

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

en collaboration avec

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ACARI

BY

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FREE-LIVING MESOSTIGMATA FROM GARAMBA NATIONAL PARK

III. — THE FAMILY EVIPHIDIDAE ⁽¹⁾

Six species representing three genera of the family *Eviphididae* were found in the H. DE SAEGER collections from Garamba National Park, Congo. Two of these are described as new and a third is redescribed, since the original description is considered inadequate. This paper is the third in a series of taxonomic studies on the free living *Mesostigmata* of this locale ⁽²⁾.

⁽¹⁾ The species described herein are from the collection of the Mission H. DE SAEGER to Garamba Park (1949-1952).

⁽²⁾ The following citations refer to the first two papers in this series :
KRANTZ, G. W., 1961, Free-living *Mesostigmata* from Garamba National Park, Congo Republic. I : Two new genera of *Macrochelidae* (*Inst. Parcs Nat. Congo*, Mission H. DE SAEGER, fasc. 24 : 3-13).

IBID., 1962, Free-living *Mesostigmata*. II : The family *Aceosejidae* (*Inst. Parcs Nat. Congo*, Mission H. DE SAEGER, fasc. 34 : 3-29).

Genus **EVIPHIS** BERLESE, 1903.

Eviphis BERLESE, A. (1903), *Redia*, 1 : 242. — RYKE, P. A. J. and MEYER, M. K. P. (1957), *Ann. and Mag. of Nat. Hist.*, Ser. 12, Vol. X : 594-603.

***Eviphis meyeri* n. sp.**

Ex savane herbeuse, J.V., II/hc/4, 21.VI.1951, avec coprophage, Garamba National Park, 6 females (Collection No. 1994).

F e m a l e : Length of idiosoma averages 1058 μ , with a range of 1030 μ -1080 μ ; width of idiosoma at level of coxae IV averages 898 μ , with a range of 880 μ -920 μ . Dorsal shield covers entire dorsum and bears 29 pairs of simple setae inserted as shown in figure 1; setae D_1 and D_2 many times longer than setae D_3 to D_6 ; setae in Mg series long and stout, longer posteriorly; surface of dorsal shield with a scale-like pattern (fig. 2). Tritosternum prominent, with a conical base and a pair of long, lightly pilose laciniae. Sternal setae I and II long and simple; sternal setae III, metasternal setae and epigynial setae large and spinose; metasternal shields large and fused with endopodals; epigynial shield bell-shaped (fig. 6). Anal shield large, pyriform, with anal opening and setae in posterior half of shield; adanal setae less than half the length of postanal seta. Unsclerotized portion of ventral opisthosoma with nine pairs of simple setae. Peritremal shield narrow and extending well beyond coxa IV; metapodal plates small and irregular. Coxa I with a stout acuminate seta and a slender (simple) seta; coxa II and III each with a blunt spur-like posterior seta and a simple anterior seta; coxa IV with a stout acuminate seta. Palpal claw two-tined; palp tarsus with a pair of closely associated rod-like setae; corniculi stout and spinose. Anterior and internal posterior hypostomal setae sub-equal and twice as long as external posterior hypostomal and gnathosomal setae (fig. 5). Deutosternum with seven ridges, of which the first and last are nude; second ridge with three large denticles, the remainder with minute teeth. Tectum unipartite, thick, and finely pilose (fig. 3). Chelicerae chelate-dentate, long and gradually tapering; chelae less than $\frac{1}{10}$ as long as total length of chelicerae (fig. 4).

The holotype female will be deposited in the collection of the Institut des Parcs Nationaux, Brussels, Belgium. Paratypes will be placed in the collection of the following institutions: U.S. National Museum, Washington, D.C.; British Museum (Natural History), London, England; Oregon State University, Corvallis, Oregon, U.S.A.; Potchefstroom University, Potchefstroom, South Africa; Zoological Institute of the Academy of Sciences, Leningrad, U.S.S.R.

E. meyeri is closely related to *Eviphis cultratellus* (BERL.), 1910 and *Eviphis mullani* (OUDS.), 1915. It may be distinguished from them by the character and disposition of the dorsal setae, the form of the tectum, and the width of the peritreme.

