

A NEW SPECIES OF THE GENUS *RHYZOLAEAPS* (ACARINA : LAELAPIDAE)

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RHYZOLAEAPS
NEW SPECIES
CHINA

SUMMARY : *Rhyzolaeps sinoamericanus* n. sp., from *Rhizomys pruinosus* in China, is described and compared with the three other species of the genus.

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NOUVELLE ESPÈCE
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RÉSUMÉ : *Rhyzolaeps sinoamericanus* n. sp., récoltée sur *Rhizomys pruinosus* en Chine, est décrite et comparée aux trois autres espèces du genre.

A new species of the genus *Rhyzolaeps* Bregetova and Grokhovskaja, 1961, collected from Hainan Island, China, in June, 1986, off *Rhizomys pruinosus* is described (all measurements are in microns).

Rhyzolaeps sinoamericanus sp. nov.

FEMALE (figs. 1-8) : Body oval, 994.1 (897.0-1045.1) long, 635.3 (592.5-680.3) wide. Dorsal plate covering large part of dorsum, 882.2 (822.9-905.2) × 480.6 (460.8-493.7) bearing 37-38 pairs of setae, those in the center of the plate small and those on the margin long and heavy. The longest M_{10} , S_3 measuring 181, the next M_{11} , S_2 , S_5 98.7 (90.5-107). All of these long setae undulating. S_8 measuring 23.9 (20.6-24.7) only. 8 pairs of lyriform pores on the dorsal plate. Bare dorsum with 10 setal pairs.

Gnathosoma 227.1 (214.0-234.5) long and 149.8 (139.9-164.4) wide. Deutosternal denticles 12,

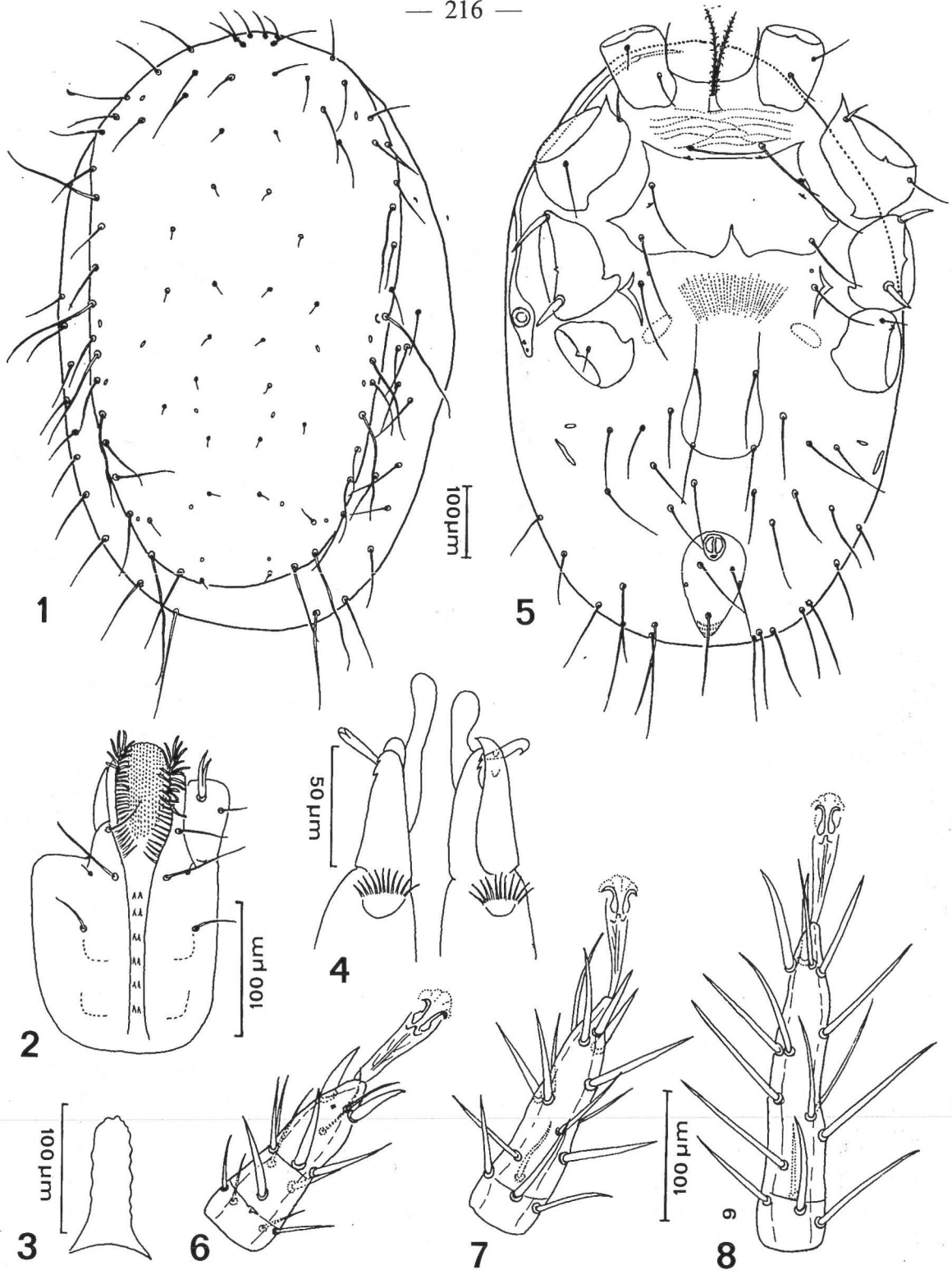
arranged in alternating double file, occasionally with one more denticle. 4 pairs of gnathosomal setae needle-like. Tip of epipharynx slightly expanded, with a median groove in the base. Margin of hypopharyngeal process bearing wide, long setae. Chelicera well developed, 234.5 (222.2-246.9) long, chela 41.1, digitus mobilis and digitus fixus with 2 separate teeth, pilus dentilis with curved tip, a transparent membranous apparatus between the digits, its tip higher than those of digits, and roundly expanded. Tectum toe-like, with irregular margin. Anterior inner seta on palptrochanter bifurcate.

