

RÉPUBLIQUE DÉMOCRATIQUE DU CONGO

INSTITUT DES PARCS NATIONAUX

Exploration du Parc National de la Garamba

MISSION H. DE SAEGER

en collaboration avec

P. BAERT, G. DEMOULIN, I. DENISOFF, J. MARTIN. M. MICHA. A. NOIRFALISE,
P. SCHOEMAKER, G. TROUPIN et J. VERSCHUREN (1949-1952).

FASCICULE 53

1. **PARASITIC MITES**, by CARLETON M. CLIFFORD, CONRAD E. YUNKER and ELEANOR K. JONES (Hamilton).
2. **DERMAPTERA**, by A. BRINDLE (Manchester).
3. **STENINAE**, von VOLKER PUTHZ (Berlin).
4. **PSILIDAE**, par JEAN VERBEKE (Bruxelles).
5. **SPHEGINAE**, Genre **Paranysson**, par JEAN LECLERCQ (Gembloux).



KINSHASA

1968

Etude réalisée avec la
collaboration de l'Institut royal des Sciences naturelles
de Belgique.

PARC NATIONAL DE LA GARAMBA. — MISSION H. DE SAEGER

en collaboration avec

**P. BAERT, G. DEMOULIN, I. DENISOFF, J. MARTIN, M. MICHA, A. NOIRFALISE, P. SCHOEMAKER,
G. TROUPIN et J. VERSGHUREN (1949-1952).**

Fascicule 53 (1)

PARASITIC MITES

I. — THE GENUS LAELAPS KOCH (ACARINA, MESOSTIGMATA) ⁽¹⁾

BY

CARLETON M. CLIFFORD ⁽²⁾, CONRAD E. YUNKER ⁽²⁾
and ELEANOR K. JONES ⁽²⁾

INTRODUCTION

In 1959, a large collection of Acarina from the Belgian Congo (now the Republic of the Congo) was sent to the Institute of Acarology, University of Maryland for study and identification by arrangement with Dr. V. VAN STRAELEN, the late President of the Institute of National Parks of the Congo. This collection was a part of a much larger and more extensive collection of animals, made during 1949-1952 by the mission of H. DE SAEGER to the National Park of Garamba, which is situated in the Northeastern portion of the Republic of Congo on its border with Equatoria Province, Sudan. At Maryland, the parasitic Acarina were sorted out and retained and the nonparasitic forms were sent to interested specialists. KRANTZ (1961 and 1962) published on certain free-living *Mesostigmata* and CLIFFORD and ANASTOS (1964) reported on the ticks. This paper reports on the genus LAELAPS (sensu lato) and includes selected information on distribution and hosts. In preparation are reports on other parasitic mites of this collection.

⁽¹⁾ The portion of his project completed at the University of Maryland was supported by Army Medical Research and Development Command, Washington, D. C., under contract No. DA 49-007-MD981.

⁽²⁾ U. S. Department of Health, Education, and Welfare, Public Health Service National Institutes of Health, National Institute of Allergy and Infectious Diseases, Rocky Mountain Laboratory, Hamilton, Montana 59840.

All localities mentioned here are in Garamba Park or adjacent to it. For further information on collecting localities refer to DE SAEGER (1954 and 1956). Host names were provided by Prof. DE SAEGER (in litt.); to these we have appended authors' names where these were not given. Unfortunately, the scientific names of many of the hosts listed here were not given but it is expected that this will be done when publications on the mammals and birds of Garamba Park appear.

Collectors are designated by the following symbols : JM, J. MARTIN; GD, G. DEMOULIN; HDS, H. DE SAEGER; PSCH, P. SCHOEMAKER; JV, J. VERSCHUREN.

We are grateful to Prof. R. TAUFFLIEB, Institut Pasteur, Dakar, Senégale, and Dr. R. W. STRANDTMANN, Texas Technological College, Lubbock, Texas, for examination of certain of the specimens.

