

**A NEW SPECIES OF RHIZOGLYPHUS FROM PAKISTAN**  
(ACARINA : TYROGLYPHIDAE)

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A new species of *Rhizoglyphus karachiensis*, collected from the manure of dairy cattle in Karachi is described and illustrated.

**Female** (Figs. 1-6)

*Dimensions.*—Idiosomal length 1190  $\mu$ ; width 812  $\mu$  (average of 8 specimens).

*Dorsum.*—Cuticle thin, smooth and colourless, body oval, dividing into propodosoma and hysterosoma. Two brown spots on either side of the body in the position of posterior lateral setae (lp). Propodosoma with a pair of internal vertical (vi) on anterior margin. External vertical (ve) lacking. External scapular (sce) three times as long as internal scapular (sci), sce being the longest body seta. On hysterosoma dorsal seta ( $d_3$ ) longer than  $d_1$ ,  $d_2$  and  $d_4$ ;  $d_1$  being the smallest. Ex-

ternal humeral (he) twice as long as internal humeral (hi), vi and he longer than sci. External sacral (sac), internal humeral (hi) and dorsal seta ( $d_1$ ) relatively shorter than other setae on hysterosoma.

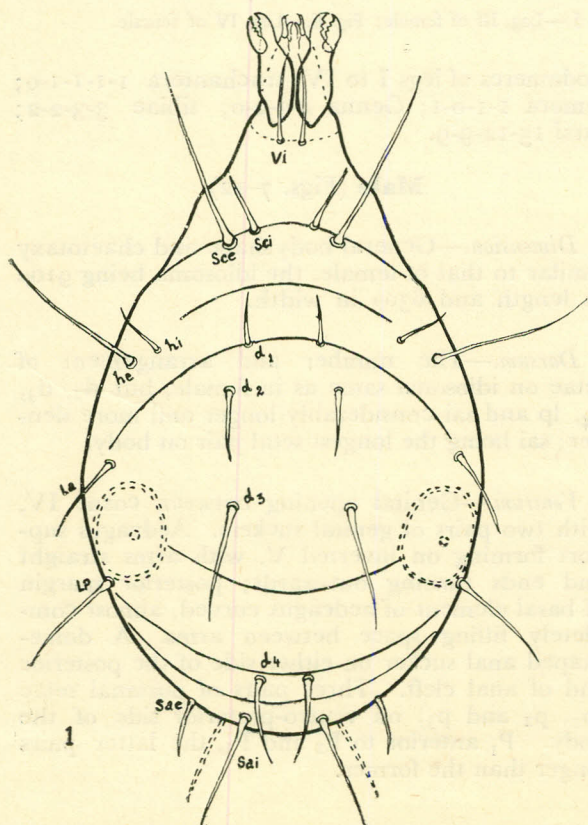


Fig. 1.—*Rhizoglyphus karachiensis* n. sp. (dorsum of female).

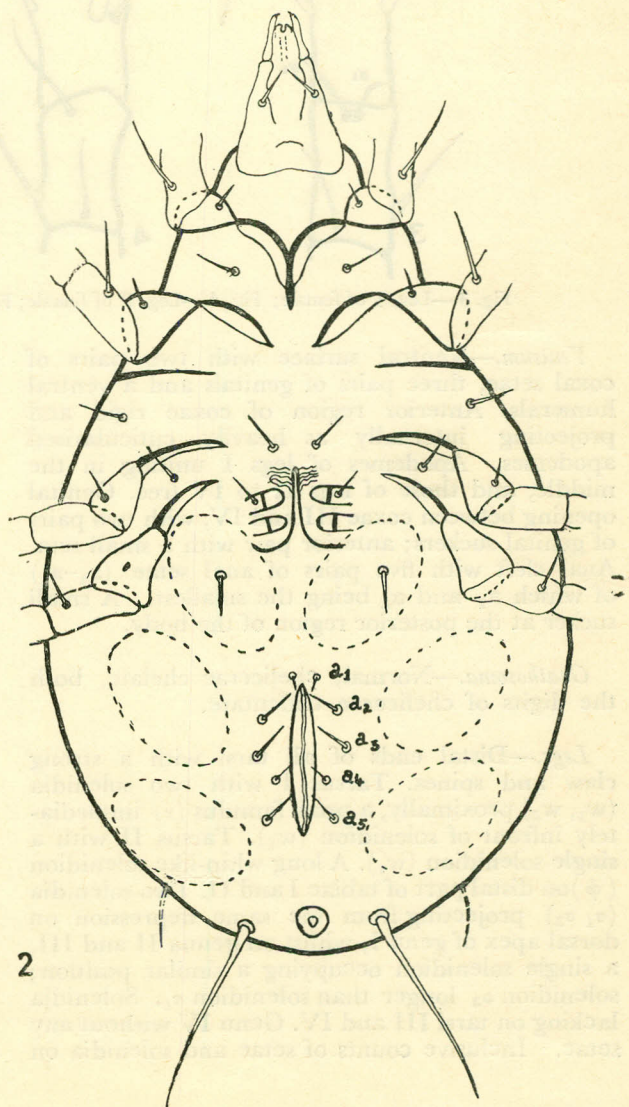


Fig. 2.—*Rhizoglyphus karachiensis* n. sp. (venter of female).





