some of the loop proteins are involved in the recognition and storage of particular transcripts required post-fertilization in the early development of the embryo.

One aspect of the account which I find interesting, concerns the grounds on which several hypotheses about lampbrush loops were proposed at particular times, enlivening the subject for a period, only to be discarded as further evidence was adduced. Since the demise of a hypothesis frequently takes place at a scientific conference or a less formal meeting, its passing may be inadequately recorded in the scientific literature, but the present account is not found wanting in this respect. Moreover the reader is given a good idea of where the wider gaps lie in our present understanding of the subject.

This book is very expensive. Nevertheless if you want an authentic account of work with lampbrush chromosomes for your library, this hardback volume is without rival. It is beautifully illustrated, with over 150 micrographs reproduced on good quality paper, together with 40 diagrams, drawings and tables. There are over 460 references listed in the bibliography and there is a subject index. So you do get something substantial for your money.

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Embryogenesis in Angiosperms. A Developmental and Experimental Study. By V. RAGHAVAN. Cambridge University Press. Cambridge. 1986. Developmental and cell biology series, 17. i–xiii; 303 pp. £27.50. US$39.50.

Techniques have been developed in recent years for the regeneration of whole plants from novel sources. Meristem culture, the derivation of plants from callus or directly from leaf segments, from single cells and protoplasts and from haploid pollen grains has been achieved, albeit erratically, in many angiosperm species. This converging evidence for totipotency has kindled an interest in how such atypical embryogenesis compares with the conventional form. This book caters for this interest by reviewing what students of morphology, ontogency, biochemistry and genetics have discovered about modes of angiosperm development. The author has in mind the needs of both the university student and the research worker who wants an up-to-date survey.

The account leads in with the basic framework of angiosperm embryogenesis, endosperm development, the role of the suspensor and the synthesis of storage proteins, and then deals in turn with specific research fields such as seed and proembryo culture, the different forms of somatic embryogenesis, pollen grain culture and the evidence for totipotency. There is a useful concluding chapter on practical applications like embryo rescue, clonal multiplication, the use of haploids and the conservation of germplasm. There is a commendable attempt to integrate different kinds of evidence, including recent molecular and biochemical information about the synthesis of storage proteins and mRNA sequence during embryogenesis. It is not an easy story to tell since so much of the plot is missing. The functional significance is still not understood of the different pathways which establish the ground plan of the embryo. Although the course of endosperm development is known well enough it is still obscure just how the endosperm sustains the developing embryo. The recipes for successful production of whole plants from callus, single cells and protoplasts point to a bewildering array of pragmatic cookery. The author draws attention to the evidence for intraspecific genetic variation in response to particular media. This looks like a clue worth following. Another promising approach is the exploitation of mutants which impair some part of embryo development, as a means of studying aspects of regulation. The recent work with *Zea* and *Arabidopsis* points the way. Anyone looking for research problems in the field of embryogenesis should be well satisfied since the text fairly bristles with recognition of unsolved problems.

This book can be recommended as a useful addition to the C.U.P. development and cell biology monographs. There are some thousand items in the literature list, perhaps sufficient to daunt the student, but meat and drink to the investigator.

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Genes and Development, volume 1, no. 1, March 1987. New Journal, published monthly by Cold Spring Harbor Laboratory in association with The Genetical Society of Great Britain. First year's subscription $65 plus postage for individuals, $195 plus postage for Institutions from Cold Spring Harbor Fulfillment Dept. P.O. Box 100, Cold Spring Harbor, N.Y. 11724.

It is a pleasure to welcome a new journal which is a joint publishing and editorial venture between Cold Spring Harbor Laboratory and the British Genetical society. It is scheduled to appear monthly in the now fashionable large format of $11 \times 8\frac{1}{2}$ inches (not quite a standard size, e.g. *Nature* was $\frac{1}{4}$ inch taller and narrower, but shed $\frac{1}{4}$ inch of height two years ago). The paper is of a semi-glossy high grade which gives high quality reproduction of colour as well as black and white photographs; the print, in two columns giving some 1000 words per page, is easy on the eye, and there is no feeling of crowding to save space on the page. The figures are often larger than they need to be for clarity, but I must admit to liking them the way they are – it gives the impression that good

research deserves to be well, and even opulently displayed, so I trust that pressure on space will not lead to reduced figure size and more crowded, smaller, text.

An additional point is that nucleic acid and amino acid sequences are set large enough to be readable without a magnifying glass (please note, Editors of *Nature*). The editors of *Genes and Development* appear to leave it to their authors to label figures and to supply camera-ready sequence data, so these are not standardized; but this does not, in the present number, spoil the look of the page, and so far figures and tables have been well integrated into each page by someone with quite an artistic eye.

I have been assured (true or not?) that many authors of a superior sort judge a journal more by the 'names' on its editorial board than by its other contents. *Genes and Development* should pass this test, and its founders have hit upon a very clever and short title, not pre-empted, which enables them to accept a wide range of topics for publication. This number is heavily biased towards experimental study of development (7 out of 10 papers which include three on *Xenopus*, and one each on sea urchin, transgenic petunia plants, the invected and engrailed genes in *Drosophila*, and two *en* genes in the mouse with marked partial homology to invected). The other three papers are on yeast spliceosomes, phage lambda cIII, and SV40 enhancer dissection.

On the question of journal name pre-emption, I note that the only other *Genes and*... I have found is *Genes and Gender* (a most intriguing title), *Genetical Research* is the only journal starting with the word 'genetical' (which is surprising) while the other journal belonging to the British Genetical Society, *Heredity–London*, is twinned by *Heredity–Tokyo*. However, the Society can hardly be blamed for this, since the name was thought up by R. A. Fisher, C. D. Darlington or K. Mather long before the journal came into the hands of the Society, and I suspect that these geneticists were not well versed in Japanese literature.

I should have said that the first number of this journal contains 100 pages of text, a list of nine forthcoming papers, and (an idea taken over from *Nature*) useful commentaries on two of the papers. A question one might ask is whether this new journal fulfils a need from the point of view of authors or will maintain itself by consuming papers from other journals. Let us wait and see, but it will benefit readers who like to do their serious reading in bed if it causes *Cell* to become a little slimmer and lighter in weight. I am sorry that it has not taken over from *Cell* the recommendation in their Information For Contributors that 'Authors are encouraged to rely as far as possible upon citation of articles published in primary research journals' – excellent advice from the point of view of the many readers throughout the world whose libraries cannot afford the plethora of symposium and conference proceedings which would overcrowd their library shelves if they could afford them. I am not, of course, against all such volumes but only the majority of them!

I have seen advertisements (and calls for papers) for two other new journals in the general field of molecular biology/genetics due to start this year. May the Lord (or some wealthy person or organisation) give us the money to fill them with good papers and even to afford them. Meanwhile, I look forward to the next number of *Gen. Dev.* even though I cannot afford it.

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