1956

Ixodid ticks of USSR fauna [excerpt]

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Med Ent G 1956

TRANSLATION 2 (T2)
Revised and corrected, 28 July 1970
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TRANSLATION FROM RUSSIAN. SERDYUKOVA, G. V. (1956). Ixodid ticks of USSR fauna. Opred. Faune SSSR Zool. Inst. Akad. Nauk SSSR, (64):79-84. (Not complete paper).

KEY TO HYALOMA

MALES

1 (2). Coxa I small; external spur triangular, broad, shorter than and not contiguous to internal spur (Fig. 115). Lateral grooves lacking. Cervical grooves crescentic (Fig. 116).

Chief host land tortoise. Also hedgehogs, hamsters, dogs, and donkeys. Three hosts. Parasitize in warm period of year. Distribution: semidesert, desert, and southern steppe zone. Crimea, Caucasus, Turkmen SSR, Uzbekistan, Tadzhikistan; Egypt*, Asia Minor, Palestine, Afghanistan, and Beluchistan. . . . . 1. H. aegyptium (L.)

Linnaeus (1758), Systema Naturae, (10):615 (Acarus); Pomerantzev (1950), pp. 193-195; Dzhaparidze (1951), Soobshch. Akad. Nauk Georg. SSR, 12(9):561-563.

2 (1). Coxa I long; external spur long, pointed, contiguous to internal spur. Lateral grooves present. Cervical grooves long, different (Figs. 111, 117-120).

3 (4). Scutum punctations close, dense. Parma usually lacking, if present not clearly delimited and middle festoon narrower than others. Lateral grooves narrow, deep, long, beginning at middle of scutum and reaching last festoon (Fig. 117).

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* Now extinct in Egypt (H. H.).

Adults parasitize large mammals from February to December, peak March to August. Larvae and nymphs parasitize birds and hares from July to November. Two hosts. Distribution: steppes, semidesert and shrub-wood mountainous formations, Ukrain, Crimea, Lower Volga, Caucasus, Central Asia, Mediterranean Sea area, Asia Minor, Iran, and Africa. Vector of the agent of hemorrhagic fever of man, nuttalliosis, and equine piroplasmosis . . . . . 7. H. plumbeum (Panz.)*

Panzer (1796), Fauna Insect. Germ. In., 90, (22) (Acarus); Pomerantzev (1950), pp. 214-215; Pomerantzev (1946), marginatum Koch, pp. 27-28.

2 (d). Small ticks, almost black with brown tint or dark brown with yellowish tint.

b (c). Scutal punctations sparse, minute. Spiracular plate with wide dorsal projection.

Adults in autumn do not attack animals, and overwinter in the steppes, often found in hay stacks. Distribution: steppes and forest-steppes in mixed grass vegetations (abandoned arable land, virgin soil, and meadows), along the Volga river, Caucasus, southern Europe, northern Africa, Asia Minor. Vector of the agent of hemorrhagic fever of man . . . . . 7a. H. plumbeum plumbeum (Panz.)

Pomerantzev (1950), pp. 215-216.

c (b). Scutum densely covered by large punctations. Spiracular plate with a narrow, long dorsal projection. Distribution: southern Kazakhstan and Central Asia . . . . . 7b. H. plumbeum turanicum Pom.

Pomerantzev (1950), pp. 216-218.

d (a). Large ticks, almost black with reddish tint. Scutum with large, deep punctations. Distribution: Daghestan, and islands of Azov Sea . . . . . 7c. H. plumbeum nigricum Ser.

Serdyukova (1955a), p. 1038.

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* H. marginatum Koch of western workers (H. H.).

4 (3). Scutum punctations sparse. Parma usually present, or if absent then breadth of middle festoon is equal to that of others. Lateral grooves usually short, begin posterior of middle of scutum (Fig. 118).

5 (8). Posteromedian groove short, does not reach parma (Fig. 119).

6 (7). Cervical grooves shallow, not trough-shaped (Fig. 118). Basis capituli dorsally with slightly concave posterior margin. Legs with whitish rings or sometimes with dorsal stripes.