Tritosternum well developed. Margin of jugular plate indistinct. Sternal plate 162.9 (156.4-168.9) long in the middle, and 248.5 (238.7-255.1) wide at the level of St_2 ; its anterior margin flat, and posterior margin irregular. Among 23 specimens, 14 had a cleft on posterior margin, the apex of the deepest cleft almost reaching the anterior margin of the plate. Anterior and middle lateral angle of

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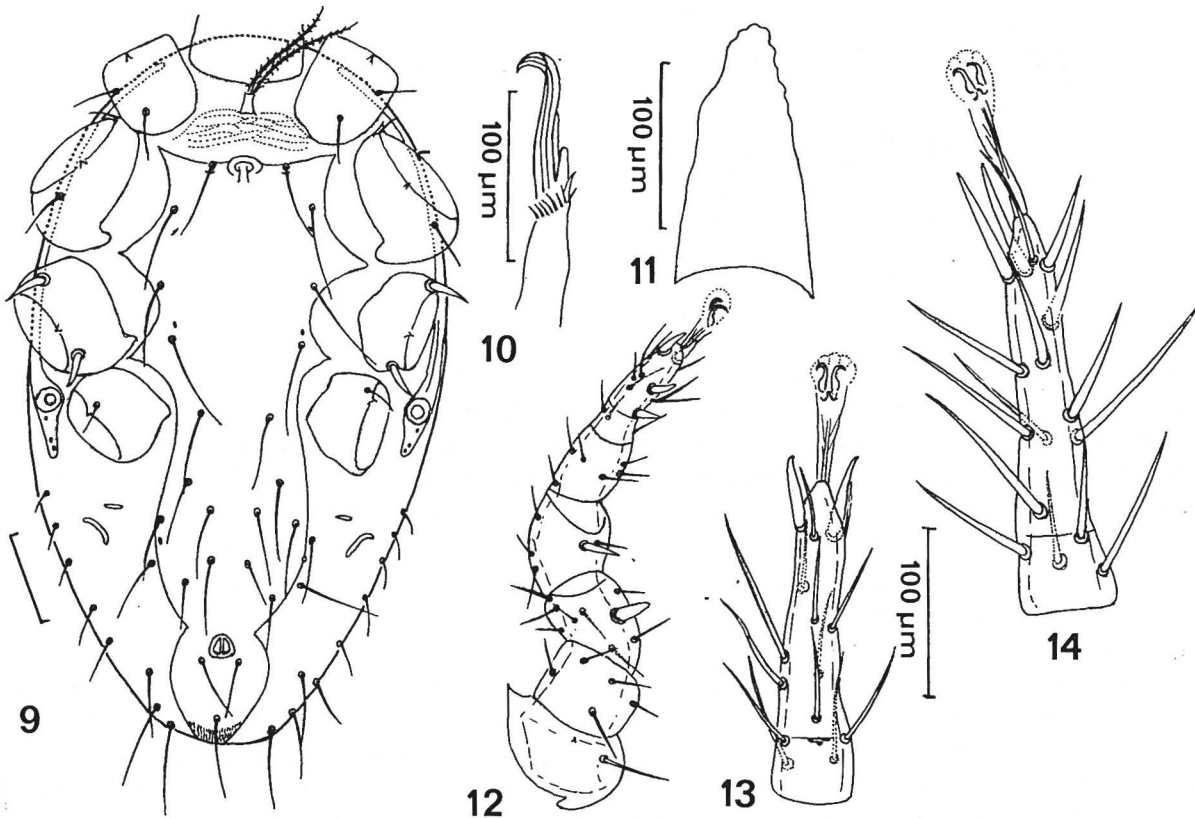
FIGS. 1-8 : *Rhyzolaelaps sinoamericanus*, sp. nov. female.
 1. — Dorsum. 2. — Gnathosoma. 3. — Tectum. 4. — Chela. 5. — Venter. 6-8. — Tarsi of legs II-IV. (Scale for FIG. 1, 2, 3, 5, 6, 7, 8 = 100 μm; scale for FIG. 4 = 50 μm).

