TWO NEW SCELIONID PARASITES OF *LOCUSTA MIGRATORIA*, L., FROM RUSSIA.

By A. A. Ogloblin.

This summer I received for identification from the Entomological Department of the Experimental Station at Poltava one vial with 12 specimens (2 ♂♂, 10 ♀♀) of a new species of *Scelio* bred from eggs of *Locusta migratoria* ph. *danica*, collected by F. Lukjanovich, 12.viii.1925, at Priluky, Poltava province; and later on Mr. B. P. Uvarov sent me two females of another species from Turkestan. All the representatives of the cosmopolitan genus *Scelio*, Latr., so far as we know, are egg-parasites of Acrididae. Some species have been bred from *L. danica* in Australia, but in Europe this is the first species of which the host has been recorded. Dr. J. J. Kieffer, in a posthumous monograph of the Scelionidae (Das Tierreich, Lief. 48, 1926), among other generic characters mentioned the four-jointed maxillary palpi. He further distinguished the Australian genus *Neoscelio*, Dodd, from *Scelio* by its having three-jointed maxillary palpi, besides the long metathoracic spine. Unfortunately Kieffer did not mention to which species of the genus *Scelio* his observation referred. I have dissected a few specimens of three species, *S. vulgaris*, Kieff., *S. uvarovi*, sp. n., and *S. nikolskyi*, sp. n., and can state that in both sexes of all these species the maxillary palpi are only three-jointed. The generic definition of the genus *Scelio* must therefore be corrected in this sense.

Many new characters useful for distinguishing the different species of *Scelio* were found in the course of the present work, and since many of them are related to secondary sexual characters, the author is convinced that in future analytic keys for the determination of males and females should always be kept separate.

Scelio uvarovi, sp. n.

♀. Length of body 4·67–4·77 mm.

Black; antennae, mandibles (except the red teeth), palpi, tegulae, all the femora in the middle, and the claws, dark brown; tibiae, tarsi and tips of four hind coxae, reddish yellow.

Head (fig. 1*a*).—Length 0·73 mm., breadth 1·04 mm. Eyes with the short and long diameters as 2 : 3; the short diameter 0·28 mm., equal to the length of the cheek. Ocelli in an obtuse-angled triangle; the diameter of the front ocellus 79μ; lateral ocellus elliptical (7 : 5), its distance from the orbits equal to the length of its larger diameter (0·079 mm.). Temple broader than the short eye-diameter. Occiput deeply emarginate posteriorly, at the middle not defined from the vertex, distinctly margined latero-ventrally. Forehead broadened towards the toruli (0·825 mm.); narrowest at the line that passes immediately under front ocellus (0·598 mm.); at the vertex, 0·735 mm. Under the front ocellus there is a sharp spine directed into the head cavity. The frontal process dividing the toruli slightly curved, distally with four short terminal hairs and four stronger bristles on each side. Toruli with swollen external margin.

Antennae (fig. 2*a*).—Radicula slightly bent, swollen basally and here covered with very short spines; length 0·09 mm. Scape (5 : 1) as long as the six following joints together, gradually dilated distally, shagreened cellulate, covered with sparse hairs nearly one-third as long as the breadth of the scape. Second joint distally with two small, round orifices, probably leading to the Johnston's organ usually placed in this

