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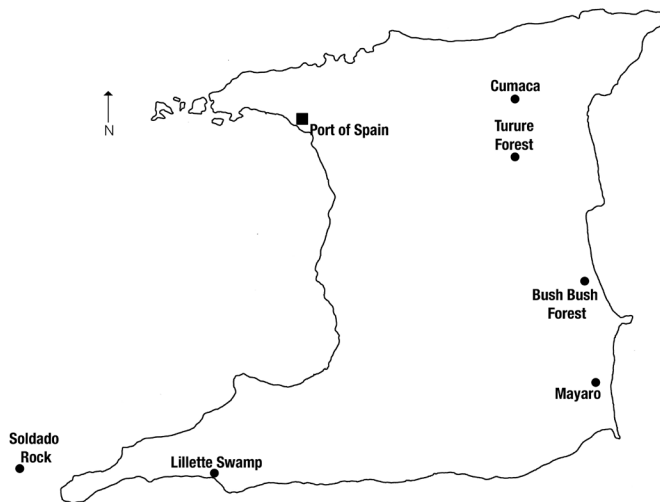
## **Laelapid Mites (Acari: Laelapidae) Collected from Small Mammals in Trinidad, Trinidad and Tobago**

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## Laelapid Mites (Acari: Laelapidae) Collected from Small Mammals in Trinidad, Trinidad and Tobago

Mites (Acarina) are minute arthropods barely visible to the naked eye, but some belonging to the family Laelapidae are as large as some ticks and are ectoparasites of cricetid rodents. Laelapidae mites are not well studied and less than a 100 species are described. As part of a study on arboviruses (insect, tick and mite-transmitted viruses) by the Trinidad Regional Virus Laboratory (TRVL), small mammals were trapped from various localities in Trinidad and blood samples processed for virus isolations and antibody determinations in an attempt to determine their role in the maintenance of arbovirus cycles. Ectoparasites were combed from these mammals and processed for virus isolations, but some were kept for specific identifications. Over a period of 10 years in Trinidad, Aitken *et al.* (1969) tested 5312 *Gigantolaelaps* sp. and 16,207 smaller laelapid mites for virus isolations, but only one strain of a virus (Cocal) was recovered. Apart from the Aitken (1969) study, there has been no written report about laelapid mites occurring in Trinidad.



**Fig. 1.** Collecting sites for small mammals and laelapid mites in Trinidad.

The present study was conducted on arbovirus studies at Bush Bush Forest, Cumaca, Cedros (Lillette Swamp), Mayaro, Soldado Rock and Ture Forest (Fig. 1). The small mammals representing eight species were trapped from these areas and the mites collected are given in Table 1. Specimens of each species and accompanying data were deposited in the TRVL (now Caribbean Epidemiology Centre). Museum collections were identified by David A. Parsons of Ohio State University to whom I offer my sincere thanks.

A total of 783 small mammals was examined. Nine

species of laelapid mites were found on 539 rodents representing eight mammal species. No laelapid mite was found on the following mammal species: 26 *Didelphis marsupialis*, 41 *Marmosops fuscatus* (formerly *Marmosa fuscata*), 100 *Marmosa robinsoni* (formerly *M. mitis*), 27 *Caluromys philander*, 7 *Oecomys trinitatis* (formerly *Oryzomys concolor*), 19 *Rattus rattus*, 8 *Mus musculus* and 2 *Makalata didelphoides* (formerly *Echimyus armatus*).

The following laelapid mites were found (Table 1):

*Androlaelaps fahrenheitzi* (Berlese) was found on only two of the eight species of rodents, *Hylaeamys megacephalus* (formerly *Oryzomys capito*) and *Proechimys trinitatis* (formerly *P. guyannensis trinitatis*) examined. Furman (1972) noted that species of *Zygodontomys* in Venezuela were commonly infested with this mite.

*Androlaelaps rotundus* (Fonseca) was found only on one species of rodent, *Necomys urichi* (formerly *Akodon urichi*), *Akodon urichi* was a common host for the mite in Venezuela (Furman 1972).

*Gigantolaelaps wolffsohni* group. Nine collections were made from Cumaca (6) and Ture Forest (3). Furman (1972) described members of this group collected from *Oryzomys fulvescens* in northeastern Venezuela.

