The book is a timely publication as cyanobacteria are used in biomass production, in biotechnology, in therapeutic and medicine, as well as in environmental biology. The engineering of the cyanobacteria holds a 'promise' for the future. The reader will find good examples and illustrations of use of molecular biology tools in cyanobacterial research.

The book shall really be a welcome addition to any library. The efforts of the editor are commendable and the readers owe him their gratitude.

I recommend that all University libraries possess this book for its 'encyclopaedic' nature.

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'The horizon of the left rock looked as though a line of bristles ran along it. Scattered among these were sturdier shapes, silhouetted against the night sky in delicate silver under the light of the moon: male hamadryas baboons!'

Meet the hamadryas baboon Papio cynocephalus hamadryas. With their furry white mantles and gleaming red behinds, this magnificent primate of the burning sands and the rugged cliffs of Ethiopia and Arabia has always been a source of awe and wonder. Seen as incarnations of Thoth, the god of scribes and scholars, by the ancient Egyptians around the 12th century BC, they were later to be condemned as representative figures of greed, conceit and sexual shamelessness by the Europeans of the Middle Ages. Now, thanks to the tireless efforts of Hans Kummer, one of the pioneers of primate research in the wild, and his intrepid colleagues of the University of Zurich, we know the hamadryas for what he actually is. And what a remarkable tale it makes.

With a modest beginning made in a Zurich zoo in 1955, Kummer's odyssey in search of the hamadryas took him through the harsh Danakil desert and the Awash plains of Ethiopia and the Asir mountains of Saudi Arabia; a search that lasted all of two decades, and continues even today. And as his journey progressed, he learnt increasingly more about these unique white baboons. All of which he communicates to us in fascinating detail.

Hamadryas baboons live in highly structured multi-layered harems, with one large male guarding as many females as his rank and tactical skills allow. They are also the only species of baboons that have evolved exclusive male-female marriages from their promiscuous ancestors, the savannah baboons that live in the plains and forests of west and south Africa. Each male with his females and their offspring form a family; several families of related males forage together to constitute a clan; a few clans begin their long day marches in search of food and water every morning and meet every evening to form a band; several bands spend the night close together on sheer mountain cliffs.

With masterly strokes, Kummer describes the baboons' social life, from the development of pair relationships to the way an entire clan decides where to march each day. We learn of the hamadryas' unique respect for the marriages of rival males and of the cohesion of the group leaders which lessen conflict and promote cooperation. And through these minute details of individual relationships we catch a glimpse of an unusual society, rigid and patriarchal in its details but flexible and adaptable in its larger units. Kummer also recognizes the importance of individual personalities. Through a number of colourful, yet revealing, anecdotes, he lays bare the motivations and tribulations of individual baboons as they assert themselves on two fronts: on the social front with respect to other group members, and on the ecological front, against the hardships of climate, refractory food sources, and the danger of predators.

This remarkable book is an essential read for anyone interested in natural history, animal behaviour, anthropology or evolution. To the primatologist the most valuable aspect could possibly be Kummer's amazing insight into the
Might is sometimes right, even in the hamadryas baboon. Although adult males usually respect the marriages of other males in the clan, conflicts over females occasionally do occur. Here, a male bares his teeth at a potential challenger, as his wives tensely avert their gazes. [Photo: Walter Götz, Reproduced from In Quest of the Sacred Baboon: A Scientist's Journey, Princeton Univ. Press]

proximate and ultimate causes which may underlie every unusual behavioural interaction that he observes. Whether they be triadic interactions which he analyses as in terms of the cognitive abilities of the participants, the burgeoning of new forms of social behaviour in the Zurich troops brought about by captivity where they experience neither predators nor hunger, or when he speculates on the possible roots of human morality which may lie embedded in the behaviour of the hamadryas, Kummer always has a brilliant, and at least to me, utterly convincing idea up his pen.

Another lasting contribution of Kummer, as a primatologist, is a series of exciting manipulative experiments that he and his students conducted with wild hamadryas and savanna baboon troops in Ethiopia. These are described in great detail, right from the initial arguments that he had had with his students when planning the experimental details (it is a pleasure to see Kummer enthusiastically crediting his students with ideas rightfully theirs!) through the meticulous design of control experiments to the conclusions that they could finally draw (and those that they could not) from these endeavours. And the final thoughtful introspection with which Kummer declares his reluctance to conduct such experiments ever again, in recognition of his ignorance of how the lives of his experimental subjects must have been changed for ever.

Kummer writes in a most engaging style. He is completely unsentimental about his subjects, but deeply admiring about their abilities. He is also as curious and understanding about the ways of the Bedouin nomads, the Karaju tribesmen or the Issa-Somali bandits who share the hardships of the desert with the baboons, and who have provided Kummer with ideas of how other species of primates too have been able to tame the harsh desert landscape. He is especially fascinating when he describes their lives and their thoughts; with the simple strokes that characterize brush painting, Kummer paints a flashing kaleidoscope of colours, sounds and smells. A traveller's canvas indeed!

Finally, this review cannot be completed without a mention of the reflections of Kummer, the philosopher. At every step he delves into the deeper recesses of his thoughts and emotions to unearth a remarkably lucid understanding of what it is to be essentially human. He recognizes the twin unique abilities of man - a comprehension of time and an ego figure - which have set this species so apart from all the others, and points out the inherent irrationality which these abilities have also imparted to us. He speculates on the creation of myths that fill us with delusional ideas and wonders why we need to have them.

At the same time, he experiences the stark life of the hamadryas and understands how man is not alone in his existence; we have always looked ahead beyond our personal ends to a future for the larger circle of life. He revolts against current sociobiological ideology and rejects the grim picture of genes directing our every thought and action. And finally, we understand him as he rejoices in the freedom which comes with the search for truth:

'A rocky desert ridge. A serrated line stretching into infinity. No one knows where you are. You keep going on in the silvery brightness through all times past and future, with increasing lightness. No animal would do this. Only this human searching for some freedom. On and on you wander in the clear light, borne by this maternal ridge above the glistening plain, among the hunched boulders and the poor, barren shrubs which hold their filigreed branches into the light. All of them silent, without pain, waiting. You walk as they wait. This is how life after death should be.'

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