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product. This argument is especially germane to discussions of the patentability of DNA sequences of unknown function. Because proprietary information and patenting have been very controversial aspects of genomics research, it is unfortunate that the author does not address these issues more directly.

For a new perspective on the scientific and commercial importance of genomics from an industry viewpoint, *Transducing the Genome* offers nonspecialists an excellent and enjoyable introduction. Readers interested in more history or requiring clarification of basic genome science will find Kevin Davies's account of the race for the human sequence (*2*) a good alternative. Nonetheless, just as there is still much to be learned from the human genome, there remains room for a thorough and analytical overview of the field.

References

1. A. M. Heller, R. S. Eisenberg, *Science* **280**, 698 (1998).
2. K. Davies, *Cracking the Genome* (Free Press, New York, 2001).

BOOKS: ECOLOGY

Beautiful Reef Builders

Stephen D. Cairns

This three-volume set is the culmination and synthesis of 30 years of research by John Veron on the biology of reef corals (order Scleractinia), and it is a remarkable achievement. For the first time, all 795 known species of extant reef corals are treated in one publication. Every species is briefly described and compared with similar taxa. Species' distributions are depicted in thumbnail maps, and their colonies are illustrated in color. The remarkable aspect of *Corals of the World* is that Veron not only managed to obtain one to six in situ photographs of 790 species, but that these pictures are exquisite. They are supplemented with numerous shaded drawings and color paintings by Geoff Kelley, which beautifully and accurately illustrate the skeletal microarchitecture. And throughout the work, Veron and his editor, Mary Stafford-Smith, have scattered spectacular photographs—some covering two full pages—of coral reefs, coral assemblages, and simply stunning corals.

Corals of the World
by J. E. N. Veron
Australian Institute of Marine Science, Townsville, Queensland. 2000. 3 vols. 1410 pp. $175, $A265. ISBN 0-642-32236-8.

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Veron begins with short introductions to observing corals, coral reef ecology, fossil corals, geological history, and coral morphology. The taxonomic accounts, which consume over 90% of the three volumes, describe the appearance, habitat, and distribution of each species. The author has previously described many new species of reef corals, and here he adds another 102 species and two genera to the world list (probably the largest number of new coral taxa ever introduced in a single publication). His taxonomic decisions increase the number of reef coral species by about 15%. Veron concludes with brief overviews of coral biogeography, the species concept in reef corals, and the evolution of coral species. Much of the material on these more academic topics has been abstracted from the author's earlier book *Corals in Space and Time* (University of New South Wales Press, Sydney, 1995). The third volume also includes an identification key to all genera and species of reef corals.

Although lavishly illustrated and a pleasure to browse, the work has some technical faults. The title *Corals of the World* implies that Veron surveys all species of stony corals, but he has largely restricted his attention to the stony corals with symbiotic algae, which are primarily inhabitants of modern shallow-water reefs. These zooxanthellate scleractinians constitute only about 50% of the stony coral species. The author only briefly alludes to the azooxanthellate taxa, of which over 650 species occur in deep or cold waters. Second, the new species that Veron names here are not validly described according to the International Code of Zoological Nomenclature, because type specimens are not designated for any of them. For each new species, the author simply includes a reference to a forthcoming monograph. But it is nomenclaturally awkward to have created so many nomina nuda, which will become valid only in a subsequent publication. Finally, Veron's brief lists of selected taxonomic references (and, occasionally, identification guides) are no substitute for good synonymies—complete lists of the names that have previously been applied to each species. He states his aversion to synonymies; he believes they are likely to "include 'fuzzy' species boundaries and thus...arbitrary decisions." But in their absence, it is impossible to know what he has done with all the junior synonyms. As a result, Veron's recognition of species in this work is one of taxonomic fiat.

Thus, the audience for *Corals of the World* is probably not the taxonomic purist. Nonetheless, the book will certainly appeal to a wide range of readers: anyone with an eye for beauty in nature, marine biologists and divers, and those that strive to identify living reef corals. Indeed, Veron states early on that the work is intended to facilitate the identification of corals in their underwater habitats. In a broader sense, as noted in an advertisement for the book, it is for "all who appreciate the beauty of coral reefs and who want to know more about the organisms that build them." Even as a taxonomic purist, I can value that.

Colonies without walls. In members of the family Agariciidae, such as this *Pavona explanulata* from Australia's Great Barrier Reef, walls between the loosely packed polyps are poorly defined and prominent septa are continuous between adjacent corallites.

CREDIT: J. E. N. VERON/AUSTRALIAN INSTITUTE OF MARINE SCIENCE