Order ACARINA
Suborder MESOSTIGMATA
Family LAELAPIDAE

Genus **LAELAPS** C. L. KOCH, 1836.

The most recent revision of this genus is Tipton's (1960).

In all, 9 species representing 2 subgenera were seen (Table 1). Although most of these have previously been reported from Central Africa, 4 are recorded for the first from the Republic of the Congo.

Subgenus **ECHINOLAELAPS** EWING, 1929.

STRANDTMANN and MITCHELL (1963) reviewed the species of the genus *Echinolaelaps* and demonstrated the latter's affinity to *Laelaps* and reduced the former genus to subgeneric rank beneath the latter.

Type-species : **Laelaps echidninus** BERLESE, 1887.

TABLE I.

List of **Laelaps** of Garamba Park.

- Laelaps (Echinolaelaps) bakeri* HIRST, 1923.
Laelaps (Echinolaelaps) gigantea BERLESE, 1918.
Laelaps (Echinolaelaps) muricola TRÄGÅRDH, 1910.
Laelaps (Laelaps) brazzai TAUFFLIEB, 1962.
Laelaps (Laelaps) congoicola TAUFFLIEB, 1959.
Laelaps (Laelaps) kampalensis TAUFFLIEB, 1957.
Laelaps (Laelaps) lavieri TAUFFLIEB, 1954.
Laelaps (Laelaps) lavoipierrei TAUFFLIEB, 1954.
Laelaps (Laelaps) roubaudi TAUFFLIEB, 1954.

Laelaps bakeri HIRST.

Laelaps bakeri HIRST 1923, Ann. Mag. Nat. Hist. 12, p. 690.

Hosts and Distribution :

MAMMALS.

Nos. 580, I/o/1, 25.V.1950, 3 ♀, *Lemniscomys striatus massaicus* (PAGENSTECHE) (No. 1351), coll. JM; 628, I/o/1, 12.VI.1950, 6 ♀, mammal (No. 1527), coll. JM; 947, I/o/1, 9.XI.1950, 2 ♂, 1 ♀, rodent nest (No. Z.2527), coll. JV; 1008, II/e, 21.XII.1950, 4 ♂, 3 ♀, 4 rodent nests, coll. JV; 1009, II/f, 23.XII.1950, 13 ♂, 7 ♀, 4 rodent nests, coll. JV; 1038, II/d, 3.I.1951, 2 ♂, rodent nests, coll. JV; 1039, II/e, 4.I.1951, 5 ♂, 3 ♀, rodent nests, coll. JV; 1051, II/f, 4.I.1951, 5 ♂, 1 ♀, 2 rodent nests, coll. JV; 1076, II/d/1, 12.I.1951, 1 ♂, 6 rodent nests, coll. JV; 1083, II/g/1, 12.I.1951, 3 ♀, 3 rodent nests, coll. JV; 1132, Kassi-Garamba, 20.I.1951, 7 ♂, 3 ♀, 3 rodent nests, coll. JV; 1207, Source Wilibadi, 30.I.1951, 2 ♂, 2 ♀, 3 rodent nests, coll. JV; 1381, II/fb/4, 18.IV.1951, 2 ♂, 1 ♀, rodent nest, coll. JV; 1583, II/hc/4, 19.IV.1951, 2 ♀, rodent nest, coll. JV; 1601, II/hc/4, 24.IV.1951, 3 ♂, 1 ♀, 6 nests of *Dasymys* sp. (No. Z.1390/2), coll. JV; 1602, II/hc/4, 24.IV.1951, 2 ♂, 2 ♀, 10 nests of *Mylomys* sp. (No. Z.1390/1) coll. JV; 1621, II/hc/4, 24.IV.1951, 4 ♀, rodent (No. Z.1390/1), coll. JV; 1714, II/ba/5, 10.V.1951, 2 ♀, nest of the murid *Heliosorex roosevelti* HELLER (No. Z. 3362/6) coll. JV; 1878, II/gd/4, 6.VI.1951, 2 ♂, 4 ♀, murid nest, coll. HDS; 1997, II/hc/4, 28.VI.1951, 3 ♀, murid *Mastomys coucha ugandae* (DE WINTON) (No. 1509/16), coll. JV; 1998, II/hc/4, 21.VI.1951, 5 ♀, rodent nest, coll. JV; 1999, II/gd/4, 27.VI.1951, 1 ♀, rodent nest, *Mylomys* sp., coll. JV; 2001, II/gd/4, 15.VI.1951, 3 ♂, 7 ♀, rodent, coll. JV; 2097, Haute Makpe/10, 12.VII.1951, 1 ♂, 1 ♀, rodent nest *Mylomys* sp. (No. 3016/5), coll. JV; 2240, II/hc/4, 1.VIII. 1951, 1 ♂, 1 ♀, rodent nest, murid (No. 3627/1) coll. JV; 2869, II/gd/4, 21.IX.1951, 6 ♀, mammal *Mylomys dybowski albertii* THOMAS (No. Z.3706), coll. HDS; 3014, II/gd/4, 11.I.1952, 1 ♂, 1 N?, in rodent run, coll. JV; 3248, II/gd/6, 26.III.1952, 2 ♂, 1 ♀, rodent nests of *Uranomys ruddi ugandae* HELLER (No. Z.4412/2), coll. JV.