***Eviphis hastatellus* (BERLESE), 1910.**

Copriphis hastatellus BERLESE, A., 1910, Redia, 6 : 262.

Eviphis rufus OUDEMANS, A. C., 1914, Ent. Berlin (Nederland), 4 : 68.

Eviphis exemplaris VITZTHUM, H. G., 1925, Suppl. Ent. Berlin, 11 : 31.

Eviphis hastatellus RYKE, P. A. J. and MEYER, M. K. P., 1957, Ann. Mag. Nat. Hist., Ser. 12, Vol. 10 : 599.

Only one female of *E. hastatellus* was recovered from the examined material. Collecting data are as follows : Ex ruisseau sans galerie G.D., I/c/4, 13.I.1950, avec insecte (Collection No. 158) ⁽³⁾.

***Eviphis cultratellus* (BERLESE), 1910.**

Copriphis cultratellus BERLESE, A., 1910, Redia, 6 : 261.

Eviphis cultratellus RYKE, P. A. J. and MEYER, M. K. P., 1957, Ann. and Mag. Nat. Hist., Ser. 12, Vol. 10 : 596.

Eviphis cultratellus was collected from the following locales in Garamba Park ex savane arborescente, I/o/1, 9.XI.1950, avec insecte (Collection No. 949), 1 female; ex savane herbeuse, II/hel/4, 23.III.1951 (Collection No. 1455), 1 female; ex savane herbeuse, II/ge/14, 17.V.1951, avec dendroxylyle (Collection No. 1814), 1 nymph, 1 male, 2 females; ex tête de source à boisement dégradé, II/nc/8, 5.VI.1951, divers (Collection No. 1871), 1 nymph; ex houtes d'éléphants, J.V., II/hc/4, 28.VI.1951, avec insecte (Collection No. 2028), 1 nymph; ex savane herbeuse, II/hd/4, 3.IX.1951, avec arachnide (Collection No. 2349), 1 male; ex savane herbeuse, II/id/4, 10.IX.1951, avec insecte (Collection No. 2426), 1 male, 1 female; ex savane herbeuse, II/id/4, 6.XI.1951, avec insecte (Collection No. 2743), 3 males, 4 females; ex petit cours d'eau sans ombrage, II/ge/10, 4.XII.1951, avec insecte aquatique (Collection No. 2844), 2 males, 6 females; ex savane herbeuse, PpK/15, 24.XII.1951, avec

⁽³⁾ RYKE and MEYER (1957) described *Eviphis hastatellus transvaalensis* as a sub-species of *Eviphis hastatellus* sens. str., and at that time indicated that the only difference between the two forms was in the structure of some of the ventral setae. *Eviphis hastatellus transvaalensis* has acuminate spine-like sternal setae III, and a similar seta on both coxa II and III. These setae are blunt and spur-like in *Eviphis hastatellus* sens. str. Since the form of these setae has been considered by RYKE and MEYER to be of specific value in separating *Eviphis hastatellus* and *Eviphis stefaninianus* (BERLESE), the authors hesitate to describe *Eviphis hastatellus transvaalensis* as a sub-species of *Eviphis hastatellus* sens. str., the separation of these forms being as distinct as that between *Eviphis hastatellus* and *Eviphis stefaninianus*. The question arises, however, as to the value of the setal character used in establishing the separation of *E. hastatellus* and *E. stefaninianus*. It is felt that this character is a valid one, and that it may be used at the species level in the genus *Eviphis*. We are, therefore, raising *Eviphis hastatellus transvaalensis* to a specific rank (*Eviphis transvaalensis* RYKE and MEYER status novum).

