

Helminth Fauna of Bats in Japan LI

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ABSTRACT—Three (including one undetermined) species belonging to two genera of hymenolepidid cestode are recorded from bats collected at ten sites in six administrative areas in 1996. The data of the cestode parasites are arranged along the hosts and their localities.

Introduction

As a continuation of my serial studies on cestode parasites of the Japanese bats, the present paper reports hymenolepidid cestodes from bats collected at ten sites in Niigata, Shiga, Kagawa, Tokushima, Miyazaki and Okinawa Prefectures during the period from July to November, 1996.

Materials and Methods

Thirty-six specimens of bats belonging to seven species of five genera were captured alive and autopsied immediately at the collecting sites. Their alimentary canals were fixed in Carnoy's fluid. The cestodes were washed with water and stained with alum carmine, dehydrated in alcohol, cleared in xylene, and mounted in permount.

Results and Discussion

Localities of bats examined and their cestode parasites are shown in Fig.1 and Table 1.

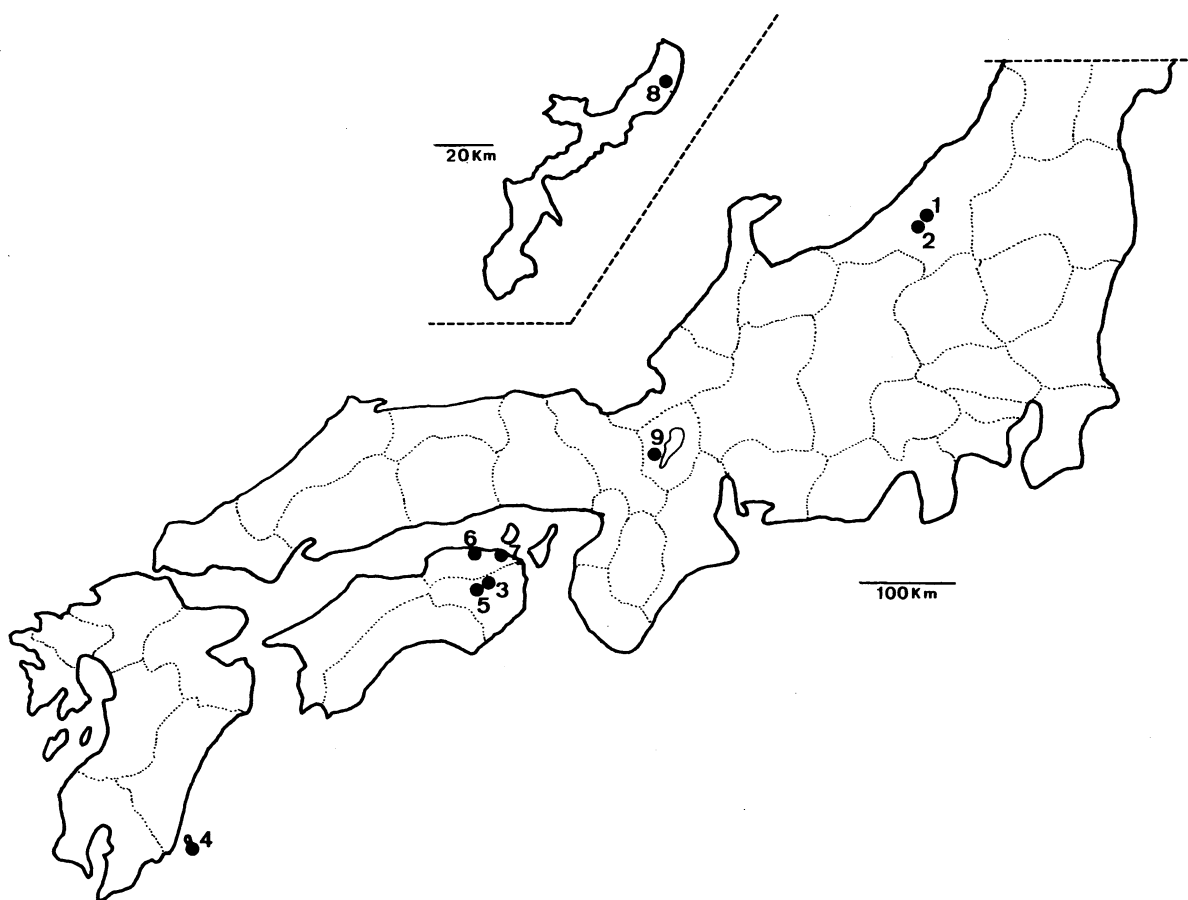


Fig. 1. A map showing the collection sites of bats. For the locality number, see Table 1.

