

RESEARCH NOTE

THE LARGE BANDICOOT RAT, *BANDICOTA INDICA*, A NEW HOST FOR *SCHISTOSOMA SPINDALE*, MONTGOMERY, 1906, IN PENINSULAR MALAYSIA

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Recently a study was carried out to identify animal schistosomes that cause cercarial dermatitis in paddy field workers, in Alor Setar, Kedah Darulaman. During the course of the investigation into zoonotic diseases 1 out of 4 *Bandicota indica* collected near Alor Setar was found to harbor adult *Schistosoma spindale*.

Previously *S. spindale* was reported to occur naturally in large mammals like ruminants viz water buffalo (*Bos bubalis*), Zebu, goat, sheep and also in the dog in India (Liston and Soparker, 1918; Fairley and Jasudasin, 1927) and in goat and sheep in Sumatra (Soulsby, 1968). Buckley (1938) reported ruminants as the normal hosts of the parasite in Malaysia; the same animal hosts were reported in Thailand by Harinasuta and Sornmani (1969). However, the present finding of *B. indica*, a paddy field rat as a new host for *S. spindale* in Peninsular Malaysia is a new record.

Four *B. indica* were collected around the vicinity but only one was positive for *S. spindale*. Two adult male and four female worms and some fragments were recovered from the animal. Other animals collected in the same vicinity were the house shrew *Suncus murinus*, several species of rodents, *Rattus tiomanicus*, *R. argentiventer*, *R. rattus diardii* and the Mongoose, *Herpestes brachyurus*, but none of them harbored the fluke.

Morphological features and measurements of the *B. indica* specimens (Table 1) were similar to those reported recently from goat and water buffalo (Krishnasamy *et al*, 1991) except that the oral and the ventral sucker and the testis were slighter larger in the male worms and the females contained more eggs in the uterus.

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Table 1
Comparison of measurements of *Schistosoma spindale*.

	Present study	Krishnasamy <i>et al</i> (1991)
Host	<i>Bandicota indica</i> (Rat)	Goat and water buffalo
Location	Malaysia	Malaysia
Male: No of worms	2	4
Body length	12 - 13* (12.5)*	9 - 14* (12)*
Width	42 - 45 (43)	36 - 45 (40)
Oral sucker length	225 - 300 (278)	176 - 332 (242)
Width	300 - 450 (375)	195 - 273 (222)
Ventral sucker length	345 - 375 (360)	195 - 280 (236)
Width	360 -	195 - 265 (242)
Esophagus length	315 - 360 (338)	273 - 390 (312)
Testis length	78 - 133 (102)	60 - 98 (80)
Width	94 - 105 (98)	50 - 90 (72)
No. of testis	6 - 7	2 - 7
The distance between two suckers	240 - 375 (293)	315 - 405 (385)
Female: No. of worms:	4	3
Body length	13 - 17 (15)	14 - 15 (14.7)
Width	10 - 14 (12)	10 - 11 (10)
Oral sucker length	28 - 35 (33)	28 - 35 (31)
Width	28 - 41 (33)	23 - 35 (29)
Ventral sucker length	23 - 28 (26)	35 - 46 (41)
Width	23 - 35 (28)	30 - 48 (39)
Esophagus length	58 - 69 (63)	127 - 155 (140)
Ovary length	360 - 540 (460)	378 - 540 (487)
Width	90 -	72 - 108 (90)
Eggs length	220 - 250 (235)	175 - 245 (219)
Width	35 - 40 (37)	30 - 40 (35)
Total no. of eggs in uterus	15 - 32	12 - 22
The distance between two suckers	70 - 105 (80)	98 - 117 (100)

* range (mean) in mm.

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