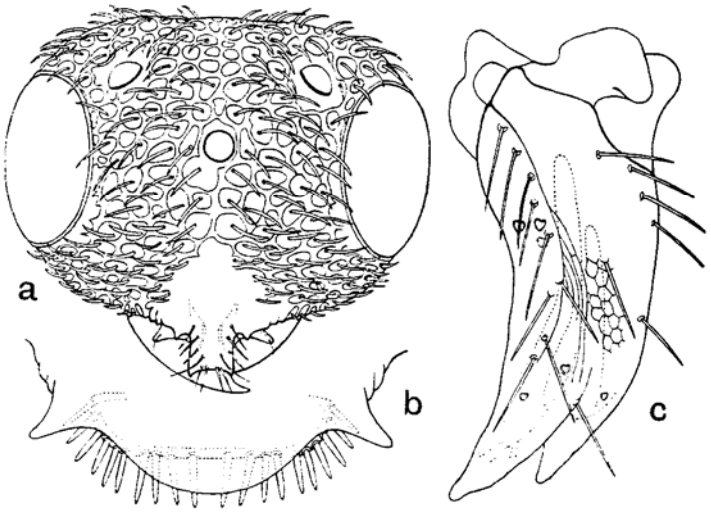

Fig. 1. *Scelio uvarovi*, sp. n., ♀: *a*, head; *b*, labrum; *c*, mandible.

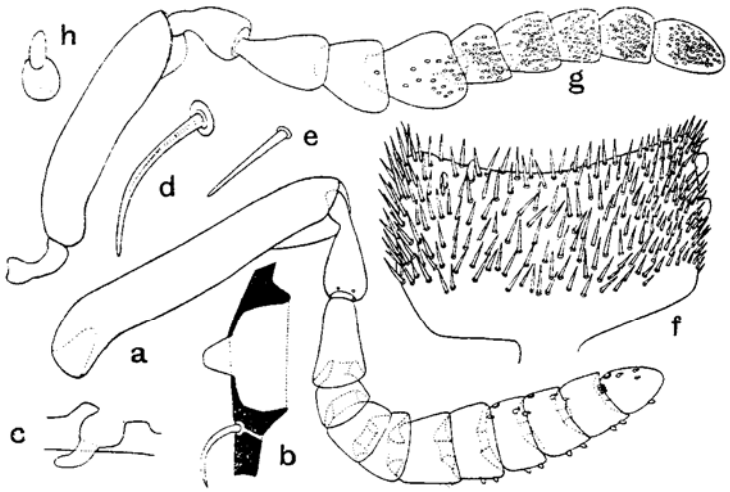

Fig. 2. *Scelio uvarovi*, sp. n. Female: *a*, antenna; *b*, *c*, sensoria; *d*, tactile hair; *e*, covering hair; *f*, eleventh antennal joint. Male: *g*, antenna; *h*, sensorium.

joint. Third joint nearly twice as long as distally broad (95 : 50). The length and breadth of antennal joints respectively as follows :—

0·667 ; 0·178 ; 0·161 ; 0·088 ; 0·080 ; 0·080 ; 0·096 ; 0·085 ; 0·085 ; 0·085 ; 0·093 ; 0·107 mm.

0·110 ; 0·076 ; 0·085 ; 0·096 ; 0·112 ; 0·119 ; 0·127 ; 0·127 ; 0·127 ; 0·122 ; 0·109 ; 0·085 mm.

The 7th–12th antennal joints ventrally bear bottle-shaped sensoria (fig. 2, *b*), the 12th and 7th having one each, the 8th–11th two. These ventral sensoria, arranged in a row, are very characteristic for the female antennae of all SCELIONIDAE. The 9th–12th antennal joints each dorsally with a single circular sensorium (fig. 2, *a*). External dorsal surface of 8th–12th with sparse sensoria of a third kind (fig. 2, *c*). Joints of flagellum and of club densely covered with fine short hairs ; on the joints of the club the hairs are shorter ventrally. Besides the covering hairs (fig. 2, *e*) each joint bears a few tactile hairs (fig. 2, *d*).

