

## Bees for science and bees for keeping

John Powell

*Bees and Mankind*. By John B. Free. Pp.155. ISBN 0-04-638001-9. (George Allen & Unwin: 1982.) £9.50, \$17.95.

DR JOHN Free is internationally acknowledged as an authority on bees and pollination; his published work in the scientific literature is extensive. Any book from such a source is therefore bound to be looked upon as of some importance in beekeeping circles.

It is interesting to note that of Dr Free's books to date, half have been written for children and it is evident that he has mastered the art of expressing a complex subject in a straightforward and lucid manner. In confirmation of this, *Bees and Mankind* is a fascinating and easily readable work, though its structure is unusual. The book is split into three parts entitled "Bees: Solitary and Social", "Honeybees" and "Beekeeping: Past and Present". The reader, however, is more likely to regard the text as divided into two.

Parts I and II together provide a brief account of two selected solitary bees, *Osmia rufa* and *Megachile rotundata*, and a more detailed treatment of bumblebees and honeybees. Each chapter is broken into short sections, each headed by a quotation from such diverse sources as

Virgil and J.G. Whittier. It is the sharp contrast between the cool text of Dr Free and the colour of some of the poetry that provides much of the charm of this book, though I found it took some time to get used to it. This then is not a book to dip into — at least not at first acquaintance.

There is a distinct change of style when we enter Part III, effectively the second half of the book, and move from the strictly factual material to a narrative of man's relationship with bees over 9,000 years, from primitive honey-hunting to the sophisticated mechanization of the late twentieth century. This must be one of the most complete accounts available and John Free's wide experience of the bee species involved is evident in the way he has been able to make a coherent whole from the often fragmentary evidence. There is, too, more than an interesting story here; in their unobtrusive way bees have had a profound influence on man's social, religious and cultural development.

Like the bees themselves, the sting of the book comes in the tail. The closing pages deal with the influence and availability of pollinating insects on agricultural production, both in intensively farmed areas and in developing countries.

The book is liberally illustrated and is beautifully set-out and produced. Although the subject matter is vast there is throughout an element of speculation which binds the whole together, be it the socialization of bees or man's manipulation of that social organization. It would be a pity if *Bees and Mankind* remained solely within beekeeping circles; it could be read profitably by all who are involved in conservation and planning, agricultural development, international aid programmes and anthropology. □

John Powell, a research physicist, is author of *The World of a Beehive* (Faber & Faber, 1979).

## High in Africa

Margaret Sharman

*Kilimanjaro*. By John Reader. Pp.84. ISBN 0-241-10683-4. (Elm Tree, London/Universe: 1982.) £12.95, \$25.

KILIMANJARO is not only Africa's highest mountain, and so a magnet for climbers, it is also an ecologist's delight. Within a few miles one finds tropical forest, alpine flora, near-desert, glaciation and the world's biggest volcano. Such variety provides scope for the excellent photographs, ranging from majestic landscapes to haunting close-ups, with which John

Reader adorns his record of one man's pilgrimage to Kilimanjaro.

One usually sees the mountain for the first time as a backdrop for the migrating herds of the Serengeti Plain, the elephants of Tsavo, or even, on a clear day, the ex-colonial suburbs of Nairobi, over 100 miles away. It rises from the burning heat of the thorn savannah, and it is no wonder that the reports of missionaries Krapf and Rebmann in the mid-nineteenth century were rejected as the imaginings of fevered brains and poor eyesight.

Yet tales of snow-capped mountains in Africa were not new. As an introduction to the highly personal account of his first climb, the author traces the story through the centuries, as Europeans overcame the obstacles — adverse geographical conditions, slave traders and the spears of tribesmen defending their homeland against white men bent on "discovering" Africa. (I am dismayed, incidentally, to find that the kink in the Kenya-Tanzania border is not the result of Queen Victoria giving Kaiser Bill the present to end all presents.) African legends, too, there are in plenty; and tales of those who were intrepid enough to brave the "fiery beings" and the fingers that "died", to obtain samples of "the silver-like stuff [which] when brought down in bottles, proved to be nothing but water".

Climbing the mountain is one of the things Westerners who live in East Africa aim to do "one day". It is everybody's mountain in that, while it is climbable without expertise, the twin peaks of Kibo and Mawenzi provide severe challenges, some of which are here described with concomitant gruesome tales of misadventure.

The snows of Kilimanjaro are melting rapidly (the ice has been in retreat since c.1700), and the melting process is responsible for the fantastic ice edifices which are among the most striking images in the book. Lower down in tropical splendour are the giants — the lobelias, and the groundsels which grow up to four metres high and may be 100 years old. How plants withstand temperature extremes and at the same time cope with intense ultraviolet radiation and the threat of being exhumed by solifluction is explained in the last section of the book.

Near the mountain's summit are found cryptozoic spiders, and crystallized butterflies which have been blown up by the "anti-trade wind" — a wind which explains the conventional picture of a snow-white summit riding high on a cloud layer and apparently completely detached from the earth below. This is the one photograph which every tourist takes home, even if only on a postcard, and which John Reader omits. But with 82 colour plates one cannot cavil at that. Here is an attractive and very readable book.

Margaret Sharman is a freelance editor specializing in books on African history.

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