

ライム病スピロヘータのリザーバーとしての 渡り鳥アカハラ(*Turdus chrysolaus*)の能力

宮本健司*、佐藤雪太*、岡田啓司、福長将仁、佐藤文男**

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Competence of a migratory bird, red-bellied thrush (*Turdus chrysolaus*), as an avian reservoir for the Lyme disease spirochetes in Japan

Kenji Miyamoto*, Yukita Sato*, Keiji Okada,
Masahito Fukunaga and Fumio Sato**

ABSTRACT To evaluate the competence of migratory birds as reservoirs for the Lyme disease spirochetes, we examined two species of migrants, red-bellied thrush (*Turdus chrysolaus*) and black-faced bunting (*Emberiza spodocephala*) in Nemuro, the northern part of Japan. Spirochetes were found in four individual birds out of 11 *T. chrysolaus*, three isolates were detected from the skins and the other one was obtained from the liver. No spirochete was found to be infected in 20 *E. spodocephala*. As far as we know, this is the first record of direct detection of the spirochetes from migratory birds in Japan. The spirochetes were also isolated from immature ixodid ticks, *Ixodes persulcatus*, fed on those species of birds. The spirochetes were transmitted transstadially to next stages, when infected ticks molted. All of the isolates from birds and ticks were identified as *Borrelia garinii* by our ribotyping and flagellin gene sequence analyses. Our results strongly suggest that the migratory birds are reservoirs in the transmission of Lyme disease spirochetes in Japan.

抄録 日本におけるライム病スピロヘータのリザーバーとしての野鳥の能力を評価するため、アカハラとアオジの2種の渡り鳥の調査を行った。アカハラからは4株のスピロヘータが検出されたが、アオジからスピロヘータは検出されなかった。また、スピロヘータはアカハラに寄生するシュルツェマダニからも検出され、マダニの脱皮後、次の

世代へも伝播された。リボタイピングあるいは鞭毛遺伝子塩基配列の解析により、アカハラおよびアカハラ寄生のシュルツェマダニから分離されたスピロヘータは全て *Borrelia garinii* であることが解った。以上の結果、渡り鳥は日本におけるライム病スピロヘータ伝播のリザーバーであることが強く示唆された。

- * Department of Parasitology, Asahikawa Medical College
旭川医科大学寄生虫学教室
- ** Bird Banding Center, Yamashina Institute for Ornithology
山科鳥類研究所