Mouth-parts.—Clypeus semicircular at the middle, on both sides with a large blunt tooth. Labrum with straight anterior margin, laterally rounded, with 20 stout bristles (fig. 1, *b*). Mandible more than twice as long as broad (0·4 by 0·176 mm.),

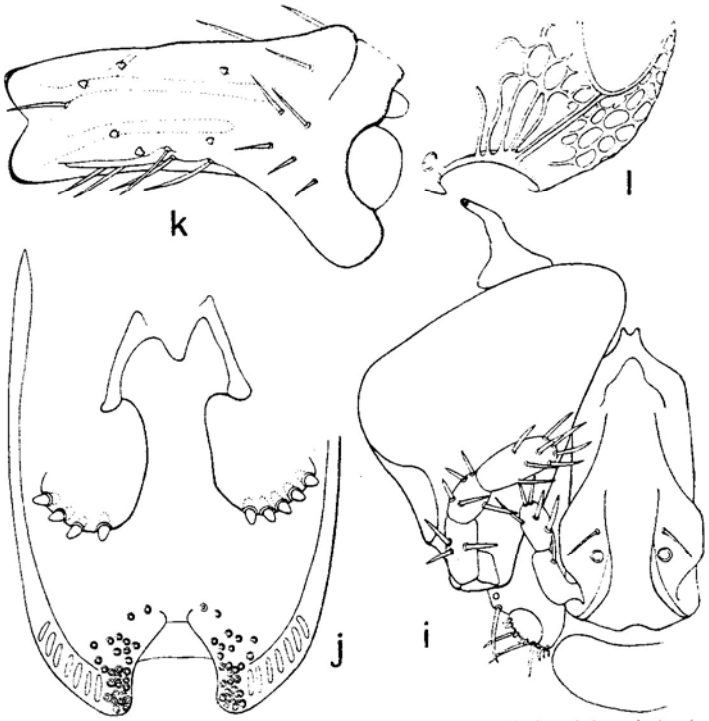

Fig. 3. *Scelio uvarovi*, sp. n. : *i*, first maxilla and second maxilla from below ; *j*, tip of male genitalia ; *k*, mandible of ♂ ; *l*, cheek.

moderately bent, externally with nearly 16 sparse, long bristles and six sensorial pustules; apical teeth pointed. (Fig. 1, *c* shows the mandible a little from above.) Maxilla I with cardo, 25 : 20; stipes, 78 : 45; galea and lacinia very soft, membranous, the former with a round ventral plate bearing 6 long and 8 short bristles. Palpus with three joints (68 μ, 34 μ and 61 μ) of equal breadth (27 μ). Maxilla II (labium + glossa), length, 0·270; breadth, 0·109 mm. First joint of palpus 1½ times as long as the second; length, 57 μ and 34 μ; breadth, 20 μ and 19 μ (fig. 3).

The general surface of the head with raised reticulation and large punctures, smaller towards the occiput and cheek, each puncture with a thick bent white hair (fig. 1, *a*).

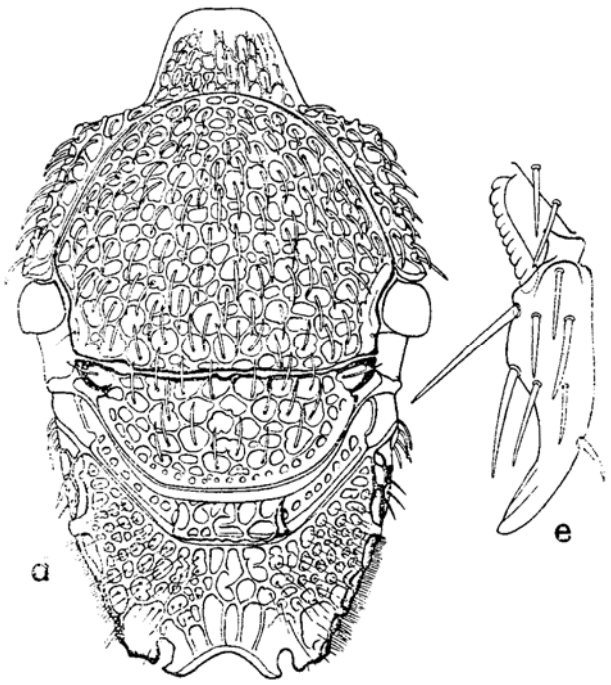

Fig. 4. *Scelio uvarovi*, sp. n., ♀: *d*, thorax; *e*, claw.