HYMENOLEPIDIDAE Railliet et Henry, 1909

Vampirolepis Spassky, 1954

1. *Vampirolepis ogaensis* Sawada, 1974

This is the first record of the species from Niigata Prefecture except Sado Isl.

Specimens examined: (Host: *Rhinolophus ferrumequinum nippon*) 5 exs., Takayanagi-machi, Niigata Prefecture.

Distribution in Japan: Hokkaido (Hakodate City), and Aomori, Akita, Yamagata, Niigata (Sado Isl.) and Gifu Prefectures.

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Table 1. Localities and dates of bats examined and their cestode parasites in 1996

Host	Habitat and locality	Date	No. of bats		Cestode species
			examined	infected	
Rhinolophidae					
(1) <i>Rhinolophus ferrumequinum nippon</i>					
1)	Disused air-raid shelter Takayanagi-machi, Niigata Pref.	Jul.12	2	2	<i>Hymenolepis rashomonensis</i> <i>Vampirolepis</i> sp. (no scolex)
2)	Disused air-raid shelter Takayanagi-machi, Niigata Pref.	Nov.13	5	4	<i>Vampirolepis ogaensis</i> <i>Hymenolepis rashomonensis</i>
3)	Disused raceway Ichiba-cho, Tokushima Pref.	Aug.17	2	0	
4)	Sea eroded cave Kô-shima, Miyazaki Pref.	Aug.16	5	0	
(2) <i>Rhinolophus cornutus cornutus</i>					
5)	Senjou-jiki cave Kouyama-cho, Tokushima Pref.	Aug.16	2	1	<i>Vampirolepis isensis</i>
Vespertilidae					
(3) <i>Miniopterus schreibersii fuliginosus</i>					
3)	Disused raceway	Aug.17	2	0	
4)	Sea eroded cave	Aug.16	5	0	
(4) <i>Myotis macrodactylus</i>					
6)	Raceway Ayakami-cho, Kagawa Pre.	Aug.23	2	0	
7)	Yashima cave Takamatsu City, Kagawa Pref.	Aug.23	2	0	
(5) <i>Myotis yanbarensis</i> (MS)					
8)	Forest Kunigami-son, Okinawa Jima, Okinawa Pref.	Oct.12	2	0	
(6) <i>Vespertilio superans superrans</i>					
9)	Hiei-zan Enryakuji Temple Otsu City, Shiga Pref.	Aug. 8	5	0	
(7) <i>Murina ryukyuana</i> (MS)					
8)	Forest	Oct.12	2	0	

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Remarks: *V. ogaensis* was described for the first time from *R. ferrumequinum nippon* in Kôhmori-kutsu at Monzen, Oga City, Akita Prefecture (Sawada, 1974). It is the commonest species parasitizing *R. f. nippon* in South of Hokkaido (Hakodate City), the side of the Japan Sea of the Tohoku District and the northern part of Gifu Prefecture (Sawada, 1993).

2. *Vampirolepis isensis* Sawada, 1966

Specimens examined: (Host: *R. cornutus cornutus*) 2 exs., Kouyama-cho, Tokushima Prefecture.

Distribution in Japan: Honshu, Shikoku, Kyushu except Amami Shotô (Sawada, 1997).

Remarks: This species was described for the first time from *R. c. cornutus* and *R. f. nippon* (Sawada, 1966), but it is preferably parasitic on *R. c. cornutus*.

Hymenolepis Weinland, 1858

3. *Hymenolepis rashomonensis* Sawada, 1972

Specimens examined: (Host: *R. ferrumequinum nippon*) 7 exs., Takayanagi-machi, Niigata Prefecture.

Distribution in Japan: Hokkaido, Honshu, Shikoku, Kyushu except Osumi Shotô.

Remarks: This species was described for the first time from *R. ferrumequinum nippon* collected in the limestone cave, Rashomon, at Kusama located about 14 km to the southeast of Niimi City, Okayama Prefecture and it is preferably parasitic on *R. ferrumequinum nippon*.

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References

- Sawada, I. (1972) Helminth fauna of Bats in Japan XI. Bull. Nara Univ. Educ., **21** (2): 27-30.
- Sawada, I. (1974) Helminth fauna of bats in Japan XV. Annot. zool. japon., **47**: 193-106.
- Sawada, I. (1988) On the distribution of Japanese Rhinolophidae bats with special refernce to the cestode fauna. Bull. Nara Sangyo Univ., **4**: 169-207 (in Japanese with English abstract).
- Sawada, I. (1993) Helminth fauna of bats in Japan XLVII. Bull. Nara Sangyo Univ., **9**: 133-139.
- Sawada, I. (1997) Geographical distribution of *Rhinolophus cornutus cornutus* infected with *Vampirolepis isensis* Sawada. Bull. Nara Sangyo Univ. **13**: 91-98.