sternal plate pointed, the posterior lateral angle rounded. Only 2 pairs of sternal setae and 2 pairs of lyriform pores on the plate, St_1 on the presternal area, first pair of pores on the anterior margin. Metasternal seta on the cuticle, a lyriform pore and endopodal plate alongside. Genitoventral plate with a round expansion on its posterior portion, the largest width 132.5 (131.7-135.8), bearing 2-3 setal pairs, VI_1 and VI_3 always on the plate, VI_2 may be one or two on or off the plate. Anal plate parshaped, 186 (172.8-189.3) \times 96.3 (94.6-98.8), anus on the anterior portion, Ad at the level of the posterior margin of anus, 113.6 (107-115.2) long, PA heavier, 130 (123.4-131.7) long. 13-14 setal pairs on the bare venter. 2 pairs of metapodal plates, lateral one slender, 39.1 (27-41.1) long, anterior one smaller, transverse. Peritreme reaching anterior portion of coxa I, 2 lyriform pores on the posterior end of peritremal plate.

Legs strong, length of legs : I = 720.9 (658.3-773.5), II = 684.7 (658.3-707.7), III = 720.9 (658.3-773.5), IV = 997.4 (938.1-1 020.4). Coxa II with large anterior dorsal spine, anterior and posterior setae of coxa III spinous. Subapical end of tarsi II-IV with 3 spinous setae respectively, and more spinous setae behind former setae, as shown in figs 6-8.

