

most influential individuals and organizations in the city. Strangely, neither directory makes much mention of the other.

Although either directory would be better than none, a telephone subscriber who had access to only one would have a sadly incomplete view of even the telephonic possibilities of Manhattan. The same may be said of a student, scholar, or practical man trying to understand and influence ecological systems with either computer models or mathematical analysis exclusively.—*Joel E. Cohen, Rockefeller University*

Ecosystem Modeling in Theory and Practice: An Introduction with Case Histories. Charles A. S. Hall and John W. Day, Jr., eds. 684 pp. Wiley-Interscience, 1977. \$29.95.

Whatever its stylistic limitations, the alphabetical listing of the Manhattan telephone directory is detailed, comprehensive, clearly organized, long, and extremely useful for solving many practical problems. The same may be said of the modeling of ecological systems by numerical computer simulations as exemplified in *Ecosystem Modeling in Theory and Practice*. Twenty-five chapters by thirty-four authors introduce modeling by computer simulation to the novice and describe case histories ranging from the naive to the sophisticated and, in subject matter, from the Vietnam War to Barataria Bay. Some of these case histories are valuable examples of good ecological science.

The Manhattan yellow pages omit mention of most individuals but organize very usefully information required to approach certain other problems. The analogous approach to modeling ecological systems uses mathematically tractable models with a handful of variables. It is exemplified, for example, in R. M. May's *Theoretical Ecology: Principles and Applications*.

Both Manhattan directories give limited insight into the functioning either of that perplexing island as a whole or of the life of anyone who lives there. Neither lists the telephone numbers of some of the

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