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Sommario/riassunto	This monograph summarizes several decades of collaborations between ecologists and mathematicians, presenting novel applications in biological modeling. The authors are among the first researchers to pioneer the use of dynamical systems models to successfully describe and predict animal behavior in relation to environmental changes. The text highlights the biological and mathematical techniques used in the research, including three main components: 1) large data sets on natural populations in the field; 2) mathematical models rigorously tied to data, which describe, explain, and predict behavioral dynamics in relation to environmental variables; and 3) simplified, proof-of-concept models to probe dynamic mechanisms, suggest testable hypotheses, and allow study of the consequences of environmental change and evolving traits. It is a suitable text for field ecologists interested in the modeling procedures and conclusions addressed therein, as well as

mathematicians interested inapplications to population, ecological, and evolutionary dynamics.