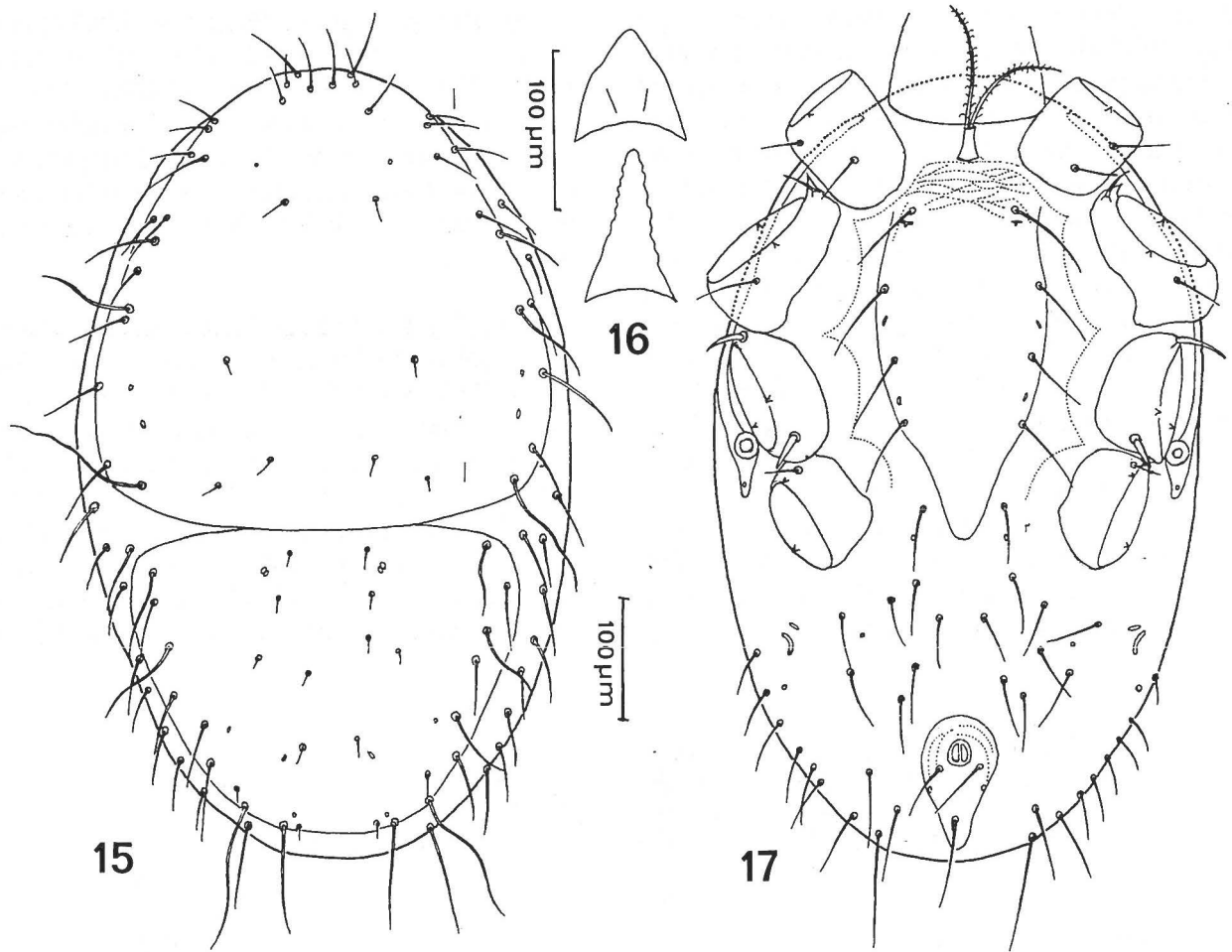
MALE (figs. 9-14) : Body 788.4 (765.3-822.9) long and 483.9 (460.8-510.2) wide. Dorsal plate 752.1 (732.4-773.5) \times 429.6 (427.9-436.1), dorsal setae and structure of gnathosoma as in female. Chelicera long 237.8 (222.2-255.1), spermatodactyl 97.1 (90.5-107) long and with point and curved tip.

Tritosternum developed. Holoventral plate 637.9 (609-655) long, width 265 (255.1-279.8) between St_{2-3} , and 164.6 (123.4-197.4) in the ventral portion concave anterior to the anus. There are 3 perianal



FIGS. 9-14 : *Rhyzolaelaps sinoamericanus*, sp. nov. male.

9. — Venter. 10. — Spermatodactyl. 11. Tectum. 12. — Leg II. 13-14. — Tarsi of legs III, IV. (Scale = 100 μ m).



FIGS. 15-17 : *Rhyzolaelaps sinoamericanus*, sp. nov. deutonymph.
15. — Dorsum. 16. — Tectum. 17. — Venter. (Scale = 100 μ m).