BIRDS.

Nos. 282, I/o/2, 1.II.1950, 10 ♀, bird (No 534), coll. GD; 1712, II/ee/18, 27.IV.1951, 3 ♀, bird (Z.3323), coll. JV.

ON VEGETATION, OR HOST UNKNOWN.

1759, II/fd/4, 14.V.1951, 4 ♂, 5 ♀, on vegetation, coll. HDS; 1689, II/gd/4, 6.V.1951, 5 ♀, host unknown, coll. HDS.

ZUMPT (1950), ZUMPT and TILL (1958, 1961) and TAUFFLIEB (1959, 1962, 1964a) considered *L. bakeri* to be a synonym of *L. gigantea*. However, after studying large numbers of specimens in the present material we feel, as does TAUFFLIEB (1964b), that there are sufficient differences to warrant recognizing *L. bakeri* as a valid species. Dr. R. W. STRANDTMANN examined samples of this material and concurred (in litt.). Due to these differences of opinion, information on the distribution and hosts of both species is

confused. From the available information (HIRST 1925, KEEGAN 1956, ZUMPT and TILL 1961, TAUFFLIEB 1964a), it appears that both are widely distributed in Africa and parasitize a variety of rodents.

Laelaps gigantea BERLESE.

Laelaps gigantea BERLESE, 1918, Redia, 13, p. 129.

Hosts and Distribution :

MAMMALS.

