生态学报 2006 26 (2006（03）): 638～646 ISSN: 1004-616x CN: 44-1063/R

研究论文

红胁蓝尾鸲(*Tarsiger cyanurus*)在中国东北部帽儿山地区的迁徙中途停歇生态

王勇[1，2，3]，常家传[3]，弗兰克•摩尔[4]，苏立英[5]，崔黎明[3]，杨显峰[3]

1.Center for Forestry and Ecology, Alabama A& M University, P. O. Box 1208, Normal, 35762 USA
2.北京师范大学生命科学学院，北京 100875
3.东北林业大学野生动物资源学院，哈尔滨 150040
4.Department of Biological Science, University Southern Mississippi, Hattiesburg, 39406,
5.International Crane Foundation, 447, Baraboo, Wisconsin, 53913

收稿日期 2005-8-30 修回日期 2006-1-10 网络版发布日期: 2006-3-25

摘要 中国迁徙鸣禽类的保护面对着与世界其他地区如欧洲和北美洲鸟类保护相似的挑战。迁徙鸣禽类具有复杂生活周期和很大的空间关联。迁徙过程中发生的事件对迁徙鸣禽类种群动态具有决定作用。对于鸣禽类迁徙中途停歇期的生态,比如停歇期的长短，能量的积累，生境的利用等，了解还非常有限。在中国东北部的一个鸟类迁徙停歇地对红胁蓝尾鸲(Tarsiger cyanurus)的中途停歇生态包括迁徙时间、停歇时间、能量状态和性比进行了研究。2002年秋和2003年春分别捕获了1751只和684只红胁蓝尾鸲。红胁蓝尾鸲的体重在秋季迁徙时要比在春季迁徙时重。春季雌性红胁蓝尾鸲停歇时的能量状态指数最低; 而秋季的红胁蓝尾鸲比春季的红胁蓝尾鸲停歇时间更长。无论季节和性别，红胁蓝尾鸲的能量状态指数和第1次捕获的时间早晚成正相关， 间接证明红胁蓝尾鸲在停歇期间能够比较快地积累能量。秋季雄性红胁蓝尾鸲日体重净增率最大。估测秋季停歇期的每日能量净增能维持红胁蓝尾鸲雌性0.6h和雄性3.1h的飞行。红胁蓝尾鸲的中途停歇生态与北美和欧洲一些迁徙鸣禽类很相似。比如，春季迁徙过境的时间和脂肪积累的变化与自然选择对雄性的要求：当食物和气候适宜时尽快到达繁殖地的假设是一致的。对迁徙中途的停歇生态研究有利于更好地了解鸟类的迁徙行为和更有效地保护迁徙鸣禽类。

关键词 鸟类保护；鸟类迁徙；中途停歇生态；中途停歇地；红胁蓝尾鸲Red\|flanked Bush Kobin(*Tarsiger cyanurus*)

分类号

Stopover ecology of *Tarsiger cyanurus* at Maoershan of northeast China

WANG Yong[1，2，3], CHANG Jia-Chuan[3], MOORE Frank R.[4], SU Li-Ying[5], CUI Li-Ming[3], YANG Xian-Feng[3]

1.Center for Forestry and Ecology, Alabama A&M University, P. O. Box 1208, Normal, Alabama 35762 USA;
2.Beijing Normal University, Beijing 100875, China;
3.College of Wildlife Resources, Northeast Forestry University, Harbin 150040, China; 4.Department of Biological Science, University of Southern Mississippi, Hattiesburg, Mississippi, 39406, USA;
5.International Crane Foundation, P. O. Box 447, Baraboo, Wisconsin, 53913 USA

Abstract The conservation of songbird migrants in China faces challenges similar to those in other parts of the world such as Europe and North America. Songbird migrants have complex life history and are associated with large spatial scale. The events occurred during migration play a critical role in determining population status. Little is known about stopover behavior of migratory songbirds in China during passage, including stopover duration, energetic condition (e.g., the amount of fat stores), and habitat use of these birds. We investigated migration timing, stopover duration, change of energetic condition, and sex-related variations among Red-flanked Bush Robin (Tarsiger cyanurus) at a stopover site in northeast China. A total of 1,751 and 684 Red-flanked Bush Robins were captured in fall 2002 and in spring 2003, respectively. Body mass of fall birds wa

s higher than that of spring birds. Condition index (i.e., body mass adjusted for body size) was lo
west among spring females. Birds were more likely to stay longer in fall than in spring. We detec
ted a positive relationship between time of initial capture and condition index regardless of seaso
n or sex, suggesting birds were able to replenish energy stores. The net daily mass gain was the hi
ghest among males in fall (3% body mass). The net daily mass gain would sustain a flight o
f 0.6 h for females and 3.1 h for males in fall. The stopover biology of Red-flanked Bush Robins i
s similar to some songbird migrants of Europe and North America. For example, spring passag
e time and fat store variation between sexes agree with the hypothesis that males are selected to a
rrive at their breeding grounds as early as food resources or climatic conditions are adequate in sp
ring. Further research on stopover ecology is urgently needed in China for a better understandin
g of the migratory behavior and for the conservation of these songbird migrants.

Key words bird conservation； bird migration； stopover ecology； stopover si
te； *Tarsiger* *cyanurus*

DOI

通讯作者 王勇 yong.wang@email.aamu.edu