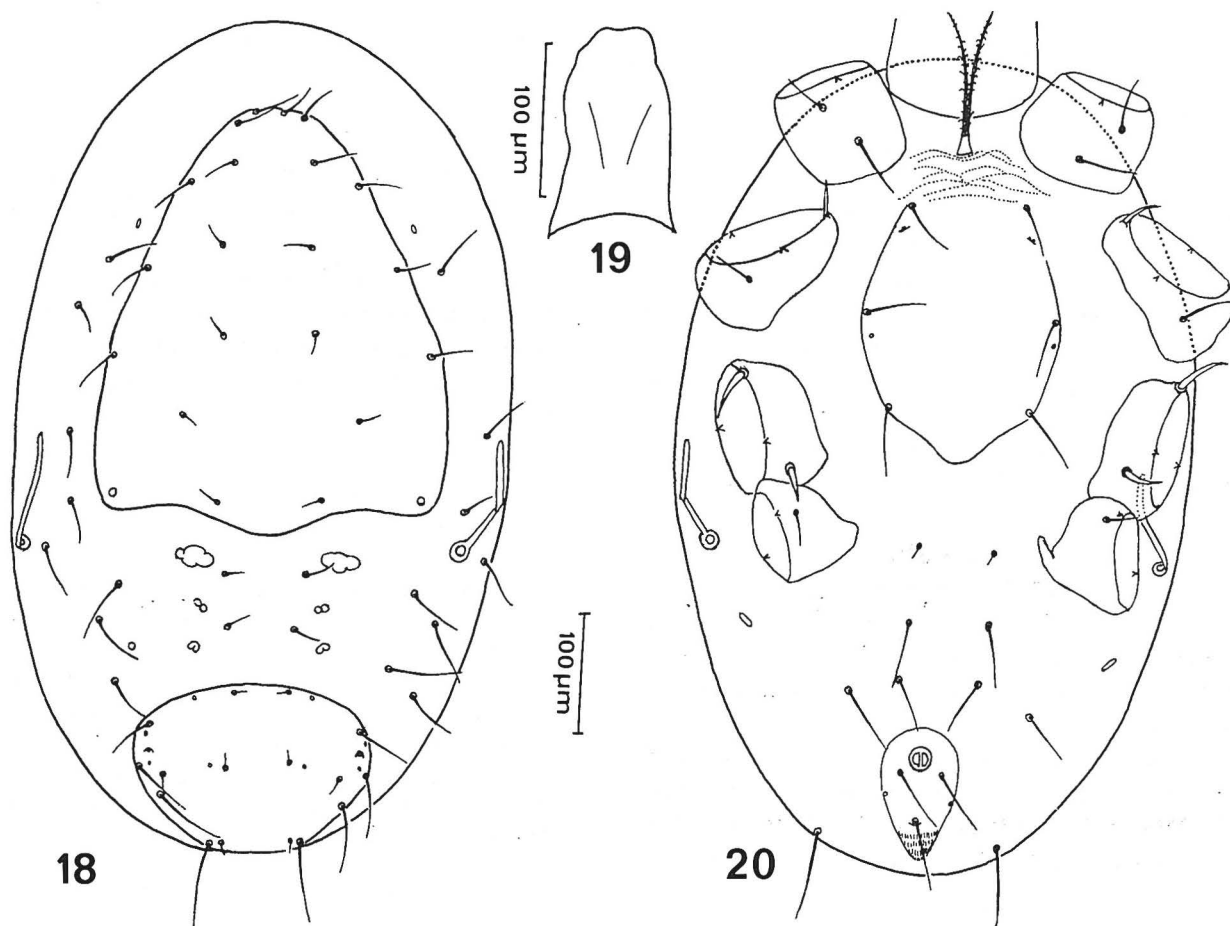
setae, 10 pairs of setae and 4 pairs of pores on this plate, 3 pairs of pores on the sternal portion, another pair on the ventral portion. Anus 37.9 (32.9-41.2) \times 24.7, Ad at level of posterior margin of anus 80.7 (74.1-86.4); PA heavier, 100.9 (94.6-109.5) long. Two pairs of metapodal plates, the larger one arc-shaped. Peritreme reaching anterior portion of coxa I, and 3 lyriform pores on the posterior end of peritremal plate.

Length of legs : I = 618.8 (592.5-641.9), II = 579.3 (559.6-609), III = 666.6 (641.9-691.2), IV = 898.6 (804.1-897). Setae on coxae same as female. Femur II armed with spur, tibia II with a spinous seta, tarsus II bearing 4 spinous setae, subapical of tarsi III and IV bearing spinous setae 2-3 separately (figs. 12-14).

DEUTONYMPH (figs. 15-17) : Body 724.2 (658.3-822.9) long, 452.6 (411.5-526.7) wide. Two dorsal plates covering nearly all of dorsum, 677.7 (625.4-724.2) long and 403.2 (278.5-444.4) wide; number and order of dorsal setae same as in female, the suture between podonotal plate and posterior dorsal plates different in different specimens, in fig. 15 it is between D_4 and D_5 . 12 setal pairs on the bare dorsum.

Gnathosoma 168.7 (148.1-181) long, 129.6 (123.4-139.9) wide, its structure as in female. Tectum smaller and with narrower anterior end.