insecte (Collection No. 2947), 1 nymph, 1 female, ex savane herbeuse, PpK/73/4, avec insecte coprophage et arachnide (Collection No. 3323), 1 male 1 female; ex galerie forestière, II/fel/17, 24.IV.1952 (Collection No. 3330), 1 femal; ex savane herbeuse, II/he/4, 29.V.1952 (Collection No. 3565), 1 nymph; ex savane herbeuse, II/ic/4, 6.VI.1952, avec insecte coprophage (Collection No. 3672), 2 nymphs, 1 female, 1 male, ex savane herbeuse, PpK/8/4, 7.VI.1952, avec insecte coprophage (Collection No. 3673), 2 females ex savane herbeuse, II/ec/4, 30.VI.1952, avec insecte coprophage (Collection No. 3725), 2 male, 3 females; ex plaine marécageuse, II/gc/11, 4.VII.1952, avec insecte coprophage (Collection No. 3740), 2 nymphs, 3 females; ex savane herbeuse, II/je/4, 26.VIII.1952, avec insecte coprophage (Collection No. 3675), 2 nymphs, 2 males, 2 females.

***Eviphis stefaninianus* (BERLESE), 1921.**

Copriphis stefaninianus BERLESE, A., 1921, Redia, 14 : 172.

The following data was given on the two females in the collection : II/dd/4, 22.VIII.1951 (Collection No. 2287).

The short diagnosis of *E. stefaninianus* given by BERLESE in the original description was deemed inadequate, for which reason the following redescription is presented (4).

F e m a l e : Length of idiosoma = 435 μ (430 μ -440 μ); width at level of coxae III = 300 μ (290 μ -310 μ). Dorsal shield bears thirty pairs of simple acuminate setae in four groups : 8 pairs of dorsals, 3 pairs of medians, 8 pairs of laterals, and 11 pairs of marginals (fig. 7); marginal and lateral setae slightly longer than the median and dorsal setae. Ventral setae (fig. 9) simple, acuminate and subequal in length; metasternal shields not fused with the endopodals. Epigynial shield with more or less parallel sides. Anal shield with anal opening and adanal setae in posterior $\frac{2}{3}$ of plate; anal setae subequal. Peritrematal shield broad, extending well beyond posterior margin of coxa IV; unsclerotized portion of ventral opisthosoma with 10 pairs of setae. Palp tarsus with two-tined claw and two closely associated rod-like setae. Anterior hypostomal and internal posterior hypostomal setae subequal and twice as long as gnathosomal and external posterior hypostomal setae. Deutosternal groove with seven ridges, each bearing 6-8 denticles. Tectum elongate, with a slender finely pilose distal portion and a broad basal portion fringed on the lateral edges only (fig. 8).

E. stefaninianus is closely related to *E. hastatellus* and *E. transvaalensis*, but may be distinguished from them in that all the ventral setae of the for-

(4) The authors wish to acknowledge the help of Dr. FAUSTA PEGAZZANO, Stazione di Entomologia Agraria, Florence, Italy, who kindly supplied a diagnosis and drawings of BERLESE'S type specimen of *E. stefaninianus*.

mer are simple. The third sternal and posterior setae of coxae II and III are modified into spurs on *E. hastatellus* and *E. transvaalensis*.

Genus **SCARABASPIS** WOMERSLEY, 1956.

Scarabaspis WOMERSLEY, H., 1956, Jour. Linn. Soc. (Zoology), Vol. 42 (No. 288): 590. — EVANS, G. O., 1956, Ann. and Mag. Nat. Hist., Ser. 12, Vol. 10: 409-416.

Scarabaspis rykei n sp.

Ex crotins de rhinocéros, J.V., PpK 10-11.I.1951, 3 females (Collection No. 1084); ex savane herbeuse, H.D.S., II/gd/4, 26.VI.1951, 2 males (Collection No 1967); ex petit cours d'eau sans ombrage, H.D.S., II/ge/10, 4.XII.1951, avec insecte aquatique, 1 female, 1 male (Collection No. 2844); galerie forestière, H.D.S., II/fel/17, 24.IV.1952, 1 male (Collection No. 3330); ex savane herbeuse, H.D.S., II/he/4, 29.V.1952, 3 females, 1 male (Collection No. 3565); ex savane herbeuse, H.D.S., PpK/8/4, 7.VI.1952, avec insecte coprophage, 1 male (Collection No. 3673); ex plaine marécageuse, H.D.S., II/gc/11, 4.VII.1952, avec insecte coprophage, 1 male, 1 nymph (Collection No. 3739); ex plaine marécageuse, H.D.S., II/gc/11, 4.VII.1952, avec insecte coprophage, 1 female, 1 nymph (Collection No. 3740); ex savane herbeuse, H.D.S., II/je/4, 26.VIII.1952, avec insecte coprophage, 1 female, 2 males (Collection No. 3975).

