are characterized by less than 10 percent endemicity. This also helps to explain the very long average age (10 million years) of coral species in the fossil record.

Veron does not overlook the fact that low coral biodiversity can also be a consequence of low habitat diversity; reef-building corals occur only in the euphotic zone and in the tropics. Veron explains similarities in species composition as due to similarities in habitat. Reefs characterized by large differences in physical habitat though separated by a few miles may be more different than reefs with similar habitat on western and eastern coastlines of Australia, a separation of over 1000 miles. Herein may lie a limitation to Veron's argument. If corals need to retain genetic specialization (for example, habitat specificity), they must avoid hybridizing with species occupying very different but nearby habitats. Veron does not discuss this problem, but then he does not claim that reticulate evolution applies to all corals any more than it applies to all species in nature.

Thus Veron does not argue either-or regarding dichotomous or reticulate evolution; rather, he offers the latter as a significant process to explain the evolution of those species that can successfully hybridize. The hypothesis of reticulate evolution is not new regarding plants, but it has been given little consideration in animal systematics. Veron suggests that reticulate evolution may be a major mechanism in the evolution of many marine invertebrates (among them crustaceans, mollusks, polychaetes, and echinoderms) and some vertebrates, notably Amphibia, in which fertilization is external. This is the major contribution of the book, and it should usher in a plethora of new research to test the generality of the hypothesis. If it occurs broadly, reticulate evolution should wreak havoc on traditional cladistics. Ultimately, the overall importance of reticulate evolution may be proved or disproved by molecular genetics. Thus the book represents a challenge for future research.

Having focused on the positives, I would be remiss not to mention some shortcomings. Perhaps the most bothersome to me is Veron's use of the term "vicariance circulation" to explain both separation and connectivity. Clearly circulation (ocean currents) can cause both, but the term "vicariance" refers to separation only. Other bits of jargon, such as "connectivity ratchets" are distracting, although Veron's meaning is clear. The references in some chapters are rather spotty, and some typos need correcting, such as the latitude of Clipperton Atoll (10 degrees north, not south). The writing in places is somewhat nebulous, but this is more than offset by the numerous summaries of main points and conclusions. It may take a decade of research to verify reticulate evolution as a major evolutionary process. If it proves to be such, history could well place Veron's *Corals in Space and Time* on the shelf alongside the works of Darwin, Mayr, Eldredge, and Gould.

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Books Received

Analysis of Biological Development. Klaus Kalthoff. McGraw-Hill, New York, 1995. xviii, 738 pp. + supplementary material. $68.63.

The Botany of Mangroves. P. B. Tomlinson. Cambridge University Press, New York, 1995. xii, 419 pp., illus. Paper, $29.95. Cambridge Tropical Biology. Reprint, 1986 ed.

Caring for Patients. A Critique of the Medical Model. Allen B. Barbour. Stanford University Press, Stanford, CA, 1995. xxx, 398 pp. $45.

Crystal Chemistry of Condensed Phosphates. A. Durif. Plenum, New York, 1995. xvi, 408 pp., illus. $115.

Empires of Time. Calenders, Clocks, and Cultures. Anthony F. Aveni. Kodansha Globe, New York, 1995. x, 371 pp., illus. Paper, $16. Reprint, 1989 ed.

Encounters with Qi. Exploring Chinese Medicine. David Eisenberg, with Thomas Lee Wright. Norton, New

York, 1995. 260 pp., illus. Paper, $11 or $C13.99. Reprint, 1985 ed.

Forces in Scanning Probe Methods. H.-J. Güntherodt, D. Anselmetti, and E. Meyer, Eds. Kluwer, Norwell, MA, 1995. xiv, 644 pp., illus. $290 or £187 or Dfl. 445. NATO ASI Series E, vol. 286. From an institute, Schluchsee, Germany, March 1994.

Fractal Cities. A Geometry of Form and Function. Michael Batty and Paul Longley. Academic Press, San Diego, 1994. xxii, 394 pp., illus., + plates. $35.

Geohazards. Natural and Human. Nicholas K. Coch. Prentice Hall, Englewood Cliffs, NJ, 1995. xx, 481 pp., illus. $51.33.

How the Leopard Changed Its Spots. The Evolution of Complexity. Brian Goodwin. Scribner's, New York, 1994. xvi, 252 pp., illus. $23.

***In Vitro* Embryogenesis in Plants**. Trevor A. Thorpe, Ed. Kluwer, Norwell, MA, 1995. x, 558 pp., illus. $264 or £164 or 400 Dfl. Current Plant Science and Biotechnology in Agriculture, vol. 20.

The Modular Brain. How New Discoveries in Neuroscience Are Answering Age-Old Questions about Memory, Free Will, Consciousness, and Personal Identity. Richard M. Restak. Touchstone (Simon and Schuster), New York, 1995. xx, 199 pp., illus. Paper, $14. Reprint, 1994 ed.

The Monkey Wars. Deborah Blum. Oxford University Press, New York, 1994. xii, 306 pp. + plates. $25.

Neurobiological Effects of Sex Steroid Hormones. Paul E. Micevych and Ronald P. Hammer, Jr., Eds. Cambridge University Press, New York, 1995. xviii, 444 pp., illus. $84.95.

Patty's Industrial Hygiene and Toxicology. Vol. 2, Part E, Toxicology. George D. Clayton and Florence E. Clayton, Eds. 4th ed. Wiley, New York, 1994. xviii, pp. 3285-4310, illus. $195.

The Private Life of Plants. A Natural History of Plant Behavior. David Attenborough. Princeton University Press, Princeton, NJ, 1995. 320 pp., illus. $26.95. Based on a television series.

Quantum Chaos. Between Order and Disorder. Giulio Casati and Boris Chirikov, Eds. Cambridge University Press, New York, 1995. xvi, 683 pp., illus. $100.

Separations of *f* Elements. Kenneth L. Nash and Gregory R. Choppin, Eds. Plenum, New York, 1995. viii, 277 pp., illus. $95. From a symposium, San Diego, March 1994.

Serengeti II. Dynamics, Management, and Conservation of an Ecosystem. A. R. E. Sinclair and Peter Arcese, Ed. University of Chicago Press, Chicago, 1995. xii, 665 pp., illus. $90 or £71.95; paper, $34 or £27.25. Based on a workshop, Arusha, Tanzania, Dec. 1991.

What's Love Got to Do with It? The Evolution of Human Mating. Meredith F. Small. Anchor (Doubleday), New York, 1995. xxii, 249 pp. + plates. $24.95.

Publishers' Addresses

Below is information about how to direct orders for books reviewed in this issue. A fuller list of addresses of publishers represented in *Science* appears in the issue of 26 May 1995, page 1220.

Comstock Press, P.O. Box 6525, Ithaca, NY 14851–6525. Phone: 800-666-2211 (outside NY state); 607-277-2211. Fax: 800-688-2877; 607-277-6292.

Routledge, 29 W. 35th St., New York, NY 10001–2299. Phone: 800-634-7064; 212-244-6412. Fax: 800-248-4724; 212-268-9964.

University of Georgia Press, Order Dept., 330 Research Dr., Athens, GA 30602–4901. Phone: 706-369-6130. Fax: 706-369-6131.