Nos. 1011, II/f, 20.XII.1950, 1 ♂, nests of rodents, coll. JV; 1039, II/e, 4.I.1951, 1 ♀, rodent nests, coll. JV; 1051, II/f, 4.I.1951, 1 ♀, 2 rodent nests, coll. JV; 1076, II/d/1, 12.I.1951, 2 ♂, 6 rodent nests, coll. JV; 1580, II/gd/4, 18.IV.1951, 3 ♂, 5 ♀, murid rodent (No. Z.1374/1), coll. JV; 1583, II/hc/4, 18.IV.1951, 7 ♀, rodent nest (Z.1583) coll. JV; 1597, II/hc/1951, 3 ♀, rodent nest, coll. JV; 1601, II/hc/4, 24.IV.1951, 3 ♀, rodent nest, coll. JV; 1601, II/hc/4, 24.IV.1951, 2 ♂, 2 ♀, 6 rodent nests of *Dasymys* sp. (Z.1390/2), coll. JV; 1602, II/hc/4, 24.IV.1951, 2 ♀, 10 rodent nests of *Mylomys* sp. (Z.1390/1), coll. JV; 1621, II/hc/4, 24.IV.1951, 3 ♀, rodent (No. Z.1390/1), coll. JV; 1659, II/hc/4, 2.V.1951, 1 ♂, 3 ♀, rodent nest, coll. JV; 1711, II/ba/5, 10.V.1951, 3 ♂, 1 ♀, nest of *Otomys* (No. Z.3367/6), coll. JV; 1713, II/hc/4, 21.IV.1951, 12 ♀, rodent *Lophuromys sikapusi ansorgei* DE WINTON (No. Z.3227/7), coll. JV; 1714, II/ba/5, 10.V.1951, 3 ♂, 3 ♀, nest of murid *Heliosorex roosevelti* HELLER (No. Z.3362/6), coll. JV; 1767, II/gd/4, 18.V.1951, 3 ♂, 1 ♀, 3 rodent nests, coll. JV; 1768, II/gd/4, 18.V.1951, 2 ♂, 1 ♀, rodent nests, coll. JV; 1997, II/hc/4, 28.VI.1951, 4 ♂, 4 ♀, murid nest *Mastomys coucha ugandae* (DE WINTON) (No. 1509/16), coll. JV; 1998, II/hc/4, 21.VI.1951, 1 ♀, rodent nest, coll. JV; 1999, II/gd/4, 27.VI.1951, 4 ♂, rodent nest of *Mylomys* sp., coll. JV; 2237, II/gd/4, 6.VIII.1951, 3 ♂, 3 ♀, murid *Dasymys incommutatus bentleyae* (THOMAS) (No. Z.3629/2), coll. JV; 2240, II/hc/4, 1.VIII.1951, 4 ♂, murid nest (No. 3627/1), coll. JV.

BIRD.

No. 1712, II/ee/18, 27.IV.1951, 4 ♀, bird (No. Z.3323), coll. JV.

L. gigantea is a common, widely distributed mite in the Ethiopian region and its main hosts are various species of rats. ZUMPT and TILL (1961) provided further details concerning the hosts of this species. (See comments under *L. bakeri*.)

Laelaps muricola TRÄGÅRDH.

Laelaps muricola TRÄGÅRDH, 1910, Exp. Kilimanjaro-Meru, 3, p. 54.

Hosts and Distribution :

MAMMALS.

Nos. 781, Region of Bagbele, 13.VIII.1950, 1 ♀, on *Genetta tigrina aequatorialis* (No. 2130), coll. JM; 1060, II/f, 8.I.1951, 4 ♀, rodent nest (No. Z.2298), coll. PSCH; 1965, II/gd/4, 7.VI.1951, 6 ♀, on murid *Mastomys coucha ugandae* (DE WINTON) (No. Z.3460), coll. JV.

This species lives on and in the nests of various Muroidea throughout the Ethiopian region. TAUFFLIEB (1964a & b) recorded it from a variety of hosts and localities in the Republic of the Congo. ZUMPT and TILL (1961) gave a more detailed list of the Ethiopian hosts reported for this mite.

Subgenus **LAELAPS** C. L. KOCH, 1836.

Type-species : **Laelaps agilis** C. L. KOCH, 1836.

Laelaps brazzai TAUFFLIEB.

Laelaps brazzai TAUFFLIEB, 1962, *Acarologia*, 4, p. 499-501.

Hosts and Distribution :

MAMMALS.

No. 1060, II/f, 8.1.1951, 3 ♀, rodent nest (No. Z.2298), coll. PSch.

This species was described from specimens collected on rodents, mainly *Praomys tullbergi*, at Brazzaville, Congo. Other less frequent hosts listed for this species were *Lemniscomys striatus*, *Dasymys incomtus* and *Rattus frugivorus*. TAUFFLIEB (1964a) records several other hosts and localities in the Republic of the Congo.

Laelaps congoicola TAUFFLIEB.

