homemakers are married (a possibility not specified in the models). Despite the repeated assertion of the salience of economic factors in the first-birth process, the same model includes no variable indicating husband's income or household income, preventing the authors from testing a major economic explanation of fertility. The instability of fertility intentions over time is analyzed without indication of whether marriage in the interim is associated with changing plans about parenthood.

Though the matter of the role of marriage in the timing of parenthood is troublesome, there is no doubt that this book provides a dramatic point of departure for future demographic studies of fertility. Its analytic framework will be widely adopted, and the authors' mastery of demographic data and methods provides a standard that other fertility researchers would do well to emulate.

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Allegiances in Education

Ed School. A Brief for Professional Education. GERALDINE JONÇICH CLIFFORD and JAMES W. GUTHRIE. University of Chicago Press, Chicago, 1988. xii, 413 pp. $24.95.

This provocative book by two professors of education at the University of California at Berkeley argues that "schools of education, particularly those located on the campuses of prestigious research universities, have become ensnared improvidently in the academic and political cultures of their institutions and have neglected their professional allegiances" (p. 3). By seeking status through the academic disciplines, schools of education in the research universities have lost a sense of purpose. They "have seldom succeeded in satisfying the scholarly norms of their campus letters and science colleagues, and they are simultaneously estranged from their practicing professional peers" (p. 3). The more scholarly such schools become, the more distant they are from the public schools; on those few occasions where they have made systematic efforts to address the problems of the public schools, they have been placed at risk on their research-dominated campuses.

The authors make their case largely through integrated histories and case examples drawn from ten schools of education in elite, graduate-oriented research universities—including Harvard, Stanford, Yale, Michigan, Duke, Chicago, and Columbia—during the 20th century, showing how these schools became the model type toward which other institutions gravitated. Their affiliation with elite universities, the emphasis on the scientific principles of education to be discovered by researchers, and the prominence given to preparing educational leaders (defined primarily as administrators and professors of education) increased their status at the expense of normal schools and state teachers' colleges. Yet on their own campuses these same schools of education were second-class citizens.

Facing "status deprivation" as vocational schools in an academic milieu the education schools adopted "dysfunctional coping strat-

egies" (p. 332) of appeasement and accommodation, including the appointment of discipline-oriented scholars with little interest in the practical problems of schools, the exaltation of the Ph.D. degree over the more clinical and applied Ed.D. degree, and the emphasis on social science educational policy research rather than on the problems facing the predominantly female teaching force. Imitative rather than initiative, the accommodations served only to confirm the second-class status of schools of education, which were tolerated on their campuses only because they allowed universities to show concern for education and because their students brought tuition income.

Clifford and Guthrie believe that schools of education can improve themselves through a commitment to professional education rooted in the practical problems that confront teachers. In keeping with the thrust of recent reports on the teaching profession, they believe that the undergraduate education major should be eliminated and that national professional standards for entering teaching should be established. But their essential recommendation is more fundamental: "Schools of education must take the profession of education, not academia, as their main point of reference" (p. 349). One consequence of this is the recommendation that the Ph.D. degree in education be abandoned in favor of an Ed.D. degree that includes "knowledge of and appreciation for academic research" but is not "oriented primarily toward academic inquiry" (p. 358).

Ed School is a powerfully argued case against almost every major trend in education schools for more than 50 years. As such, it should be a center of discussion for those inside and outside education schools. But powerfully argued as it is, *Ed School* is deeply flawed. Clifford and Guthrie appear to have been much affected by the near closing of the school of education at Berkeley (in the saving of which they were active players). They imply that the arts and sciences disciplines were at the heart of the problem at Berkeley, that the education school tried to be too much like those disciplines and was treated contemptuously for the effort. That is only one reading of what occurred at Berkeley, and it distorts Clifford and Guthrie's reading of schools of education more broadly. Their call for a more extensive research agenda rooted in educational practice is right on target; their positing of academic research as the enemy is not. Schools of education need the tension of multiple points of view and the stimulus of scholarly dialogue, and it is essential that scholars in education schools partake in the research mission of their university colleagues. Clifford and Guthrie depreciate the

productivity of the tension and the necessity of sharing the intellectual enterprise. At this extraordinary moment when schools of education are a focus of attention and debate, *Ed School* is an important contribution, presenting the case for a distinctive professional school that turns outward away from the campus and toward the public schools. That case has a great deal of merit, but taken to the length that Clifford and Guthrie suggest it also means a loss of faith in the value of scholarly inquiry that I, for one, am not ready to accept.

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Pacific Overview

The Ocean Basins and Margins. Vol. 7B, The Pacific Ocean. ALAN E. M. NAIRN, FRANCIS G. STEHLI, and SEIYA UYEDA, Eds. Plenum, New York, 1988. xiv, 642 pp., illus. $95.

Although I have never seen the guidelines or instructions that the editors of this series provide to contributors, I imagine they read something like this: "Write a well-illustrated review of part of an ocean (or related adjacent land masses) and include enough geological and geophysical information so that a wide variety of earth scientists can capture the essence of its evolution and structure." The book at hand completes the survey of the Pacific Ocean begun by its companion, Volume 7A. Most of the papers focus on either the Pacific or an adjacent continent, but four chapters deal with geophysical data from the entire ocean. In my estimation, most, but not all, of the 14 chapters meet the imaginary criteria quoted above.