The forehead round the bases of the antennae and a narrow space round each ocellus smooth, shining. Cheek with a sulcus genalis; between sulcus and frontal process 5–6 longitudinal keels, confluent above with the raised margins of the punctures (fig. 3, *l*).

Thorax (fig. 4, *d*).—Length 1·678 mm., breadth 0·95 mm. Pronotum deeply sinuate posteriorly, as long as the mesoscutum; an indistinct longitudinal keel on the projecting shoulder separates the notal part from the pleural. Spiracles circular (34 μ);

proepimeral one not distinctly defined, longitudinally striated. Proepisterna smooth and shining in the anterior half, reticulate-rugulose posteriorly, with a thin erect hair in each mesh ; the diameter of the meshes decreases caudally and externally. Mesoscutum (0·678 by 0·791 mm.) like the lateral parts of the pronotum and scutellum, nearly evenly raised-reticulate with large punctures ; the thick hairs arising from these punctures in front of an imaginary line between the tegulae are directed caudally and behind this line in the opposite direction ; the lateral margin of the mesoscutum near the tegula twice shallowly sinuate. Scutellum (length 0·282 mm., breadth 0·706 mm.) $2\frac{1}{2}$ times as broad as long, with produced antero-lateral angles, separated from the metanotum by a row of deep punctures followed by a smooth space. Mesosternopleurae throughout raised-reticulate with large meshes (under the wing base 34–57 μ), beyond which after a small round groove with small meshes (12–24 μ) ; sternal surface with meshes of unequal size (11–80 μ). Metanotum (length 0·339 mm., breadth 0·678 mm.) with the length at the middle 0·068 mm., medially raised and coarsely rugulose. Metapleurae evenly raised reticulate.

Propodeon elongate ; max. length, 0·62 mm., length at the middle, 0·309 mm. ; breadth between the spiracles, 0·79 mm. Beyond the spiracles slightly constricted ; postero-lateral angles produced into large blunt teeth. The dorsal surface unevenly and weakly rugulose-punctate, with fine sparse pilosity. Lateral surfaces from the spiracles to the posterior teeth densely covered with fine silvery hairs. The spiracle elliptical (1 : 2), raised laterally.

Wings.—Forewing (3 : 1, length 2·921 mm., breadth 0·95 mm.) reaches the base of fifth abdominal tergite. The submarginal vein not reaching the anterior margin of wing ; stigmal vein surrounded by brown nebulosity and traceable to the apex, 0·071 mm. long, equal to the length of the basal elements together, distally with two sensorial pustulae. Submarginal cell attaining two-fifths the length of the wing, 1·112 mm. long, with the anterior margin without fringe hairs. The wing brownish infumate in the apical two-thirds with a trace of the radial vein indicated by a slightly darker line. A colourless line in place of the discoidal vein. Hind wing (length 2·113 mm., breadth 0·452 mm.) hyaline ; with three hamuli at 1·299 mm. from the wing base. A bare longitudinal broad area from the base to the middle of wing ; another small hairless space just in front of hamuli. The longest hairs of the fringe near the base, 0·119 mm.

Legs.—Fore coxae (0·238 by 0·197 mm.) smooth, internally microscopically striate ; pilosity basally dense and very short, sparse and longer distally. Trochanter (0·238 by 0·075 mm.) elongate, sparsely and evenly hairy. Femur (0·595 by 0·15 mm.) ventrally at the base with five round sensorial pustulae ; pilosity denser and shorter dorsally to the distal end. Tibia (0·510 by 0·119 mm.) finely shagreened, densely hairy, distally with 14 strong spines (thickened hairs) ; spur (0·207 mm.) with the upper tooth twice as long as the lower one. Comb of the fore metatarsus (0·272 by 0·051 mm.) with about 60 spines. The tarsal joints 2–5 respectively 0·146, 0·133, 0·098, 0·139 mm. ; claw, 0·068 mm. ; pulvillus of each tarsus with peculiar basal paired elements (fig. 4, *s*), length 0·054 mm. (folded pulvillus).