Parasitize large mammals. Three hosts. Adults from March to November, larvae and nymphs from July to October. Distribution: Caucasus, Central Asia, Iran, Asia Minor, Red Sea coast, northwestern Africa, Egypt, and Ethiopia. Transmit bovine theileriasis (sheep and goats excluded) . . . . . 6. H. anatolicum Koch.

Koch (1844), Arch. Naturgesch., 10(1): 220-221; Pomerantzev (1950), pp. 211-214; Pervomaisky (1954), pp. 62-200; Koch (1844), excavatum. Arch. Naturgesch., 10(1):222.

7 (6). Cervical grooves deep, trough-like (Fig. 119). Basis capituli dorsally with a deep, angular posteromarginal notch. Legs with distinct white rings.

Adults parasitize large mammals, hares, and hedgehogs. Larvae and nymphs on rodents and hedgehogs. Three hosts. Parasitize from April to October. Distribution: desert, semidesert and steppe landscapes, eastern Transcaucasus (including Armenian SSR), Central Asia, and Iran. Transmit bovine theileriasis (sheep and goats excluded) . . . . . 3. H. asiaticum Sch. and Schl.

Schulze and Schlottke (1929), dromedarii asiaticum. Sber. Abh. Naturf. Ges., 3(2): 34-43; Pomerantzev (1950), pp. 200-206.

a (d). Pulvillus short, less than half length of claw. Adanal shields narrow.

b (c). Caudal area of scutum sparsely punctate. Legs brownish-red.

Parasitize camels and other domestic animals, wild boar, also hares and other rodents. Attacks man. Distribution: Central Asia . . . . 3a. H. asiaticum asiaticum Sch. and Schl.

Schulze and Schlottke (1929), dromedarii asiaticum, Sber. Abh. Naturf. Ges., 3(2): 34-43; Pomerantzev (1950), pp. 200-206.

c (b). Caudal area of scutum densely punctate. Legs light yellow.

Parasitize camels. Distribution: Ashkhabad, Chinese Turkestan, and Central Asia . . . . . 3c. H. asiaticum kozlovi Ol.

Olenev (1931), kozlovi, Parazit. Sborn. Zool. Inst. Akad. Nauk SSSR, 2:258-259; Pomerantzev (1950), pp. 204-206.

d (a). Pulvillus long, exceed half length of claw. Adanal shields broad.

Parasitize domestic animals, hares and other rodents. Occasionally found in cattle sheds. Distribution: Transcaucasus . . . . . 3b. H. asiaticum caucasicum Pom.

Pomerantzev and Matikashvili (1939, 1940), pp. 117-118; Pomerantzev (1950), pp. 203-204; Ogandzhanyan (1953). Material for study of fauna of Armenian SSR, Zool. Sborn., 1(8):149-167.

8 (5). Posteromedian groove long, reaches parma (Figs. 111, 120).

9 (10). Subanal shields large, broader than accessory, often bifurcated, usually posterior of accessory. Legs with white rings. Cervical grooves deep, trough-like (Fig. 111).

Parasitize camel, cattle, horse, sheep in warm and cold seasons of the year. One host. Distribution: Turkmen SSR, southern Tadzhikistan, southern Uzbekistan, Ethiopia, Nubia, Egypt, Sudan, Tripoli, Tunis, Algeria, Morocco, Asia

Minor, Syria, Iran, Afghanistan, Sind, and Punjab . . . . . .2. H. dromedarii Koch.

Koch (1844), Arch. Naturgesch, 10(1): 220; Pomerantzev (1950), pp. 197-200; Pospelova-Shtrom (1935), jakimovi Ol., pp. 195-234.

10 (9). Subanal shields small, narrower than accessory, posterior of adanal shields. Legs yellowish, lack white rings. Cervical grooves shallow.

11 (12). Spiracular plate comma-like, with a narrow, long dorsal projection reaching scutum. Legs long, segments with whitish dorsal stripe. Scutum glossy (Fig. 120).