Female: Length of idiosoma averages 451 μ with a range of 440 μ -460 μ ; width of idiosoma at level of coxae IV averages 275 μ with a range of 250 μ -290 μ . Dorsal shield (fig. 13) with 30 pairs of setae, of which the verticals and the fourth pairs of marginals are short and spinose as in *S. inexpectatus* (OUDS.) and *S. punctatus* EVANS; surface of shield with a reticulated pattern and densely punctured. Sternal shield (fig. 15) as long or longer than wide, and produced between coxae I and II, and II and III; surface of sternal shield without ornamentation; with three pairs of simple setae and three pairs of pores (metasternal pores on shield); metasternal setae on soft cuticle posterior to the shield. Epigynial shield more or less parallel-sided, rounded posteriorly, and without any distinct reticulation; genital setae inserted off the shield; unarmed portion of the ventral opisthosoma with a pair of small sausage-shaped metapodal plates and nine pairs of simple setae. Anal shield rounded anteriorly, with para-anal seta lying in line with middle of anus; cribrum $\frac{1}{2}$ as wide as the anal shield; surface of shield weakly reticulated. Chaetotaxy of venter of gnathosoma, and form of corniculi, salivary styli, deutosternal groove, and labrum are as shown in fig. 12. Specialized palpal claw two-tined; with a pair of closely associated conspicuous rod-like setae on palp tarsus. Form of tectum as shown in fig. 14. Setae on coxae I and posterior seta on coxa II modified into oval protuberances or « asperites ».

Male : Length of idiosoma averages 372 μ with a range of 340 μ -390 μ ; width of idiosoma at level of coxae IV averages 218 μ with a range of 200 μ -230 μ . Chaetotaxy and ornamentation of dorsal shield essentially the same as in female (fig. 13). Sternitigenital and anal shields as shown in fig. 10. Gnathosoma as in the female. Movable digit of chelicera with a short spatulate spermatophoral process (fig. 11). Coxa, trochanter, and femur II each armed with a weak spur.

Scarabaspis rykei is similar to *S. punctatus* EVANS, but can be separated from it by the shape of the anal shield, the form of the tectum, and by the length of the sternal shield, which is as long or longer than wide in *S. rykei* (wider than long in *S. punctatus*). In addition, the cribrum of *S. rykei* is $\frac{1}{2}$ as wide as the greatest width of the anal shield, while in *S. punctatus* the cribrum is approximately $\frac{1}{3}$ the width of the anal shield.

Genus **ALLIPHIS** HALBERT, 1923.

