

Symposium 17 Evolutionary history of selected bird taxa from the Sino-Himalayan region

Introduction

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Within the palearctic realm, the Sino-Himalayan fauna is of central significance. Because of their climatic and orographic complexity, China and the Himalayas harbor an extremely rich bird fauna — more than 1 250 species in China and more than 850 species, including about 600 breeding species, in the tiny country of Nepal. Moreover, the fauna of present-day China and adjacent areas is considered to be the center of origin of large and speciose genera of passerine birds. Leaf-warblers (*Phylloscopus*), redstarts (*Phoenicurus*), rosefinches (*Carpodacus*), laughing-thrushes (*Garrulax*), parrot-bills (*Paradoxornis*) and snow sparrows (*Pyrgilauda*, *Montifringilla*) are among the most diverse. From presumed central and east Asian centers, some species groups even reach the west palearctic, although in low numbers. Within China and the Himalayas, local species richness is often high: up to ten species of leaf-warblers may be scattered over a mountain slope less than 2000 m in height. Within the passerines, speciation processes

led to considerable extension of niches; and a multitude of habitats, including subtropical environments as well as Tibetan mountain steppe, are occupied by closely related species. At the same time, China harbors many narrow-range species which are considered relics. Some of their close relatives live in the northern palearctic, and others in the south in subtropical environments.

This symposium addresses the evolutionary history of these assemblages, both the radiation of speciose genera and the localization of narrow-range relics. Aspects of biology, ecology, distribution, vocalization and molecular phylogeny in the genera *Seicercus*, *Montifringilla*, *Pyrgilauda* and *Phoenicurus* are used to shed light on the evolutionary history of species-rich genera. For narrow-range Chinese endemics, such as the almost unknown Chinese grouse (*Bonasa sewerzowi*) and Sichuan jay (*Perisoreus internigrans*), other historical explanants are put forward to account for present distributions.