Parasitize large mammals, rarely hares. Two hosts. Larva and nymphs from August to May, adults in summer. One annual developmental cycle, winter diapause in nymphal instar. Apart from natural biotopes, inhabits cattle farms. Distribution: Transcaucasus, southern Kazakhstan, Uzbekistan, Tadzhikistan; northern Africa, Iran, China, Transmit bovine theileriasis . . . 4. H. detritum Sch.

Schulze (1919), Sber. Abh. Naturf. Ges. Freunde, (5-6):193-196; Pomerantzev (1950), pp. 206-209.

12 (11). Spiracular plate with a wide short, dorsal projection not reaching scutum. Legs short, lack whitish dorsal stripes. Scutum rugose.

Parasitize cattle, also horses, camels donkeys, goitered gazelle, and Cervus elaphus bactrianus Lyd. One host. Parasitize animals in cold weather October to April. One annual developmental cycle. Distribution: Kursk and Saratov oblasts, lower reaches of the Volga, Ukrain, Crimea, Caucasus, Kazakhstan, Tadzhikistan; Yugoslavia and Central Asia (region of Lake Sogo-Nor). Transmit bovine theileriasis and nuttalliosis . . . 5. H. scupense Sch.

Schulze (1918), Sber. Abh. Naturf. Ges. Freunde, 1(2):2-62; Pomerantzev (1950), pp. 209-211. Schulze (1931), volgense, uralense. Z. Parasitenkde, 3(1):44-46.

FEMALES

1 (2). External spur of coxa I triangular, broad, shorter than inner spur and not adjacent. Legs dark, almost black with white rings . . . . . 1. H. aegyptium (L.).

2 (1). External spur of coxa I slender, pointed, length not less than that of adjacent inner spur.

3 (10). Legs with white or whitish rings. Lateral grooves present.

4 (7). Scutum with trough-like depressions, delimited by lateral and cervical grooves.

5 (6). Scutum elongate, length greater (including scapulae) than breadth, posterior margin rounded (Fig. 121). Genital aperture lacks lateral lobes . . . . . 3. H. asiaticum Sch. and Schl.

a (d). Pulvilli short, do not exceed half length of claw.

b (c). Legs brownish red . . . . . 3a. H. asiaticum asiaticum Sch. and Schl.

c (b). Legs light yellow . . . . . .3c. H. asiaticum kozlovi Ol.

d (a). Pulvilli long, reach half length of claw . . . . . 3b. H. asiaticum caucasicum Pom.

6 (5). Scutum broad, broader than long (including scapulae), posterior margin rounded. Genital aperture with lateral lobes (Figs. 112, 122). . . . 2. H. dromedarii Koch.

7 (4). Scutum lacking trough-like depressions.

8 (9). Scutum elongate, longer (including scapulae) than broad, lacking lateral depressions posterior of eyes, punctations sparse (Fig. 123) . . . . . 6. H. anatolicum Koch.

9 (8). Scutum broad, length and breadth subequal (including scapulae), with depressions posterior of eyes, punctations dense (Fig. 124) . . . . 7. H. plumbeum (Panz.).

a (b, c). Scutum moderately punctate . . . . . 7a. H. plumbeum plumbeum (Panz.).

b (a, c). Scutum with dense, deep punctations. Larger dark brown . . . . . 7b. H. plumbeum turanicum Pom.

c (a, b). Scutum with sparse, deep punctations. Large, almost black with reddish tint . . . . . 7c. H. plumbeum nigricum Ser.

10 (3). Legs monochromatic, without white or whitish rings. Scutum lacks lateral grooves.

11 (12). Projection of spiracular plate sharply bent dorsally. Legs yellowish orange. Scutum smooth, glossy (Fig. 125) . . . . . 4. H. detritum Sch.

12 (11). Projection of spiracular plate bent posteriorly, sometimes slightly curved dorsally. Legs reddish-brown. Scutum with transverse wrinkles, dull . . . . . 5. H. scupense Sch.