Mid coxae (0·340 by 0·214 mm.) smooth, internally at the base microscopically transversely striate ; the anterior surface with numerous small spines. Trochanter (0·194 by 0·082 mm.) with three pustulae. Femur (0·724 by 0·143 mm.) basally with four pustulae, very finely shagreened. Tibia (0·660 by 0·112 mm.) basally with five pustulae, with the pilosity slightly denser ventrally ; distal ends of tibia and of tarsal joints 1–4 with a few longer and stronger bristles. Spur (0·170 mm.) with dense short spines. The tarsal joints 1–5 respectively, 0·262, 0·173, 0·142, 0·109, 0·142 mm. ; claw 0·068 mm. ; breadth of tarsal joints 0·054 mm.

Hind coxae (0·422 by 0·228 mm.) internally near the base with three short transverse rugae ; trochanter (0·187 by 0·085 mm.) with three pustulae on the distal end

dorsally. Femur (0·823 by 0·160 mm.) basally with four ventral pustulae in one row. Tibia (0·976 by 0·119 mm.) basally with 4–5 sensorial pustulae and like the foregoing parts of leg, smooth basally with sparse pilosity, distally shagreened, with dense short pilosity; spur (0·187 mm.) with short spines. The tarsal joints 1–5, 0·570, 0·214, 0·201, 0·129, 0·153 mm.; joints 1–4 distally with stronger bristles.

Abdomen.—First abdominal tergite truncate in front, the anterior angles seen from above appearing like four rounded teeth. Spiracles lateral, immediately behind anterior margin, slightly projecting. Eight longitudinal dorsal parallel ridges. Lateral surface with a semicircular ridge bordering a small smooth space; about ten short radial ridges ramifying from the semicircular ridge. Base of tergite near the spiracles with 5–6 long, thick, parallel hairs from each side. Second tergite with 16 longitudinal ridges, of which 4 on each side anastomose and do not reach the apical margin of the tergite. Third and fourth tergites medially with 20 longitudinal ridges, laterally rugulose-punctate. Fifth basally with 16 ridges, only 4 median ones reaching the apical margin. Sixth at the middle coarsely punctate, each puncture with a strong erect hair, apically with a bundle of ten parallel bristles.

First ventrite coarsely reticulate, laterally with thin short pilosity, second ventrite basally with 16 large punctures in a transverse row, followed by six longitudinal ridges. On both sides, as on the third ventrite, a feeble tubercle. This tubercle finely, longitudinally aciculate, covered with numerous (nearly 40) pores, which lead into canals perforating the chitin, which is here thickened. As for the morphological significance of this structure, it is difficult to judge, since we know nothing of the anatomy of *Scelio*. Both sexes of different species have the same structure on ventrites 2, 3, 5. Third ventrite with 18 longitudinal ridges basally; apically with a large smooth shining space. Fourth and fifth medially smooth, laterally longitudinally rugulose-punctate without tubercles; fourth with two canals on each side. Sixth coarsely punctate, the punctures denser apically and laterally; the apical margin twice feebly sinuate. Terebra in a fine membraneous sheath; length, 2·44 mm.; breadth, 0·136 mm.

The dimensions of the abdominal segments are:—

		I.	II.	III.	IV.	V.	VI.	
Tergites:	length ...	0·339	0·452	0·622	0·565	0·429	0·283	mm.
	breadth	0·610	0·837	0·877	0·859	0·643	0·339	mm.
Ventrites:	length ...	0·316	0·475	0·711	0·565	0·452	0·283	mm.
	breadth	0·452	0·643	0·678	0·622	0·429	0·260	mm.

