L. Kitching and S. L. Pimm), wetland herpetofaunas (M. P. Simbotwe and G. R. Friend), nectar-feeding birds (H. A. Ford), breeding biology of insectivorous birds (J. C. Z. Woinarski), small mammal succession after fire (B. J. Fox *et al.*), and general community structure (A. V. Milewski and R. M. Cowling). These papers provide a good sampling of the state of the art of intercontinental comparison.

The state of the art is, unfortunately, still rather primitive. Nonetheless, the southern continents offer some of the best opportunities for comparisons because of the relative taxonomic uniqueness of their floras and faunas, their long isolation from one another and from the northern continents, and their relative tectonic stability. What is needed soon is a second symposium or, better, a workshop to identify ecosystems and features best suited for further comparison, the nature of the data needed, and the ways in which future studies can be made more comparative than the past ones.

This volume represents a first step in a long road. It is easy to read, and there are relatively few typographical errors. The art work is varied in quality, and my particular copy of the book quickly fell apart, even with gentle handling.

GORDON H. ORIANS
Institute for Environmental Studies and Department of Zoology, University of Washington, Seattle, WA 98195

Fallout from Yucca Flat

Under the Cloud. The Decades of Nuclear Testing. RICHARD L. MILLER. Free Press (Macmillan), New York, 1986. xii, 547 pp., illus., + plates. $24.95.

Justice Downwind. America's Atomic Testing Program in the 1950s. HOWARD BALL. Oxford University Press, New York, 1986. xviii, 280 pp., illus. $21.95.

Fallout from nuclear testing, which began in the Nevada desert in 1951 and continued regularly, except for the moratorium from 1958 to 1962, until the limited test ban treaty was signed in 1963, created a serious hazard for the American people at the height of the Cold War. The authors of these two books give complementary accounts of the deadly nature of the resulting radiation. The difference lies in their points of focus. In *Under the Cloud*, Richard Miller makes it clear that all Americans, not just those living downwind from the Nevada test site, were exposed to heavy amounts of radiation. The vagaries of wind and rainfall meant that people as far away as upstate New York received heavy doses of strontium-90 and iodine-131. Howard Ball, on the other hand, concentrates on those living downwind from the Nevada test site who experienced sufficient radiation to increase greatly their chances of coming down with cancer and leukemia. Both authors condemn the Atomic Energy Commission for using the imperatives of the Cold War to hide from the American people the real danger to public health and safety from the more than 100 atomic tests conducted at Yucca Flat. The casualties included not only the troops foolishly placed within a few miles of ground zero or the nearby livestock callously destroyed, but potentially all Americans who lived for more than a decade under this ominous shadow.

The strength of Miller's book lies in the detailed account of the individual tests and the careful tracking of the fallout patterns across the nation. He shows both the normal course of the clouds, across the Middle West and upstate New York, and variations that took the deadly material over the South and sometimes even back westward across Arizona and California. His account, together with fallout maps in the appendix, clearly supports his assertion that "every person alive [in the United States] during the 1950s and 1960s lived under the atomic cloud" (p. 9).

His book, however, is too detailed and impressionistic. He fails to offer any sustained analysis of why this serious risk to public health continued for so long without any effective public protest. By focusing on the tests themselves, he tends to slight the policy issues they raised, and particularly the movement that led to the moratorium in 1958 and the limited test ban treaty five years later. Miller ignores the problem of global fallout from the American shots in the Pacific and Russian explosions in Siberia, which provided the primary focus of the nuclear fallout debate of the '50s. It was the massive contamination of the atmosphere from the hydrogen bomb tests conducted by the two superpowers, not the smaller amount from the Nevada atomic tests, that led to the public outcry that finally forced the United States and the Soviet Union to restrict their testing to underground shots.

In *Justice Downwind*, Ball focuses on the impact of the Nevada tests on the 100,000 people in Nevada, Arizona, and especially southern Utah who lived downwind from the test site. This population, Ball contends, received 30% of the total fallout generated by the atmospheric tests conducted at Yucca Flat between 1951 and 1963.

As a political scientist, Ball is primarily concerned with the issues of government responsibility and the legal claims of the downwinders, as he calls them, for compensation. He blames the AEC not only for negligence in the way it conducted the tests but also for deceiving the affected people about the risk of cancer and leukemia stemming from their exposure to the radioactive fallout. In tracing the downwinders' efforts to achieve justice, he praises federal judge Bruce C. Jenkins, who ruled in their favor in 1982, but is critical both of the government's refusal to accept that verdict and of the Congress for its failure to extend legislative relief to the radiation victims of southern Utah.

The key issue is the degree to which the higher rate of cancer and especially leukemia among the 100,000 downwinders can be tied directly to their exposure to radiation from the atomic tests. Ball acknowledges the inability of scientists to prove conclusively that low doses of radiation can cause cancer in humans, but he endorses the views of Chase Peterson of the University of Utah Medical School, who told a congressional committee in 1979 that "scientific proof will never be 100%, and you should not be looking for it" (p. 138). Instead, Ball argues that there is a large enough body of statistical and epidemiological evidence to establish "highly significant associations between the fallout and the ensuing cancers and leukemias" (p. 200).

Although Ball too often pleads the case for the downwinders, he does succeed in showing how irresponsibly the AEC acted at the height of the Cold War. The ultimate irony is that the people most affected, the largely Mormon population of the small towns of southern Utah, were staunchly patriotic citizens who believed that the Nevada tests were necessary to maintain American nuclear superiority over the Soviet Union in the 1950s. They were forced to pay a high price for this belief.

ROBERT A. DIVINE
Department of History, University of Texas, Austin, TX 78712

Books Received

Adolescent Abortion. Psychological and Legal Issues. Report of the Interdivisional Committee on Adolescent Abortion, American Psychological Association. Gary B. Melton, Ed. University of Nebraska Press, Lincoln, 1986. viii, 152 pp., illus. $17.50. Children and the Law.

Advances in Plant Pathology. D. S. Ingram and P. H. Williams, Eds. Vol. 4, Genetics of Pathogenicity Factors. Application to Phytopathogenic Bacteria. Arun K. Chatterjee and Anne K. Vidaver. Academic Press, Orlando, FL, 1986. xvi, 224 pp., illus. $51.

Advances in the Psychology of Religion. L. B. Brown, Ed. Pergamon, New York, 1985. xii, 234 pp. $30. International Series in Experimental Social Psychology, vol. 11. From a meeting, Oxford, UK, May 1982.