Tritosternum well developed. Sternal plate 218.1 (172.8-263.3) long, 150.2 (139.9-164.6) wide at level of St_2 , anterior margin of plate indistinct, bearing 4 pairs of sternal setae and 3 pairs of pores. Anal



FIGS. 18-20 : *Rhyzolaelaps sinoamericanus*, sp. nov. protonymph.
18. — Dorsum. 19. — Tectum. 20. — Venter. (Scale = 100 µm).

plate 116.2 (98.7-123.4) long, and 78.2 (69.9-86.4) wide, anus in anterior portion, 30.9 (24.7-32.9) × 22.6 (16.5-24.7). Ad at level of posterior margin of anus, 73.5 (65.8-80.2), *PA* 81.3 (74.1-90.5) long. 18-19 setal pairs on bare venter. 2 pairs of metapodal plates, the postero-lateral one larger, arc-shaped. Peritreme reaching anterior portion of coxa I, a pore on the posterior end of peritremal plate. Measurements of legs : I = 553.4 (477.3-617.2), II = 506.1 (477.3-559.6), III = 551.4 (510.2-609), IV = 715.9 (658.3-773.5).

PROTONYMPH (figs. 18-20) : Idiosoma 567.8 (510.2-674.8) long, 397.1 (370.3-444.4) wide. Two dorsal plates. Pododorsal plate 340.5 (316.8-370.3) long, 175.7 (263.3-288) wide, anterior margin rounded,

the middle of lateral margin concave, and the center of posterior margin convex, plate bearing 10 pairs of setae and a large pore on the postero-lateral angle. Posterior dorsal plate bowl-like, 121.4 (115.2-139.9) long, 181 (164.6-197.5) wide, anterior and posterior margin flat, bearing 8 setal pairs, 4 pairs near the margin larger, 4 pairs in the central portion very small, with 4 pairs of lyriform pores, the largest one by the antero-lateral margin. 2 pairs of setae and 3 pairs of maculae between two dorsal plates. 8-9 pairs of setae on the bare dorsum.

Gnathosoma 137.8 (127.6-148.1) long, 118.9 (111.1-1325.8) wide, its structure same as in female. Tectum larger.

Tritosternum well developed. Sternal plate 181.1 (164.6-197.5) long, 154.3 (139.9-172.8) wide at level

of St_2 , bearing 3 pairs of sternal setae and 2 pairs of pores. Anal plate pear-shaped, $92.6 (82.3-102.9) \times 63.8 (57.6-74.1)$. Anus on anterior portion of plate, Ad at level of posterior margin of anus, $51.4 (41.2-53.5)$ long, longer than PA $47.3 (37-53.5)$. 5 pairs of setae on the bare venter, the anterior one very small, the largest one on the posterior margin. One pair of metapodal plates. Peritreme very short, its anterior end extending to the middle of coxa III. Length of legs : I = $477.3 (444.4-510.2)$, II = $444.4 (427.9-460.8)$, III = $448.5 (411.5-477.3)$, IV = $578.1 (543.1-625.4)$. Setae on coxae as in female.

HOLOTYPE ♀, allotype ♂, paratypes 23 ♀♀, 12 ♂♂, 4 deutonymphs and 4 protonymphs collected by BACCUS June 1, 1986, from *Rhyzomys pruinosus* Blyth, from Nankunshan (109.9° E, 19.2° N), Hainan Province, one female, male, deutonymph and protonymph each of paratypes deposited in Guiyang Medical College, Guizhou Province, China. Other type material deposited in U. S. National Museum, Washington D. C.

Three species of *Rhyzolaelaps* have been previously described. *R. inaquipilus* Bregetova and Grokhovskaja, 1961, *R. lodiansis* Gu and Wang, 1979 and *R. rhizomydis* Wang et al., 1980. This new

species is closely similar to *R. rhizomydis*, but differs as follows : 1) in many females of the new species, the posterior margin of the sternal plate is cleft, but not in the former species ; 2) inner seta on palptrochanter is bifurcate in the new species, not in *rhizomydis* ; 3) pilus dentilis of the new species is differently shaped, and with a curved tip ; 4) 2 pairs of metapodal plates in the new species, but only one pair in *rhizomydis* ; 5) 13 setal pairs on the bare venter in the new species, but only 7 in *rhizomydis* ; 6) tarsi bearing spinous setae subapically, and the femur and tarsus of male leg II bearing spurs, but not in *rhizomydis*.

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