

Evolution, Ecology and Conservation of Lorises and Pottos

Furry and wide-eyed, lorises and pottos are small, nocturnal primates inhabiting African and Asian tropical and subtropical forests.

Their likeable appearance, combined with their unusual adaptations – from a marked reduction of the tail to their mostly slow, deliberate locomotion, powerful grasping and, in some species, a venomous bite – has led to a significant rise in research interest in the family Lorisidae over the last decade. Furthermore, lorises in particular have featured frequently in international media largely due to illegal trade – for example, as pets.

This is the first volume to present a full picture of the breadth of research being undertaken on lorises to aid future studies as well as conservation efforts. Focusing on five key topics – evolutionary biology, ecomorphology, behavioural ecology, captive management and conservation – this book is a vital read for graduate students and researchers in primatology, biological anthropology, evolutionary biology, animal behaviour and conservation.

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Anna's nocturnal journey never would have happened without the initial and unfailing support from Simon Bearder, Robin Crompton, Tab Rasmussen and Helga Schulze. That journey has allowed her to spread the passion for research on lorises and pottos to a whole new generation dedicated to researching and conserving them. She dedicates this volume to her mentors and students.

Anne dedicates this book to her family, whose constant support means everything. And to those past and present who have furthered this field and laid the groundwork for what we are able to achieve today and to the students studying lorises and pottos whose works will guide the future of these species.

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Foreword

The family Lorisidae remains one of the least known groups of primates, being extremely cryptic, even compared to other nocturnal primates. When I began fieldwork on the nocturnal primates of Africa in the 1960s, our ignorance was truly profound. At that time, we were aware of only two species of loris in Asia and one potto and one angwantibo in Africa. Like the animals themselves, research since then has not exactly progressed in leaps and bounds, but new technologies have transformed our understanding, as shown by the content of this volume.

Looking back at those earliest field studies brings memories of the many hurdles that had to be negotiated in order to follow the animals or attempt their capture. All too often they proved to be untrappable and, being relatively silent (or making ultrasonic calls), they were hard to detect and follow at night. A pair of shining eyes observing you from 30 m above in the rainforest, or from low down in dense secondary vegetation, yields little in the way of useful data. In earlier times the solution would have been to shoot the animals and study museum populations, but instead we stuck to our guns metaphorically and found alternative ways to ensure that no animals were harmed during this research. Fortunately, some species lived in drier and more open habitats, where they could be followed continuously for several hours and, even in the rainforest, the use of effective traps and tiny radio transmitters (pioneered by Pierre Charles-Dominique) made scientific study a reality.

Gradually, over the years, the number of researchers attracted by the delights of nocturnal primate research became significant. We started with lead–acid motorcycle batteries to power the headlights, 3 kg tape recorders and bulky radio–receivers, but these became miniaturised and more effective. Flash bulbs were replaced by powerful electronics and low-light video cameras that enabled us to compare the pelage markings of different species in the wild, or aspects of their behaviour such as locomotion, scent marking or social life. We no longer saw nocturnal primates as ‘primitive’, ‘solitary’ or in some way ‘lower’, but as being highly specialised for a very different way of life compared to monkeys and apes (see at the end of this Foreword my attempt to put this into verse). To operate effectively at night required very different sense organs and perceptual abilities that were the basis of differences in their social behaviour. One offshoot of the early use of radio tracking was the realisation that without the radios we often had no idea what individuals were really doing. Field researchers working with diurnal primates tended to follow the group but, because nocturnal primates often foraged alone, we were forced to track each individual, with often surprising results. This led to the realisation that they lived in dispersed or fission–fusion groups – joining a number of companions at various times in the night and sleeping with them in different combinations during the day.

Perhaps the most striking development over this time for nocturnal primates in general, and the Lorisidae in particular, was the increase in the number of species.

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Animals that recognise their own kind by scent, ultrasonic sound or subtle markings of the fur are not easily recognised by humans, and we refer to them as cryptic. It is almost impossible for us to know from a drawer full of museum specimens whether they belong to one, rather variable, species or several different ones. Hence the early taxonomists named only those species that had some striking anatomical characteristic that was absent in their relatives, such as distinctive teeth, fingernails or pelage. We now know that in all groups of nocturnal primates there has been gross oversimplification. Studies of living animals and genetic sampling continue to reveal systematic differences in a range of characteristics such as calling patterns, face and pelage marking patterns and genetic distance. Less is known about the significance of scent marking, but modern developments promise to reveal further species in the near future. I salute the efforts in this volume and wish the authors and readers every success in mastering the new techniques that underpin this exciting area of primate research.

How High Is a Higher Primate?

Do chimps, orangs and gorillas deserve a special place
Just because in some respects they're like the human race?
And is it right to class the prosimians as low
Just because they're out at night and some of them are slow?
Are small creatures primitive and large ones more advanced,
Or do we see those nearest us as naturally enhanced?
When we look down on nature what do we really see
When, due to inflated self-esteem, we lack humility?
Long-term success has no respect for level, height or grade,
So let's abandon High and Low and call a spade a spade.

Simon K. Bearder

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