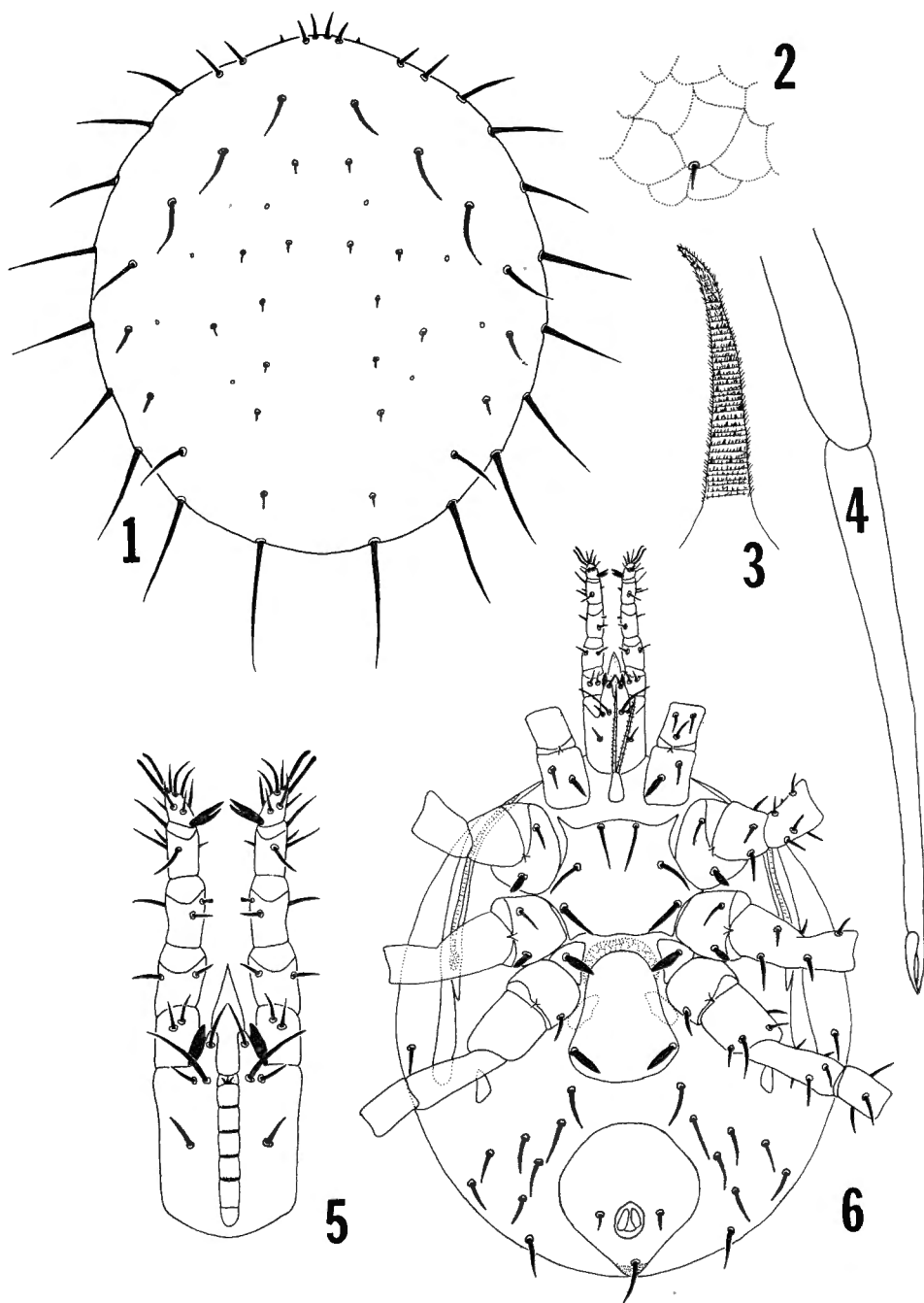
Alliphis HALBERT, J. N., 1923, J. Linn. Soc. Zool., 35 : 369.

Alliphis evansi RYKE and MEYER, 1957.

Alliphis evansi RYKE, P. A. J. and MEYER, M. K. P., 1957, Ann. and Mag. Nat. Hist., Ser. 12, Vol. 10 : 603.

