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EDITORIAL

Avian brood parasitism — a growing research area in behavioral ecology

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We are pleased to be responsible guest editors for the two special issues of *Chinese Birds* (Vol. 3, No. 4, 2012 and Vol. 4, No. 1, 2013), entitled "Avian Brood Parasitism — a Growing Research Area in Behavioral Ecology".

The goal of the two special issues is to publish accumulated knowledge and some of the recent developments in the fascinating research occurring in avian brood parasitism and to stimulate further research in this attractive field.

The papers in the two special issues are based on "The 3rd International Conference on Avian Brood Parasitism" that was held at Hainan Normal University, China, during November 15–19, 2012. Here, more than 40 scientists on avian brood parasitism met and shared their knowledge. These scientists came from all continents including Africa, Australia, North and South America, Asia and Europe. Thirty-three talks were given during the conference on long term studies, host defences, molecular approaches and theoretical models, brood parasite adaptations and finally coevolution and general issues. A broad range of avian brood parasite taxa were embraced, although most papers were given on various cuckoos and cowbirds. We share some of the discussions from the conference with the readers of *Chinese Birds* in the two special issues.

Although, particularly the knowledge about the Common Cuckoo (*Cuculus canorus*) is very old (at least 2000–3000 years old), we know that Aristotle (384–322 BC) stated that "it lays its eggs in the nest of smaller birds after devouring these birds' eggs". The cuckoo was referred to in unscientific terms by Moses in the Old Testament. Moses regarded the cuckoo as an odious evil — equal to vultures and other birds of prey. It is obvious that Moses regarded the cuckoo as living with immorality. Cuckoo terminology was also used by famous writers as William Shakespeare and Henrik Ibsen. It is also involved in the English language — a cuckold is a married man with an adulterous wife — thus the cuckolded man is raising another man's child. The world famous actor Jack Nicholson received his first Academy Award in "One Flew Over the Cuckoo's Nest"; a 1975 drama film directed by Miloš Forman and based on the 1962 novel *One Flew Over the Cuckoo's Nest* by Ken Kesey. The Chinese name of the cuckoo, "杜鹃" or "布谷鸟" , which means the farming season in spring, is found as early as in the Kingdom of Han (221–263). Since then, the cuckoos have often been found in many Chinese poems and folklores over the last 1800 years. In Japan, more than 4500 poems including cuckoos have been written over the last 1200 years. Unlike in the English language, cuckoos have never been adopted into the Chinese language as "cuckold" or "cuckolded", or been compared with birds of prey.

However, despite such interest for cuckoos even outside the field of science, the scientific field of avian brood parasitism is still a small science — in comparison to the cuckoo's status in general literature. We might therefore wonder why there has been such low interest for these fascinating birds and the evolutionary system they are part of. It is such a good model system for studying coevolution or evolutionary processes in general. For example, in China, there are up to 17 parasitic cuckoo species (Zheng, 2011), but so far there has been little information on their breeding biology and

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host use (Yang et al., 2012). A search on Web of Science reveals around 1700 papers on avian brood parasitism during 1970–2012. As a comparison there were 1352 published papers on sexual selection in the year 2011 only.

An avian brood parasite lays its egg in the nest of other bird species. The host incubates the egg and raise the chick. An obvious question is thus "how should the host respond?" and "how should the brood parasite counter the host responses?" This is a base for a coevolutionary process that we as scientists on avian brood parasitism focus on and term coevolutionary arms races. In this first issue we show examples of brood parasite adaptations as why they lay strong-shelled eggs (Antonov et al.), their visual sensitivity (Aidala et al.), host adaptations (Samas et al.; Lee and Jabłoński), as well as host-parasite interactions (Møller and Soler; Sealy and Underwood; Moskat et al.; Avilés and Parejo).

The conference as well as the two special issues is devoted to five persons who have been especially important to our field over the last 30–40 years, namely Stephen I. Rothstein, Spencer G. Sealy, Arne Moksnes, Nicholas B. Davies and Anders Pape Møller.

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References

Yang C, Liang W, Antonov A, Cai Y, Stokke BG, Fossøy F, Moksnes A, Røskaft E. 2012. Diversity of parasitic cuckoos and their hosts in China. Chinese Birds, 3:9–32.

Zheng G. 2011. A Checklist on the Classification and Distribution of the Birds of China. 2nd edn. Science Press, Beijing.