*Gigantolaelaps oudemansi* Fonseca mites were collected from *Hylaeamys megacephalus* captured at Lillette Swamp, Cedros and Ture Forest. *G. oudemansi* was collected from *Oryzomys capito* and other *Oryzomys* species from Venezuela (Furman 1972).

*Laelaps dearmasi* Furman and Tipton. Of eight *Zygodontomys brevicauda* (formerly *Z. brevicauda soldadoensis*) collected from Soldado Rock, six were infested with this species of laelapid mite. *L. dearmasi* was found only on *Z. brevicauda*. In Venezuela, Furman (1972) noted that this was the most common laelapid mite found and noted that the most commonly infested host was *Zygodontomys brevicauda*.

*Laelaps nr. castroi*. A single collection was made from *Nectomys palmipes*. *L. castroi* was collected mainly from *Oryzomys fulvescens* in Venezuela (Furman 1972).

*Laelaps paulistanensis* Fonseca was collected only at Cumaca and only from *Proechimys trinitatis*, but Furman

**Table 1.** Laelapid mites collected from rodents from various localities in Trinidad.

Mite	Host	Locality	No. Examined	No. Positive
<i>Androlaelaps fahrenheitzi</i>	<i>Hylaeamys megacephalus</i>	Bush Bush Forest	2	1
		Cedros	5	0
		Cumaca	2	0
		Mayaro	5	0
		Turure Forest	132	2
	<i>Proechimys trinitatis</i>	Cumaca	105	1
		Mayaro	1	0
		Turure Forest	185	0
	<i>Androlaelaps rotundus</i>	<i>Necomys urichi</i>	Cumaca	1
Mayaro			2	0
Turure Forest			31	5
<i>Hylaeamys megacephalus</i>		Bush Bush Forest	1	0
<i>Gigantolaelaps wolffsohni</i> group		<i>Necomys palmipes</i>	Cumaca	25
	Mayaro		1	0
	Turure Forest		11	3
	<i>Rhipidomys couesi</i>	Cumaca	9	1
		Turure Forest	1	0
	<i>Gigantolaelaps oudemansi</i>	<i>Hylaeamys megacephalus</i>	Cedros	5
Cumaca			2	0
Turure Forest			132	6
<i>Laelaps dearmasi</i>	<i>Necomys palmipes</i>	Cumaca	25	1
	<i>Zygodontomys brevicauda</i>	Soldado Rock	8	6
	<i>Zygodontomys brevicauda</i>	Turure Forest	11	0
<i>Laelaps nr. castroi</i>	<i>Necomys palmipes</i>	Cumaca	25	0
		Mayaro	1	0
		Turure Forest	11	1
<i>Laelaps paulistanensis</i>	<i>Proechimys trinitatis</i>	Cumaca	105	2
		Mayaro	1	0
		Turure Forest	185	0

Mite	Host	Locality	No. Examined	No. Positive
<i>Mysolaelaps heteronynchus</i>	<i>Nectomys palmipes</i>	Cumaca	25	1
		Mayaro	1	0
		Turure Forest	11	0
	<i>Proechimys trinitatis</i>	Cumaca	105	1
		Mayaro	1	0
		Turure Forest	185	0
	<i>Rhipidomys couesi</i>	Cumaca	9	3
		Turure Forest	1	0
	<i>Steptolaelaps heteromys</i>	<i>Heteromys anomalus</i>	Bush Bush Forest	3
Cedros			4	1
Cumaca			1	0
Mayaro			4	0
Turure Forest			5	0

(1972) found species of *Rhipidomys* was the most commonly infested host.

*Mysolaelaps heteronynchus* Fonseca was collected only from Cumaca. Three of the five collections came from *Rhipidomys couesi*. In Venezuela, this laelapid was commonly found on species of *Rhipidomys*.

*Steptolaelaps heteromys* Fox was found only on *Heteromys anomalus* and likewise Furman (1972) found this rodent to be commonly infested in Venezuela.

Laelapid mites were found commonly on cricetid rodents and all represent new locality and host records for Trinidad. In addition to the above mites identified, two collections of an unidentified *Laelaps* were made from *Nectomys palmipes* captured at Cumaca. Laelapid mites are little studied (Furman 1972) in the Neotropics and less so in Trinidad. In view of more recent studies and changing taxonomy of the mites in South America, the Trinidad specimens should be restudied.

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