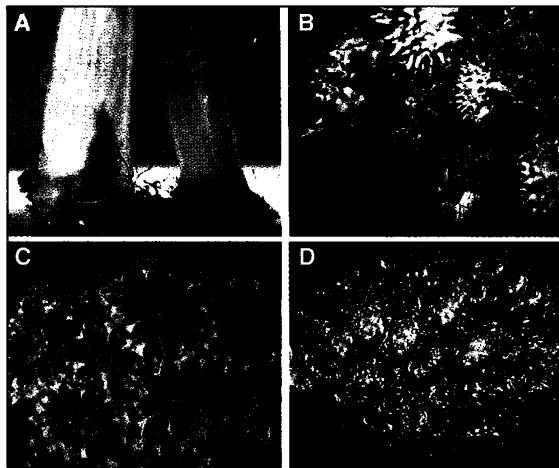




"Representative species of ascidians. (A) A cosmopolitan, solitary ascidian, *Ciona intestinalis* (left); at right is *C. savignyi*. (B) The Japanese ascidian *Halocynthia roretzi*. (C) A cosmopolitan, colonial ascidian, *Botryllus schlosseri*. (D) A colonial ascidian, *Polyandrocarpa misakiensis*." [From *Developmental Biology of Ascidians*; photographs a, c, and d provided by A. Hoshino, Y. Saito, and K. Kawamura, respectively]

natural laboratory for examining how a few changes might produce large manifestations in morphology. Some ascidians of the genus *Molgula* develop as tailed or nontailed forms, and the morphological and molecular differences in development between these closely related species are now being

described by Swalla and Jefferey. Finally, and I am leaving out much, there is the asexual reproduction characteristic of the colonial ascidians and the fascinating questions raised by this type of development. And related to this is the phenomenon of recognition or non-recognition that these colonial tunicates exhibit. This bears a striking resemblance to the immune recognition responses of the related vertebrates, and this phenomenon is now the subject of collaborative research between groups in my own institution, Japan, and Israel.

Satoh's book provides a good comprehensive review of the reproductive and developmental biology of the ascidians, as well as details of their general biology and physiology. This short and readable yet comprehensive volume will stimulate even more research on these interesting marine organisms whose ancestry we share.

David Epel

Hopkins Marine Station,
Department of Biological Sciences,
Stanford University,
Pacific Grove, CA 93950, USA

Other Books of Interest

Organic Syntheses Based on Name Reactions and Unnamed Reactions. A. HASSNER and C. STUMER. Pergamon (Elsevier Science), Tarrytown, NY, 1994. vii, 453 pp., illus. \$104 or £65; paper, \$39.50 or £28. Tetrahedron Organic Chemistry Series, vol. 11.

This is a book from which one can learn the particulars of what is meant by such terms as "Arndt-Eistert homologation," "Curtius rearrangement," "Koser tosylation," and "Wenzel-Imamoto reduction." In all, the authors include (typically allotting a page to each) well over 400 reactions, discussed in alphabetical order from Alder (ene) reaction—a "sigmatropic rearrangement with H-transfer and C—C bond formation (inter- or intramolecular) and chiral induction"—to Zinin benzidine (semidine) rearrangement. For each reaction are given, in addition to a brief definition such as the one just quoted, structural diagrams, references to the original and selected subsequent sources in the literature, and a description of the experimental technique. As to the principle of selection, the authors note both that some

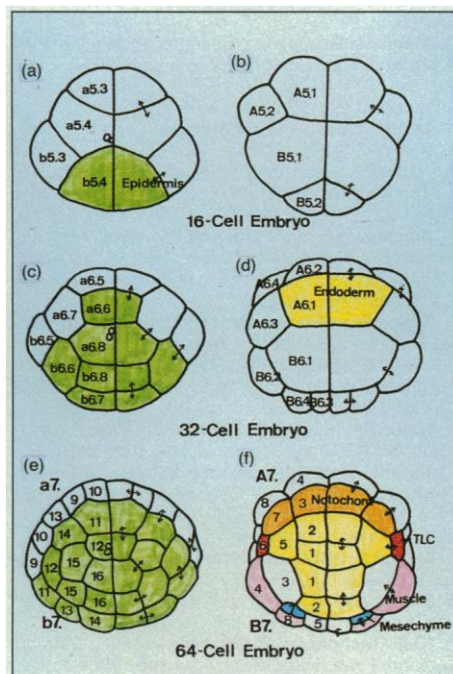
reactions "are so obvious mechanistically to the modern organic chemistry practitioner that we have in fact omitted them" and that "others are so important and so well entrenched by name . . . that it is impossible to ignore them," respective examples being the Schotten-Baumann procedure and the Baeyer-Villiger ketone oxidation. They also report that some living authors were consulted about the appropriateness of their eponyms. Several indexes have been provided to facilitate use of the book—of names, reagents, reactions, and, in a fold-out chart, functional group transformations.

—Katherine Livingston

Relaxation Phenomena in Condensed Matter. WILLIAM COFFEY, Ed. Wiley, New York, 1994. xiv, 766 pp., illus. \$150 or £161. *Advances in Chemical Physics*, vol. 187.

As an outcome of a 1991 visit to Russia William Coffey has assembled for this volume of *Advances in Chemical Physics* a "representative selection" (in English) of Russian work on relaxation phenomena. The work opens with a 30-page review of the theory of the dynamic susceptibility of magnetic fluids by M. I. Shliomis and V. I. Stepanov. The longest paper in the volume is a 255-page discussion by Vladimir I. Gaiduk and Boris M. Tseitlin of the complex susceptibility of a liberating dipole in an axially symmetric potential well. In two of the six remaining papers, which range in length from 50 to 100 pages, Yuri P. Kalmykov and Sergei V. Titov expound a memory-function approach to extended rotational diffusion models of molecular reorientations in fluids and Tatiana S. Perova reports on her work on far-infrared and low-frequency Raman spectra of condensed media. In two papers concerned with aqueous solutions the structure and related properties of solutions of electrolytes and nonelectrolytes are discussed by A. K. Lyashchenko and Yuri I. Khurgin *et al.* discuss millimeter absorption spectroscopy with special reference to solutions of medical interest. In the two final papers S. A. Nikitov discusses magnetic excitations in ferromagnetic media and Yuri L. Raikher and Shliomis discuss the effective field method in the orientational kinetics of magnetic fluids (a term they define as referring to "a stable colloidal suspension of ultrafine particles of a ferromagnet or ferrite in any ordinary liquid") and liquid crystals. Each paper has its own table of contents and reference list, and most include lists of symbols used. In addition, there are subject and author indexes for the volume as a whole.

—Katherine Livingston



"Progressive restriction of developmental fates during ascidian embryogenesis. . . . Blastomeres whose developmental potential has been restricted to give rise to only one kind of tissue are shown by color: green, epidermis; yellow, endoderm; pink, muscle; orange, notochord; blue, mesenchyme; red, trunk lateral cells." [From *Developmental Biology of Ascidians*]