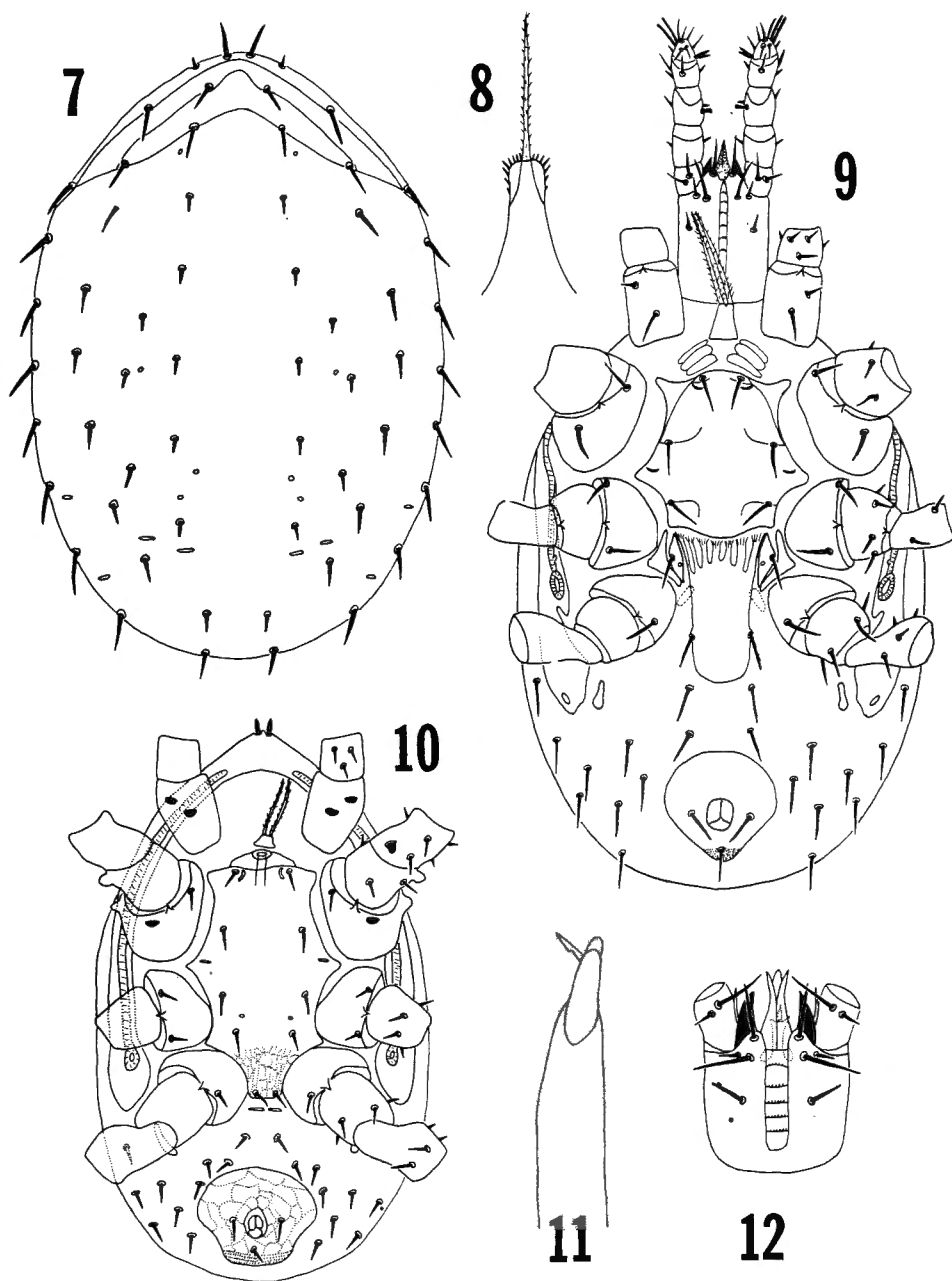
Alliphis evansi was collected at the following locations : ex savane herbeuse, H.D.S., II/je/4, 11.VII.1952, 1 female (Collection No. 3767); ex savane herbeuse, H.D.S., II/he/4, 29.V.1952, avec insecte coprophage, 1 female (Collection No. 3565); ex savane herbeuse, H.D.S., II/ec/4, 30.VI.1952, avec insecte coprophage, 3 females (Collection No. 3725); ex savane herbeuse, H.D.S., II/je/4, 26.VIII.1952, avec insecte coprophage, 1 female, 1 male (Collection No. 3975); ex savane forestière non brûlée, H.D.S., II/gd/4, 16.VI.1951, 1 female (Collection No. 1855); ex petit cours d'eau sans ombrage, II/ge/10, 4.XII.1951, avec insecte aquatique, 2 females (Collection No. 2844).

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FIGS. 1-6. — *Eviphis meyeri* n. sp.

1: Dorsum of female; 2: Portion of dorsal shield of female; 3: Tectum of female;
4: Chelicera of female; 5: Venter of female gnathosoma; 6: Venter of female.