Laelaps congoicola TAUFFLIEB, 1959, *J. Entomol. Soc. S. Afr.*, 22, p. 397.

Hosts and Distribution :

MAMMALS.

No. 1998, II/hc/4, 21.VI.1951, 1 ♀, rodent nest, coll. JV.

This species was previously known only from the type series collected from *Oenomys hypoxanthus* at Brazzaville in the Congo.

Laelaps kampalensis TAUFFLIEB.

Laelaps kampalensis TAUFFLIEB, 1959, *J. Entomol. Soc. S. Afr.*, 22, p. 402.

Hosts and Distribution :

MAMMALS.

Nos. 628, I/o/1, 12.VI.1950, 1 ♀, mammal (No. 1527), coll. JM; 1009, II/f, 23.XII.1951, 1 ♀, rodent nests, coll. JV; 1038, II/d, 3.I.1951, 1 ♀, rodent nests, coll. JV; 1207, Source Wilibadi, 30.I.1951, 1 ♀, rodent nests, coll. JV.

BIRDS.

No. 282, I/o/2, 1.II.1950, 1 ♀, bird (No. 534), coll. GD.

L. kampalensis was described from specimens taken off *Lemniscomys striatus* at Kampala, Uganda. These specimens are the first recorded from the Republic of the Congo. TAUFFLIEB (in litt.) informs us that the *pilus dentilis* of *L. kampalensis* is truly inflated, rather than slender, as stated in his key (1959).

Laelaps lavieri TAUFFLIEB.

Laelaps lavieri TAUFFLIEB, 1954, Ann. Parasitol. hum. comp., 29, p. 442.

Hosts and Distribution :

MAMMAL.

No. 1582, II/gd/4, 17.IV.1951, 1 ♀, rodent nest of *Tatera* sp., coll. JV.

TAUFFLIEB (1962) records this species from *Mus musculoides* at Brazzaville, Congo and on *Leggada* at Yaoundé, Cameroon. TAUFFLIEB (1964a) records *L. lavieri* from *Leggada bella*, at Lwiro Bukavu Kivu, Republic of the Congo.

Laelaps lavoipierrei TAUFFLIEB.

Laelaps lavoipierrei TAUFFLIEB, 1954, Ann. Parasitol. hum. comp., 29, p. 440.

Hosts and Distribution :

MAMMAL.

No. 2271, II/hc/8, 17.VIII.1951, 1 ♂, 1 ♀, murid *Crocidura littoralis* HELLER (No. Z.3656/2), coll. JV.

Previously known only from *Lophuromys sikapusi* at Brazzaville, Congo and Yaounde, Cameroon (TAUFFLIEB 1954, TAUFFLIEB and MOUCHET, 1959).

Laelaps roubaudi TAUFFLIEB.

Laelaps roubaudi TAUFFLIEB, 1954, Ann. Parasitol. hum. comp., 29, p. 437.

Hosts and Distribution :

MAMMALS.

No. 2237, II/gd/4, 6.VIII.1951, 1 ♀, murid *Dasymys incomtus bentleyae* (THOMAS) (No. Z.3629/2), coll. JV.

TAUFLIEB (1962) considered *L. roubaudi* to be host-specific for the rat *Dasymys incomtus* and recorded its presence at Brazzaville and Pointe-Noire. He also listed a single record of *L. roubaudi* from *Lophuromys sikapusi* and another from *Pelomys* sp., noting, however, that in both collections the same biotope was inhabited by *Dasymys*.

The specimen recorded here is the first reported from the Republic of the Congo.

CLASSIFIED HOST LIST

MAMMALS.

Mammals *Laelaps* (E.) *bakeri*.
Laelaps (L.) *kampalensis*.

ORDER CARNIVORA.

VIVERRIDAE.

Genetta tigrina aequatorialis *Laelaps* (E.) *muricola*.

ORDER RODENTIA.

