Vignettes: Dinners with Notables

During a dinner at the Huxleys', Grace [Mrs. Edwin Hubble] was seated next to the novelist's brother Julian . . . . Edwin was given the place of honor beside Bertrand Russell, who confessed to a weakness for Agatha Christie mysteries. . . . Hoping to pass the evening on a high intellectual plane, the Hubbles were disappointed by Russell's preoccupation with his fate. The long-standing pacifist and his wife would soon have to go at great expense to Mexico, provided the authorities would admit them, and then, if they got there, the United States might not let them come back. Grace offered to contact a certain well-connected friend on the Russells' behalf, but the annoying lament continued. . . . She followed Edwin's longing gaze across the room where the actor Ronald Colman, who had a head cold from sitting in a massive refrigeration unit during filming, was reverently listening to a discussion dominated by Aldous.

—*Gale E. Christianson*, in *Edwin Hubble: Mariner of the Nebulae* (Farrar, Straus, and Giroux)

We had some time to wait before dinner for Dr. Fitton, which is always awful and, in my opinion, Mr. Lyell is enough to flatten a party, as he never speaks above his breath, so that everybody keeps lowering their tone to his. Mr. Brown, who Humboldt calls "the glory of Great Britain," looks so shy, as if he longed to shrink into himself and disappear entirely; however, notwithstanding these two dead weights, viz. the greatest botanist and the greatest geologist in Europe, we did very well and had no pauses.

—*Emma Wedgwood Darwin*, 1839, on a dinner party given shortly after her marriage to Charles, as quoted by Janet Browne in *Charles Darwin: Voyaging, Volume 1 of a Biography* (Knopf)

edgeable about the history of mathematical crystallography and gives a sweeping historical view in order to set the stage for the last 10 years. By lucky happenstance she was the co-organizer of a workshop on mathematical crystallography at Institut des Hautes Etudes Scientifiques in France in January 1985 that had long been planned to feature some intense discussions about modulated crystals, generalizations of the aperiodic tilings of Penrose and Ammann, and crystallography in higher dimensions. All were topics of immediate applicability to quasicrystals. A last-minute invitation issued to some of the discoverers of quasicrystals produced an immediate appreciation of the mathematical opportunities. Senechal became an active participant in this research and an able chronicler. Her several published reports and this book convey both the searches for new directions and the excitement of new results and are worthwhile narratives of ten exciting years.

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Other Books of Interest

Frontiers in Mathematical Biology. S. A. LEVIN, Ed. Springer-Verlag, New York, 1994. x, 633 pp., illus. $69 or DM98. Lecture Notes in Biomathematics, vol. 100.

This 100th volume marks the termination of a monograph series of some 20 years' standing. Conceived as an effort to foster the development of a field that at the time seemed peripheral to much of biology, the series comes to its end at a point at which, the editor writes, "mathematical biologists . . . see their work guiding experiments, and shaping the conceptual foundations of almost all areas of biology." For this final volume Levin has invited a number of contributors to the field to "take a step back from their work, and to give their views on the key issues in their subject areas." In all there are 36 papers grouped thematically according to what Levin describes as "a convenient if imperfect hierarchy." The first group, Frontiers in Cell and Molecular Biology, contains discussions of molecular topics ranging from RNA structure to gene mapping by De Lisi and by Waterman and of cellular topics by Oster and Perelson (the mechanics of protrusion) and by Alt (effects of environmental stimuli on movement and orientation). Organismal biology is represented next, with papers on pattern formation in tissue interaction (Murray *et al.*), neurotransmitter release (Segel), mutual synchronization in neurobiology (Strogatz), ventricular fibrillation (Winfree), and immune networks (Rose and Perelson). Turning to issues in evolutionary biology, Ohta considers the evolution of gene families, Ewens gives a "devil's advocate" critique of theoretical population genetics, Otto *et al.* address the advantages and disadvantages of recombination, Bookstein offers an "intellectual history" of the biometric analyis of size and shape, and Mangel and Roitberg consider the consequences of behavior for fitness with respect to infectious disease. In a section on population ecology two papers (Tuljapurkar, Diekmann and Metz) are concerned with life history. Then models for the dynamics of structured populations are discussed by Cushing, social aggregations of animals by Grünbaum and Akubo, and spatial chaos in ecology and evolution by May. Frontiers in Community and Ecosystem Ecology opens with two papers by Cohen, both dealing with food webs—their future as descriptions of community ecology and the contribution of Lorenzo Camerano, a translation of whose 1880 paper on the subject is also included. In other papers Levin discusses the challenge of incorporating physical environmental factors into population biology; De Angelis *et al.* concern themselves with "computational ecology," specifically with population models that simulate many discrete organisms; Getz presents a "metaphysiological approach" to the analysis of trophic systems; Yodzis discusses trophodynamic models of communities, with attention to effects of the way data are aggregated; and Castillo-Chavez *et al.* take up "contact structures"—those by which diseases, genetic characteristics, or cultural traits are transmitted. Categorized as applied biology are papers on spatial structure in conservation (Hastings), the construction of epidemiological models (Hethcote), fisheries management (Ludwig), and ecological risk assessment (Hallam and Lassiter). A final section, Mathematical Challenges, comprises papers on health information in developing countries (Krickeberg), the Belousov-Zhabotinsky reaction (Tyson), model-building as an inverse problem (Capasso and Forte), and estimation techniques for size-structured population models (Banks), along with a discussion of dynamic systems that its author (Akin) describes as a "conservative harumph" at currently trendy approaches. A subject index concludes the volume. Unfortunately lacking is a listing of the previous works that have made up the series.

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