Slugging it out

Adrian Desmond

The Cuvier–Geoffroy Debate: French Biology in the Decades before Darwin. By Toby A. Appel. *Oxford University Press*: 1987. Pp.305. \$35, £29.50.

GOETHE was electrified by news of it; Parisian intellectuals flocked to watch it; the press eagerly reported it. Cuvier and Geoffroy were at last fighting publicly at the Académie des Sciences, after a decade of deteriorating relations and increasing disagreement over the first principles of science. The story of their clash in 1830 grew to mythic (and misshapen) proportions through constant retelling in the nineteenth century. But now Toby Appel in her long-awaited and exhilarating study has cut through this older historiography to provide the definitive modern account.

The emphasis is on 'modern', for Appel sees this as a social encounter, rather than a clash of aetherial ideas. She lays bare the scientific discord all right: the imperious Georges Cuvier with his four *embranchements* of animal life, the tetchy Geoffroy St Hilaire with his "unity of plan" stretching from monad to man; Cuvier's functional explanation of structure, Geoffroy's uniform morphological laws. Appel's revisionism is strongest in this area, and she shows that both men actually defended more extreme positions than later commentators admitted.

But she does much more, and embeds this scientific analysis in a rich study of contemporary institutional politics. Her evocation of professorial life in the Jardin des Plantes — the prima-donna personalities, shifting allegiances, rival methodologies and struggles for patronage — provides the context to make sense of the passions. Outside the Jardin, too, tensions were rising as France lurched towards revolution (it came three months later), and Appel explains why, in this anticlerical climate, Cuvier feared Geoffroy's deistic, lawful science, which "would reduce Nature to a sort of slavery" and divorce it from God's immediate action.

The Académie debate was primarily about Geoffroy's "unity of plan". (It was sparked off by his support for attempts to trace homologies between squids and fishes.) But the new "philosophical anatomy" also embraced recapitulationist embryology, the animal series, and sometimes verged dangerously close to evolution — and Cuvier abhorred all of these speculative theories for implying that nature had an "autonomous existence". Of course this explains why it appealed to the republicans, and Appel depicts Geoffroy going out of his way to canvass the popular vote. His romantic vision

"The great philosopher fell into a profound sadness" — a caricature of Geoffroy and Cuvier by J.J. Grandville. (From the book under review.)

attracted the younger writers too: George Sand revelled in her meeting with the aged Geoffroy, whom she described as "a rather curious beast, as ugly as the orangutan, as talkative as a magpie, but for all that full of genius".

It is a pity that Appel was not able to mention the wealth of work published during the past five years on philosophical anatomy in Britain (a subject which L.S. Jacyna has made his own) the more so because it supports her main conclusions: that there was no outright victory for Cuvier, that Geoffroy's supporters were more numerous than had been thought, and that comparative anatomists in the 1840s hammered out a compromise between the functional and morphological approaches. But this neglect does not detract from Appel's achievement. This newer work simply enables us to flesh out her rather *ad hoc* discussion of British biology, while supporting her main thesis.

Historians are only now coming to realize how prevalent and important morphological theories were in the pre-darwinian period. *The Cuvier–Geoffroy Debate* contributes substantially to this changing historical perspective. Toby Appel's masterly study is destined to become a landmark. □

Adrian Desmond is an Honorary Research Fellow in the Department of Biology, University College London, Gower Street, London WC1E 6BT, UK, and author of *Archetypes and Ancestors: Palaeontology in Victorian London 1850–1875* (University of Chicago Press, 1984).

NATURAL
HISTORY
MUSEUM
PUBLICATIONS

First Impressions. Early British Discovery of Australia

M. Steven

Published to coincide with the Australian Bicentenary, this lavishly illustrated book draws on the records left by artists Sydney Parkinson and Ferdinand Bauer of the difficult early days of the convict colony in New South Wales.

96pp (approx). 0 565 01023 9 £4.95

Dogs of the Last Hundred Years

K. Dennis-Bryan & J. Clutton-Brock

Documents the history of the remarkable collection of mounted dogs principally exhibited at the Zoological Museum, Tring (a branch of the BM(NH)). Each specimen not only represents its breed, but also has a personal history.

96pp, 60 b/w & 40 colour illus. Pbk. 0 565 01022 0 £9.95

A Study of Blackbirds, revised ed.

D. W. Snow

A reissue with updated bibliography and new preface of Snow's classic work on observing one species of bird over a long period of time.

192pp. Pbk. 0 565 01021 2 £9.95

Dinosaurs In The Attic. An excursion into the American Museum of Natural History

D. J. Preston

Traces the history of the collections, the characters involved and a 'behind the scenes' look at this world-famous museum.

244pp, 36 b/w photos.

Hardback. 0 312 21098 1 £14.95

(Published by St. Martin's Press, USA)

Handbooks For The Identification of British Insects

This series, published by *The Royal Entomological Society*, is now available exclusively through us.

Details available from:

Sales Department, Natural History Museum Publications, Cromwell Road, London SW7 5BD