Murid nest *Laelaps* (E.) *bakeri*.
Laelaps (E.) *gigantea*.
 Murid rodent *Laelaps* (E.) *bakeri*.
Laelaps (E.) *gigantea*.
Laelaps (E.) *muricola*.
Laelaps (L.) *lavoipierrei*.
Laelaps (L.) *roubaudi*.
Otomys nest *Laelaps* (E.) *gigantea*.
 Rodent *Laelaps* (E.) *bakeri*.
Laelaps (E.) *gigantea*.
Laelaps (E.) *muricola*.
 Rodent nests *Laelaps* (E.) *bakeri*.
Laelaps (E.) *gigantea*.
Laelaps (E.) *muricola*.
Laelaps (L.) *brazzai*.
Laelaps (L.) *congoicola*.
Laelaps (L.) *kampalensis*.
Laelaps (L.) *lavieri*.
Crocidura littoralis HELLER *Laelaps* (L.) *lavoipierrei*.
Dasymys incomtus bentleyae (THOMAS). *Laelaps* (E.) *gigantea*.
Laelaps (L.) *roubaudi*.
Heliosorex roosevelti HELLER *Laelaps* (E.) *bakeri*.
Laelaps (E.) *gigantea*.
Lemniscomys striatus massaicus (PAGENSTECHE) *Laelaps* (E.) *bakeri*.
Lophuromys sikapusi ansorgei DE WINTON *Laelaps* (E.) *gigantea*.
Mastimys coucha ugandae (DE WINTON). *Laelaps* (E.) *bakeri*.
Laelaps (E.) *gigantea*.
Laelaps (E.) *muricola*.
Mylomys dybowskii alberti THOMAS *Laelaps* (E.) *bakeri*.

<i>Uranomys ruddi ugandae</i> HELLER	<i>Laelaps (E.) bakeri.</i>
<i>Dasymys</i> nests	<i>Laelaps (E.) bakeri.</i> <i>Laelaps (E.) gigantea.</i>
<i>Myiomys</i> nest	<i>Laelaps (E.) bakeri.</i> <i>Laelaps (E.) gigantea.</i>
<i>Tatera</i> nest	<i>Laelaps (L.) lavieri.</i>
Rodent run	<i>Laelaps (E.) bakeri.</i>

BIRDS.

Bird	<i>Laelaps (E.) bakeri.</i> <i>Laelaps (E.) gigantea.</i> <i>Laelaps (L.) kampalensis.</i>
-------------	--

OTHER.

On vegetation	<i>Laelaps (E.) bakeri.</i>
Host unknown	<i>Laelaps (E.) bakeri.</i>