I will use a few chapters as examples illustrating the range encompassed in this collection. The contribution by D. B. Stone on the Bering Sea and Aleutian arc epitomizes what I believe will prove to be the most useful kind of review. Perhaps its most striking feature is the quality of its illustrations, which include a variety of clearly labeled maps, cross sections, seismic reflection and refraction profiles, and oblique physiographic diagrams. By scanning the figures alone a reader could obtain at least a feel for the overall structure of the Bering Sea and its margins. Another important attribute of the chapter is its variety of well-integrated and up-to-date geophysical data and geological evidence. Most of the chapter is devoted to the Bering Sea itself and the Aleutian arc constituting its southern margin, but some relevant features of mainland Alaska and the Soviet Union adjacent to the sea (for example, large latitudinal displacements indicated by paleomagnetic data) are briefly discussed. Other chapters on the northeast Pacific, the Caroline plate region, and New Zealand and environs are comparable in scope and quality.

Notably less successful are two chapters on China and the China Sea. Although there is a reawakening of interest in the geology of China among Western geoscientists, I doubt that these contributions will satisfy the need for an overview of the stratigraphy, tectonics, or geological history of the region. The chapter on China suffers from a lack of powerful yet simple illustrations—especially maps and cross sections—on the one hand, and too much stratigraphic detail from diverse regions on the other. I concluded after reading this contribution that chapters on continental regions adjacent to oceans should be included in this kind of volume only if the information in them is clearly relevant to processes recorded in the oceans themselves. The chapter on the China Sea also needs more illustrations and a better explanation of how the evolution of the component ocean basins themselves is related to not only the Asian mainland but also the archipelagos and islands to the south and east.

A chapter by Saleeby and Gehrels on the tectonic history of the California margin is unusual and deserves comment. It makes the case that the Phanerozoic tectonics of not only California but also the western margin of the United States and Canada is clearly related to processes in the adjacent Pacific Ocean. Though I found it fascinating reading, probably because of my specialized interest in Cordilleran tectonics, I was nearly overwhelmed with details of on-land geology, and even the authors would admit that the connections between what is recorded on land and what is inferred to have occurred offshore prior to about 20 to 30 million years ago are quite hypothetical. I find these model-dependent contributions less valuable to the nonspecialist than the comprehensive yet broad reviews such as Stone's on the Bering Sea.

This volume (like its companion) contains several general reviews that are potentially useful for a geoscientist who wants an introduction to parts of the Pacific without spending the better part of a lifetime in the library plowing through an immense literature scattered through tens of sources. Not every part of the Pacific or its related margins is covered, of course, but I would recommend this volume and the majority of its papers as an excellent place to begin.

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Some Other Books of Interest

Pheromone Biochemistry. GLENN D. PRESTWICH and GARY J. BLOMQUIST, Eds. Academic Press, San Diego, CA, 1987. xx, 565 pp., illus. $85.

This book is "designed as a sourcebook for the next decade of research" on insect pheromones. The first part of the book is devoted to pheromone biosynthesis and its regulation. The opening papers deal with the structure and function of pheromones (Tumlinson and Teal) and with glands that produce sex pheromones (Percy-Cunningham and MacDonald). Four papers in the section relate to Lepidoptera: Bjostad *et al.* on desaturation and chain shortening in biosynthesis, Morse and Meighen on enzymatic studies, Raina and Menn on endocrine regulation, and Eisner and Meinwald on courtship behavior. Others deal with Coleoptera (Vanderwel and Oelschlager), Diptera (Blomquist *et al.*), ixodid ticks (Sonenshine), and meloid beetles (cantharadin; McCormick and Carrel). Part 2, on pheromone reception and catabolism, contains five papers: Steinbrecht on pheromone-sensitive sensilla, Vogt on the molecular biology and De Kramer and Hemberger on the neurobiology of pheromone reception, Prestwich on chemical studies using radioligands, and Pace and Lancet on molecular mechanisms of vertebrate olfaction.—**K.L.**

NaCl Transport in Epithelia. R. GREGER, Ed. Springer-Verlag, New York, 1988. xii, 321 pp., illus. $89.50. Advances in Comparative and Environmental Physiology, vol. 1.

This volume inaugurates a series that, in the words of its editor-in-chief, Raymond Gilles, is intended to "provide comprehensive, integrated reviews giving sound, critical, and provocative summaries of our present knowledge in environmental and comparative physiology, from the molecular to the organismic level." The present volume consists of eight papers, covering sodium chloride transport in gills and related structures in vertebrates and invertebrates (Péqueux, Gilles, and Marshall), intestine in invertebrates (Gerencser) and vertebrates (Groot and Bakker), the kidney (Lang), amphibian skin (Larsen), tracheal epithelium (Welsh), salt glands (Schlatter and Greger), and tight epithelia (Palmer). Volume 2 of the series will cover a variety of topics including hibernation and nutrient transport. Further projected volumes will be devoted to the molecular and cellular basis of social behavior in vertebrates, animal adaptation to cold, and vertebrate gas exchange.—**K.L.**