of phylogenic relationships or the history of domestication. However, if this Atlas increases interest in either of these problems or makes possible new research utilizing the turkey, it will have served its purpose.

Only time will tell.

There is little doubt that avian anatomists will find this report exciting and useful (if they find it at all—some anatomists don't search the nuclear literature exhaustively). The report has something for others, too. For ecologists the report suggests nuclear energy and the turkey as another relationship in the web of life; for the legal mind there is the challenge of finding precedence for the turkey study in the Atomic Energy Act of 1954 or subsequent legislative history; and since nearly 100 million domestic turkeys die annually in the United States and most of these are dissected at the dining table, the report could prove to be of especial benefit to the American consumer. If bureaucratic jealousies can be transcended, a popular version done in conjunction with the Department of Agriculture should be considered.

A review of this report would not be complete without noting the acknowledgments in the preface. Particularly it should be mentioned that this Atomic Energy Commission report on the turkey would apparently not have been possible without the continual encouragement and stimulation of a Mr. R. Pigeon from the Division of Technical Information. The reviewer can only hope that someday, somewhere in the AEC, a patron of similar conscience and conviction will be found for an equally definitive WASH report on the chronic effects of low-level radiation.

DEAN E. ABRAHAMSON
Center for Studies of the Physical Environment, University of Minnesota, Minneapolis 55455

Pet Cats and Pollutants

Although the unfortunate contact of Mr. Leo Pard and his zoo colleagues with city pollutants (see News and Comment, 9 July, p. 130) provides an exotic basis for the suggestion that "the zoo animals could potentially serve as barometers of the medical effects of the variety of pollutants in the city's air," one needn't consider only captive wild animals for this purpose. Since members of the cat family groom themselves with their tongues, it should come as no surprise that the first cases of lead poisoning observed at the Staten Island Zoo were in cats. The city contains, however, a far larger and more appropriate "barometer" in its domestic cat population; surely pet cats would concentrate pollutants as well as big zoo cats, and would have the added advantage of sharing an environment more nearly like that of their owners.

WILLIAM A. PRIESTER
National Cancer Institute, Bethesda, Maryland 20014

Complementarity

In his article "Sensuous-intellectual complementarity in science" (4 June, p. 1003), Blackburn draws valuable attention to a point that concerns many who aspire to a counterculture or superculture, but largely overlooks the major obstacle to blending sensuality and intellectuality in science. It is an error to suppose that quantification and objectivity are the aims and dictators of science. They have been useful tools for many purposes, but we do not reject as unworthy the essentially verbal description of much systematic biology, and we are aware of the dramatic role of intuition in many key research efforts.