Fig. 3.—Leg, I of female; Fig. 4.—Leg, II of female; Fig. 5.—Leg, III of female; Fig. 6.—Leg, IV of female.

*Ventrum*.—Ventral surface with two pairs of coxal setae, three pairs of genitals and a ventral humerals. Anterior region of coxae rigid and projecting internally as heavily cuticularised apodemes. Apodemes of legs I uniting in the middle, and those of legs II to IV free. Genital opening between coxae III and IV, with two pairs of genital suckers; anterior pair with a small seta. Anal cleft with five pairs of anal setae ( $a_1$ – $a_5$ ) of which  $a_1$  and  $a_4$  being the smallest. A small sucker at the posterior region of the body.

*Gnathosoma*.—Normal, chelicerae chelate, both the digits of chelicerae tridentate.

*Legs*.—Distal ends of all tarsi with a strong claw and spines. Tarsus I with two solenidia ( $w_1$ ,  $w_2$ ) proximally, a small famulus ( $\varepsilon$ ) immediately in front of solenidium ( $w_1$ ). Tarsus II with a single solenidium ( $w_1$ ). A long whip-like solenidium ( $\phi$ ) on distal part of tibiae I and II. Two solenidia ( $\sigma_1$ ,  $\sigma_2$ ) projecting from the same depression on dorsal apex of genu I, whilst on genua II and III, a single solenidium occupying a similar position; solenidium  $\sigma_2$  longer than solenidium  $\sigma_1$ . Solenidia lacking on tarsi III and IV. Genu IV without any setae. Inclusive counts of setae and solenidia on

podomeres of legs I to IV; trochantera 1-1-1-1-0; femora 1-1-0-1; Genua 4-3-2-0; tibiae 3-3-2-2; tarsi 15-12-9-9.

#### Male (Figs. 7-12)

*Dimension*.—General body shape and chaetotaxy similar to that of female, the idiosoma being  $910\mu$  in length and  $630\mu$  in width.

*Dorsum*.—The number and arrangement of setae on idiosoma same as in female, but  $d_2$ ,  $d_3$ ,  $d_4$ ,  $lp$  and  $sai$  considerably longer and more slender;  $sai$  being the longest setal pair on body.

*Ventrum*.—Genital opening between coxae IV, with two pairs of genital suckers. Aedeagus support forming on inverted V, with arms straight and ends turning out-wards; posterior margin of basal element of aedeagus curved, almost completely filling space between arms. A dome-shaped anal sucker on either side of the posterior end of anal cleft. Three pairs of postanal setae ( $p_1$ ,  $p_2$  and  $p_3$ ) on ventro-posterior side of the body.  $P_1$  anterior to  $P_2$  and  $P_3$ , the latter pairs longer than the former.



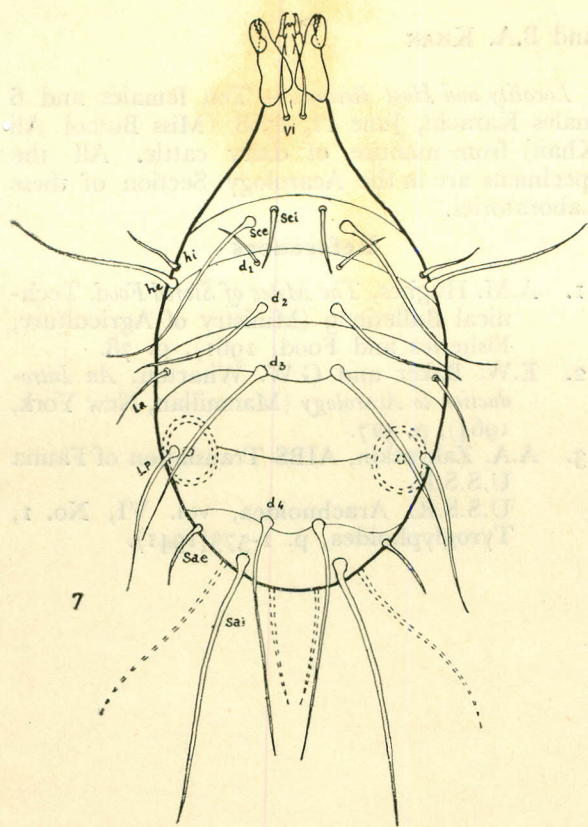


Fig. 7.—*Rhizoglyphus karachiensis* n. sp. (dorsum of male)

