

race. To my mind, however, there is a flaw in the plot. Isolation of *BRCAl* was an extraordinary technical *tour de force*, a major medical advance and perhaps the last great all-out battle of the big gene-cloning empires. Yet when the sequence was released, there was a palpable sense of anticlimax, a feeling that comes through in the book. It was as if the culprit in a crime novel turned out to be someone who nobody had heard of and who lacked any obvious motive. There were few surprises, the principal one being the rather disappointing discovery that *BRCAl* does not seem to be frequently involved in common, sporadic breast cancer. Moreover, it became clear that *BRCAl* is not the only culprit and that at least one more breast-cancer gene is involved. So the isolation of *BRCAl* recedes into what it always was: an important step in a progressive increase in knowledge about a terrible disease. A breakthrough — certainly. The Breakthrough — perhaps not.

*Breakthrough* is part of a wave of books that caters to the increasing public interest in science and medicine. Some of the more detailed accounts of the gene mapping and medical management may be hard going for the general reader and the more hard-headed may wish to skip the potted biographies of the main protagonists. Nevertheless, as an all-embracing account of the current state of breast cancer, the book has something for everyone, from the previously uninformed reader to the breast-cancer specialist. □

Mike Stratton is at the Haddow Laboratories, Institute of Cancer Research, 15 Cotswold Road, Sutton, Surrey SM2 5NG, UK.

**Children's Books**

Nature plans to publish on 16 November a supplement in which children's books and software will be reviewed. The supplement will cover new publications for children of all ages.

Publishers are invited to send suitable material for consideration, taking note of the following criteria:

- Only books and software issued in 1995 will be considered;
- Books and software dealing with any aspect of science, technology, medicine, natural history or the environment are eligible (including encyclopaedias, dictionaries and games), although school curricula texts are excluded;
- The main language used must be English;
- If possible, cross-platform software (both Macintosh and PC) should be provided.

Publications for review should be sent immediately, together with details of price and availability, to Peter Tallack, Book Review Editor, *Nature*, 4 Crinan Street, London N1 9XW, UK (tel: +44 (0)171 843 4567; fax: +44 (0)171 843 4596/7; e-mail: p.tallack@nature.com).

**Science in the dock**

John Buckleton

**Science and the Detective: Selected Reading in Forensic Science.** By Brian H. Kaye. VCH: 1995. Pp. 388. DM68 (pbk); DM148 (hbk).

**Interpreting Evidence: Evaluating Forensic Science in the Courtroom.** By Bernard Robertson and G. A. Vignaux. Wiley: 1995. Pp.240. £24.95.

FORENSIC science is a broad topic, and modern books on the subject are typically highly specialized, usually written by several different authors. Not so *Science and the Detective*. The author, a physicist with an interest in lexicography, aims to interest the lay public as well as the legal community and other concerned professionals.

Although the volume is studded with fascinating case anecdotes, these are often

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**Hands on forensics: technicians check DNA fingerprints.**

described only briefly, and what details there are often betray a lack of a proper understanding of the subject. The numerous definitions of terms, on the other hand, are tiresomely lengthy and painfully precise. The word 'autopsy', for instance, is traced back to its Greek roots and is then immediately followed by the definition of 'biopsy' in a section almost as long as the discussion of whether Anna Anderson was indeed Anastasia, as she claimed. In particular, the aspects of forensics involving physics are in many cases over-emphasized. The discussion of fingerprints, for example, has a long section on laser luminescent enhancement whereas the uniqueness of fingerprints is naively accepted in just a couple of paragraphs, with scant regard paid to the quality of the prints. There is merely passing mention of the concept of a point, with reference to the 16-point rule only, and little discussion of the relevance of such rules, despite the fact that they constitute the largest single field in forensic science.

The book cannot even be used as a 'forensic dictionary': it is not set out for this purpose, nor is it accurate enough. For instance, the section on shoe prints is con-

fusingly entitled "Foot prints". For good reasons, however, practitioners in the field deliberately make a distinction between the two kinds of prints: one connects to a shoe, the other to a suspect.

The book is also remarkably behind the times. There is a description of old methods of glass examination but no mention of the modern temperature-variation methods widely used since the 1970s; in the short section on DNA, only the obsolete multilocus technique is illustrated; and for all the suspense, readers do not even learn the answer to the Anna Anderson mystery, although the solution has recently been published.

By contrast, *Interpreting Evidence* will appeal to both lawyers and forensic scientists. It has a serious message and is not light reading. The authors are prominent workers in the fascinating yet neglected field of forensic interpretation. This, their first book on the subject, is an important attempt to bring clarity to a confusing area.

The authors rightly contend that lawyers and forensic scientists must communicate in the same language if miscarriages of justice are to be avoided. The stumbling-block lies, they argue, in the lack of understanding of Bayesian inference, first outlined in 1763 but brought to the attention of the forensic community in the 1970s and 1980s by workers such as Ian Evett and Dennis Lindley. This philosophy is now applied widely by the forensic community in parts of Europe and New Zealand yet largely ignored in the United States and Australia.

Bayesian inference follows from simple laws of probability and directs the tutored mind to ask the relevant questions, in this case with respect to legal trials but also more generally in all decision-making. Even in countries applying the approach, there is considerable scope for improvement in both scientists' and lawyers' understanding of Bayesian logic.

Forensic evidence, such as DNA, can provide answers to such questions as: "What is the probability of this DNA match if the sample did not come from the suspect?" But courts are more interested in questions such as: "What is the probability that this DNA sample came from the suspect?" The authors demonstrate why these are different questions and explain how to proceed from one to the other.

The book contains many actual case examples such as the O. J. Simpson and the Birmingham Six trials, all worked through in such a way that the authors' points are irrefutable. One must hope that their work is widely read and understood by everyone to whom forensic evidence is important. □

John Buckleton is at the Forensic Science Service, Priory House, Gooch Street North, Birmingham B5 6QQ, UK.