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Books received

Understanding DNA and Gene Cloning: a Guide for the Curious. 2nd edition. Karl Drlica. John Wiley, Chichester. Pp. 240. Paperback, price £17.95. ISBN 0 471 62225 7.

Nucleic Acids and Molecular Biology. F. Eckstein and D. M. J. Lilley (eds). Springer-Verlag, Berlin. 1992. Pp. 251. Hardback, price £70.00. ISBN 3 540 53121 1.

The Ant and the Peacock. Helena Cronin. Cambridge University Press, Cambridge. 1992. Pp. 490. Hardback, price £27.50. ISBN 0 521 32937 X.

Biotechnological Innovations in Animal Productivity. Biotol (Biotechnology by Open Learning). Butterworth-Heinemann, Oxford. 1991. Pp. 217. Paperback, price £19.95. ISBN 0 7506 1511 7.

Rice Biotechnology. G. S. Khush and G. H. Toenniessen (eds). C.A.B International, Wallingford. 1991. Pp. 300. Hardback, price £45.00. ISBN 0 85198 712 5.

Advanced Methods in Plant Breeding and Biotechnology. D. R. Murray (ed.). C.A.B International, Wallingford. 1991. Pp. 370. Hardback, price £49.95. ISBN 0 85198 706 0.

Gene Regulation: Biology of Antisense RNA and DNA (Raven Press Series on Molecular and Cellular Biology, Volume 1). R. P. Erickson and J. G. Izant (eds). Raven Press, New York. 1991. Pp. 384. Hardback, price £52.00. ISBN 0 88167 854 6.

Protocols in Human Molecular Genetics. (Methods in Molecular Biology, Volume 9). C. G. Mathew (ed.). John Wiley, Chichester. 1991. Pp. 461. Hardback, price £60.00 ISBN 0 89603 205 1.

Book reviews

Cytogenetics of Amphibians and Reptiles. Ettore Olmo (ed.). Birkhauser Verlag, Basel. 1990. Pp. 270. Price £30.00, Hardback, ISBN 0 8176 2358 2.

Amphibian Cytogenetics and Evolution. D. M. Green and S. K. Sessions. (eds). Academic Press, New York. 1991. Pp. 456. Price £60.00, Hardback, ISBN 0 12 297880 3.

Both of the above titles are based on symposia held in 1989 and both are concerned with taxonomic relationships and karyotype evolution. Olmo rapidly collected the proceedings from a session of the First World Congress of Herpetology. The speed of production and variable layout indicate that the editor sensibly demanded camera-ready copy from the participants and dispensed with any notion of proof-reading. The result is quite legible and intelligible, but photographic evidence has to be taken on trust. Green and Sessions selected some contributions from a meeting of the American Society of Ichthyologists and Herpetologists, invited other articles and used typesetting with much better photographs.

Herpetology is a convenient but archaic term, recalling a period when any salamander could be casually lumped into the genus *Lacerta*. Modern taxonomists all seem to be splitters, leading to the complaint that their creation of new species counterbalances our destruction of existing ones. Karyotypes are not an infallible guide to relationships, as any passing muntjac will confirm, but they do have certain advantages over other characters. Relative stability seems to be one. Chromosome number or the location of a nucleolar organizer may be so trivial that they can be treated as selectively neutral markers, yet some chromosome rearrangements do reduce heterozygote fitness and could thus create a barrier leading to speciation. The basic tenets of karyotype evolution were elaborated more than 40 years ago, with later techniques mainly adding more precise means of identifying chromosome regions or DNA sequences.

Olmo's book contains five reviews of amphibian karyotypes and four reptilean ones, with almost as many brief reports in each category that might well have originated as posters. Most of the reviews here carry the authority of long experience, so this collection's usefulness will greatly outlast that of normal symposium volumes.

Morescalchi provides an introductory survey of general amphibian karyotypes, concluding that a reduction in chromosome number occurred in all three orders despite later increases in some tropical anurans. He attempts to relate genome size to environmental conditions and life history, but adds that this allows a 'dichotomic interpretation of cytogenetic reports'. I suspect that is equally true for reptiles. Schmid is surely *the* expert on amphibian C-banding with 400 species to his credit. He explains here why they are refractory to G-banding and outlines the basis for more specific banding procedures. Macgregor traces a possible evolution of one very peculiar chromosome and several satellite DNA sequences in European newts. Following