

日本におけるライム病スピロヘータ：
野鳥、野鼠、シュルツェマダニを
介した動物伝播サイクル

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**Lyme disease spirochetes in Japan: Enzootic
transmission cycles in birds, rodents, and *Ixodes
persulcatus* ticks.**

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ABSTRACT The ixodid tick, *Ixodes persulcatus*, serves as a vector of *Borrelia* species associated with Lyme disease in Hokkaido, Japan. The migratory birds of genera *Emberiza* and *Turdus* and the woodland rodents of genera *Apodemus* and *Clethrionomys* are the wildlife reservoirs. To systemize the enzootic transmission cycles, borreliae isolates were classified by ribosomal RNA gene restriction fragment length polymorphism (RFLP) analysis. Most (>60%) isolates from the bird-feeding *I. persulcatus* larvae belonged to *Borrelia garinii*; the rest were classified as RFLP ribotype group 8 (unknown species). In contrast, no *B. garinii* were found among isolates from rodent-feeding *I. persulcatus* larvae. These isolates were classified as *Borrelia afzelii*, group IV, and group V (unknown species). These observations suggest that two enzootic cycles in nature (bird-tick and rodent-tick) maintain borreliae specifically. The group IV species, which was predominant among clinical isolates from Lyme disease patients in Hokkaido, appears to be the most important pathogen for humans.

抄録 rRNA遺伝子をプローブとしたRFLP-ribotype分析により、日本において捕獲された野鳥刺咬シュルツェマダニの保有するボレリアのほとんどは*Borrelia garinii*に、野鼠刺咬シュルツェマダニの保有するボレリアは*Borrelia afzelii*, group IV, Vに属することが明かとなった。ことから、自然界における野鳥-ダニと野鼠-ダニによ

る二つのボレリア伝播サイクルがボレリアの特異性を維持している可能性が示唆された。

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