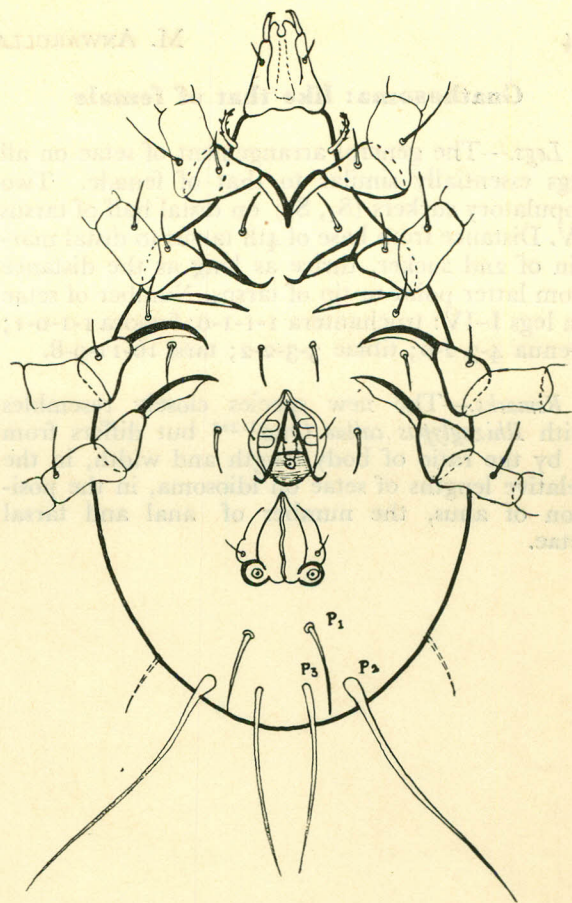


Fig. 8.—*Rhizoglyphus karachiensis* n. sp. (venter of male)

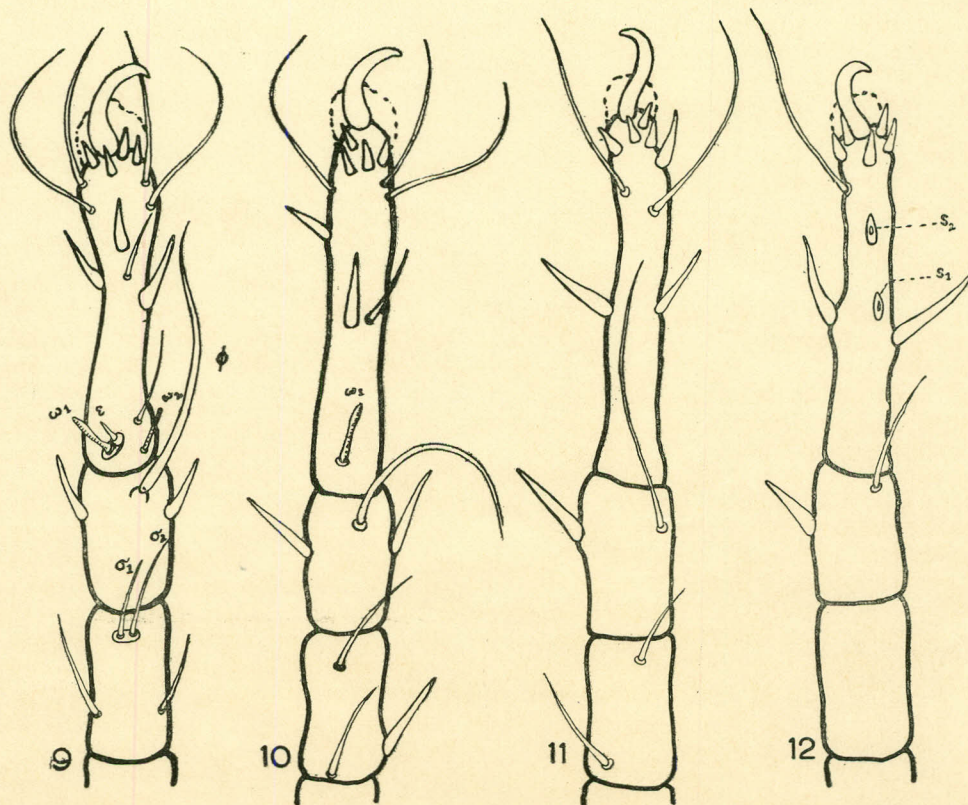


Fig. 9.—Leg, I of male; Fig. 10.—Leg, II of male; Fig. 11.—Leg, III of male; Fig. 12.—Leg, IV of male.