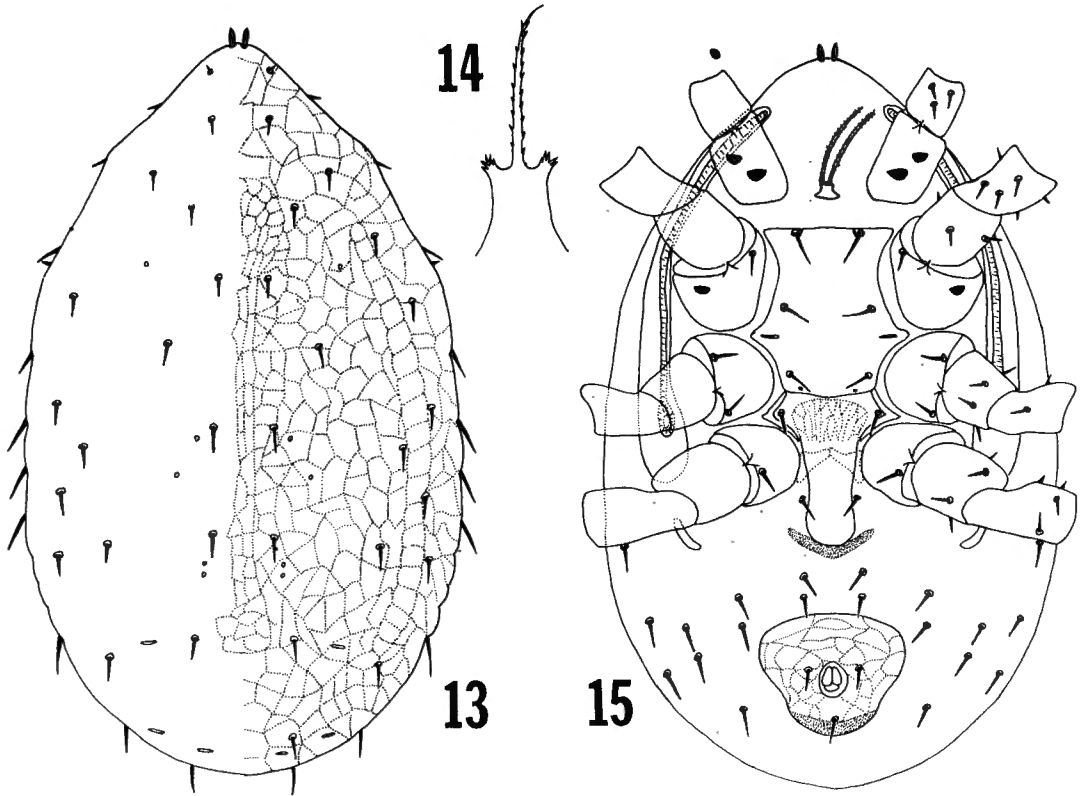


FIGS. 7-9. — *Eviphis stefaninianus* (BERLESE).

7: Dorsum of female; 8: Tectum of female; 9: Venter of female.

FIGS. 10-12. — *Scarabaspis rykei* n. sp.

10: Venter of male; 11: Chelicera of male; 12: Venter of female gnathosoma.



FIGS. 13-15. — *Scarabaspis rykei* n. sp.

13: Dorsum of female; 14: Tectum of female; 15: Venter of female.

 INDEX ARRANGED ALPHABETICALLY

GENERA.

	Pages
<i>Alliphis</i> HALBERT	8
<i>Eviphis</i> BERLESE	4
<i>Scarabaspis</i> WOMERSLEY	7

SPECIES.

<i>cultratellus</i> (BERLESE) (<i>Eviphis</i>)	5
<i>evansi</i> RYKE and MEYER (<i>Alliphis</i>)	8
<i>hastatellus</i> (BERLESE) (<i>Eviphis</i>)	5
<i>meyeri</i> n. sp. (<i>Eviphis</i>)	4
<i>rykei</i> n. sp. (<i>Scarabaspis</i>)	7
<i>stefahinianus</i> (BERLESE) (<i>Eviphis</i>)	6

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