REFERENCES

- CLIFFORD, C. M. and ANASTOS, G., 1964, Exploration du Parc National de la Garamba. Mission H. De Saeger (1949-1952). Fasc. 44 : Ticks (*Inst. des Parcs Nationaux du Congo et du Rwanda*, Bruxelles).
- DE SAEGER, H., 1954, Exploration du Parc National de la Garamba. Mission H. De Saeger (1949-1952). Fasc. 1 : Introduction (*Inst. des Parcs Nationaux du Congo Belge*, Bruxelles).
- 1956, Exploration du Parc National de la Garamba. Mission H. De Saeger (1949-1952). Fasc. 5 : Entomologie. Renseignements éco-biologiques (*Ibid.*).
- HIRST, S., 1925, Descriptions of new Acari, mainly parasitic on rodents (*Proc. Zool. Soc.*, Part 1, pp. 49-69).
- KEEGAN, H. L., 1956, Ectoparasitic laelaptid and dermanyssid mites of Egypt, Kenya and the Sudan, primarily based on NAMRU-3 collections, 1948-1953 (*J. Egypt. Publ. Hlth. Asso.*, vol. 31, pp. 199-272).
- KRANTZ, G. W., 1961, Exploration du Parc National de la Garamba. Mission H. De Saeger (1949-1952). Fasc. 24, pp.3-13. Free-living Mesostigmata from Garamba National Park, Congo I. Two new genera of Macrochelidae (*Inst. des Parcs Nationaux du Congo et du Rwanda*, Bruxelles).
- KRANTZ, G. W., 1962, Exploration du Parc National de la Garamba. Mission H. De Saeger (1949-1952). Fasc. 34, pp. 1-29. Free-living Mesostigmata II. Fam. Aceosejidae (*Inst. des Parcs Nationaux du Congo et du Rwanda*, Bruxelles).
- STRANDTMANN, R. W. and MITCHELL, C. J., 1963, The Laelaptine mites of the *Echinolaelaps* complex from the Southwest Pacific Area (Acarina : Mesostigmata) (*Pacific Insects*, vol. 5, pp. 541-576).
- TAUFFLIEB, R., 1954, Quelques *Laelaps* nouveaux (Acarina; Laelaptidae) du Moyen Congo (Afrique Equatoriale Française) (*Ann. de Parasitol.*, vol. 34, pp. 436-446).
- 1959, Nouvelles espèces de *Laelaps* de la région éthiopienne (Acarina; Laelaptidae) et clé des espèces Africaines du genre (*J. Entomol. Soc. S. Afr.*, vol. 22, pp. 394-408).
- 1962, Acariens mésostigmatés actuellement connus en République du Congo (Acarina : Laelaptidae, Spinturnicidae) (*Bull. de l'Inst. de Recherches Scientifiques au Congo*, vol. 1, pp. 109-113).
- 1964a, Notes sur les *Laelaps* du Congo-Léopoldville d'après les collections du Musée de Tervuren (*Rev. Zool. Bot. Afr.*, vol. 44, pp. 377-383).
- 1964b, 7. — Acarina — Laelaptidae (*Ann. Mus. Roy. Afr. Centr.* in-8°. Zool. 132, p. 115).

- TAUFFLIEB, R. and MOUCHET, J., 1959, Notes sur les Acariens du Cameroun (*Ann. Parasitol. hum. comp.*, vol. 34, pp. 350-353).
- TIPTON, V. J., 1960, The genus *Laelaps* with a review of the Laelaptinae and a new subfamily Alphalaelaptinae (Acarina: Laelaptidae) (*Univ. Calif. Publ. Entomol.*, vol. 16, pp. 233-356).
- ZUMPT, F., 1950, Descriptions of two new *Laelaps* species from South Africa with a key to the Ethiopian species of this genus (Acarina, Laelaptidae) (*S. Afr. J. Med. Sci.*, vol. 15, pp. 77-82).
- ZUMPT, F. and TILL, W. M., 1958, Notes on the classification and synonymy of gamasid mites parasitic on vertebrates (*J. Entomol. Soc. S. Afr.*, vol. 21, pp. 261-273).
- 1961, Mesostigmata, p. 17-91 (*In* F. ZUMPT [ed], The Arthropod parasites of vertebrates in Africa south of the Sahara, vol. 1) (*S. Afr. Inst. Med. Res.*, Johannesburg).
-

TABLE OF CONTENTS

	Pages
INTRODUCTION	3
FAMILY LAELAPIDAE	5
Genus <i>Laelaps</i>	5
Subgenus <i>Echinolaelaps</i>	5
<i>L. (E.) bakeri</i>	6
<i>L. (E.) gigantea</i>	7
<i>L. (E.) muricola</i>	7
Subgenus <i>Laelaps</i>	8
<i>L. (L.) brazzai</i>	8
<i>L. (L.) congolicola</i>	8
<i>L. (L.) kampalensis</i>	8
<i>L. (L.) lavieri</i>	9
<i>L. (L.) lavoipierrei</i>	9
<i>L. (L.) roubaudi</i>	9
CLASSIFIED HOST LIST	11
REFERENCES	13

Published April 30, 1968.