**Gnathosoma: like that of female**

*Legs.*—The general arrangement of setae on all legs essentially similar to that of female. Two copulatory suckers ( $S_1$ ,  $S_2$ ) on distal half of tarsus IV. Distance from base of 4th tarsus to distal margin of 2nd sucker, thrice as long as the distance from latter point to tip of tarsus. Number of setae on legs I–IV: trochantera 1-1-1-0; femora 1-1-0-1; Genua 4-3-2-0; tibiae 3-3-2-2; tarsi 16-11-9-8.

*Remarks.*—The new species closely resembles with *Rhizoglyphus callae* Oud<sup>1,2,3</sup> but differs from it by the ratio of body length and width, in the relative lengths of setae on idiosoma, in the position of anus, the number of anal and tarsal setae.

*Locality and Host Records.*—Ten females and 6 males Karachi, June 11, 1968 (Miss Butool Ali Khan) from manure of dairy cattle. All the specimens are in the Acarology Section of these Laboratories.

**References**

1. A.M. Hughes, *The Mites of Stored Food*, Technical Bulletin 9 (Ministry of Agriculture, Fisheries and Food, 1961), p. 78.
2. E.W. Baker and G.W. Wharton, *An Introduction to Acarology* (Macmillan, New York, 1964), p. 327.
3. A.A. Zakvatkin, AIBS Translation of Fauna U.S.S.R. U.S.S.R. Arachnoidea, vol. VI, No. 1, Tyroglyphoidea, p. 1-573(1941).

Fig. 8.—*Rhizoglyphus* sp. (center of anal)

Fig. 7.—*Rhizoglyphus* sp. (center of anal)

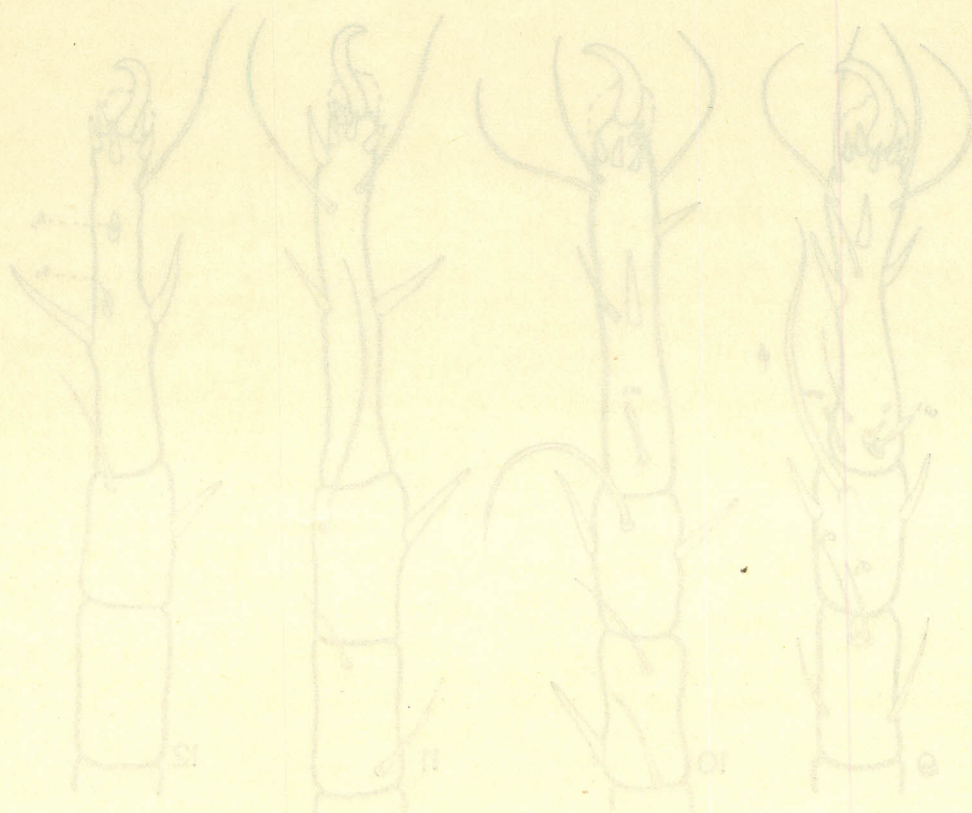


Fig. 6.—*Rhizoglyphus* sp. (center of anal)