

Book reviews

The Chromosome. J. S. Heslop-Harrison and R. B. Flavell. Bios Scientific Publishers. Oxford. 1993. Pp. 281. Price £49.50, hardback. ISBN 1 872748 32 5.

What would you expect of a book entitled *The Chromosome*? At the very least I suppose, two telomeres, a centromere and an origin of replication. I came to this volume with the expectation that I would come away better informed on these topics and on other aspects of chromosome biology. I was disappointed. The telomeres were there, so too was the origin of replication. Also present were articles on domain structure, CpG islands, nuclear organization, and recombination. The centromere was missing though there was a piece on DNA segregation in bacterial cell division. What was disappointing was that I knew too much already about some of the topics for them to be interesting and I knew too little about other topics to be able to understand them as presented here.

The Chromosome is the book of a meeting, and as such it suffers from the faults which are common to almost all such books. First, it is not at all clear at whom these volumes are aimed. Is it the conference participants? Surely not. How many of us are likely to go now to our university bookshop to buy the report of a conference which we attended in September 1992? Not many I think. If we attended the meeting I would like to hope that we received abstracts, took copious notes and spent long and profitable hours in the bar in conversation with the authors (or even with the people who did the experiments). Furthermore, we probably are actively interested in the subject and have kept abreast of the current literature (and if a week is a long time in politics, how much longer does it seem today in molecular genetics). If not the conference participants themselves, maybe their colleagues also working in the field but unlucky enough not to attend the meeting might like to buy this book. But this also seems unlikely, since they too will have kept abreast of the literature. What about workers in related fields? I think that I myself come into this category; I have for a long time been trying to assemble a cosmid contig map of the human Y chromosome which must mean that I am interested in the structure of chromosomes. I suppose that I am, but really only in their content of genes and in the gene organisation and evolution. I rarely think in units as large as a chromosome; a megabase of DNA seems like a very big chunk to me. Is this a suitable volume for my selves? (I must have thought that it might be when I agreed to this review). I am sorry to say that it is not particularly useful. I found several areas in the book. There were papers concerned with genome projects such as that in Blattner *et al.* on the progress in the *E. coli* genome project and the equivalent papers on *S. cerevisiae* and *Arabidopsis* and other plant genomes by Oliver *et al.* and Flavell *et al.* These were areas with which I was reasonably familiar, having heard similar (and more recent)

papers presented at the annual Cold Spring Harbor Genome Mapping and Sequencing meetings. I found these easy to understand, but I learnt little that was new. Then there were some straightforward pieces on telomeres and on CpG islands which again seemed familiar. I knew less about the β -globin expression domain and found the article by Dillon *et al.* a good introduction. I teach third-year genetics students about imprinting and hoped that I might find the piece of Ferguson-Smith and Surani useful but was disappointed. It might have been useful in 1992 but in 1994 it has passed its sell-by-date. Recent reviews in *Current topics in Genetics and Development* and similar journals have overtaken this paper. I wonder if the same is true of the paper by Henikoff *et al.* on position effect variegation in *Drosophila*? I found this a fascinating story and if I can find time will have to check up on the latest state-of-the-art. There were a number of papers on the arrangement of chromosomes in the nucleus which could have been interesting but which somehow failed to get my full attention; I seemed to spend too much time wondering whether the experiments reported were susceptible to alternative explanations or whether those who were expert in the field would immediately rule these out. For instance, I don't know whether the within-nucleus genome separation shown in interspecies hybrids (Fig. 2, of Heslop-Harrison *et al.*) might not just be a trivial consequence of the greater binding affinities within a species rather than between species of co-evolved sets of DNA binding proteins. Similarly, the papers on bacterial chromosomes assumed that I possessed far more background knowledge than is the case.

So who, then, might want to read this book? Perhaps a graduate student just entering any of the areas covered might find it a useful introduction to the state-of-the-art eighteen months ago and as such it has potential value. However, my advice is not to rush to buy a copy for your library. For general introductions to this and to many other fields you are far better served by subscriptions to review journals which publish on a tighter schedule.

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The Molecular Biology of Flowering. Brian Jordan (ed.). CAB International, Oxford. 1993. Pp. 272. Price £45.00, hardback. ISBN 0 85198 723 0.

Fans of David Lodge will recall that in the novel *Changing Places*, Philip Swallow, on sabbatical from the semi-fictional