♂. Length, 4·5 mm. Similar to the ♀ in colour.

Antennae reddish brown; radicula, 0·105 mm. by 0·047 mm. Scape as long as the five following joints together, moderately curved. Fifth joint swollen, ventrally with a large longitudinal sensorium: joints 4–10 dorsally and externally with small sensoria (fig. 2, *h*), fourth with only one, fifth with nearly 20, sixth to tenth with nearly 70 (fig. 2, *g*). Third to tenth joints with their base merged into the distal ends of the foregoing joints. Sixth to tenth pedunculate.

Mouth-parts.—Mandible (0·337 by 0·134 mm.) externally with 14 bristles and 6 sensorial pustules; nearly straight, with blunt apical teeth.

Thorax.—Pronotum with shoulders a little more raised.

Wings.—Forewings (2·847 by 0·96 mm.) reaching the apex of fifth abdominal tergite, light brownish with pale veins and stigma.

Legs with the joints generally shorter and thicker than those of female, except for the longer 5th tarsal joints, claws and pulvillus: the comb of fore metatarsus with nearly 40 spines: fore tibia distally with 10–12 thickened hairs.

Dimensions of the legs :—

	Fore.		*Mid.*		*Hind.*		
	Length.	Breadth.	Length.	Breadth.	Length.	Breadth.	
Coxa ...	0·233	0·219	0·282	0·221	0·398	0·245	mm.
Trochanter ...	0·238	0·078	0·170	0·075	0·170	0·082	mm.
Femur ...	0·595	0·156	0·673	0·143	0·782	0·167	mm.
Tibia ...	0·459	0·122	0·622	0·129	0·873	0·126	mm.
Spur ...	0·176	—	0·140	—	0·170	—	mm.
1st tarsal joint	0·238	0·061	0·207	—	0·401	0·054	mm.
2nd ,, ,,	0·136	—	0·126	—	0·197	—	mm.
3rd ,, ,,	0·119	—	0·085	—	0·153	—	mm.
4th ,, ,,	0·098	—	0·078	—	0·095	—	mm.
5th ,, ,,	0·160	—	0·150	—	0·160	—	mm.
Claw ...	0·071	—	0·071	—	0·071	—	mm.
Pulvillus ...	—	—	0·088	—	0·082	—	mm.

Abdomen.—First to third tergites similar to those of female ; spiracles of the first tergite a little more prominent, forming two small lateral teeth ; second and third with 16 parallel ridges ; fourth with 22, fifth with 16, sixth with 8 parallel ridges, the latter laterally and apically rugulose-punctate ; seventh tergite with a few coarse punctures on the posterior edge. First abdominal ventrite coarsely punctate, with thick hairs arising from each puncture, laterally with fine dense pilosity ; second basally with 12 punctures in a transverse row, followed by a narrow smooth shining space, thence longitudinally rugulose-reticulate with a smooth median space ; third to fifth ventrites medially smooth with sparse hairs, laterally rugulose-reticulate ; second and third with large tubercles, each with nearly 60 canals, fourth with 6 and fifth with 2 canals ; sixth and seventh ventrites coarsely punctate, each puncture with a thick hair ; sixth with a median smooth space. Dimensions of abdominal segments :—

	I.	II.	III.	IV.	V.	VI.	VII.	
Tergite :								
Length ...	0·304	0·520	0·621	0·520	0·340	0·158	0·102	mm.
Breadth ...	0·441	0·610	0·781	0·768	0·599	0·417	0·282	mm.
Ventrite :								
Length ...	0·282	0·588	0·643	0·565	0·599	0·203	0·102	mm.
Breadth ...	0·429	0·588	0·621	0·588	0·475	0·565	0·191	mm.

Genitalia consisting of a depressed short tube, in which two unequal joints can be distinguished : the shorter basal (length 0·221 mm.) and the longer distal (0·340 mm) ; the latter can be bent ventrally at a right angle. Distal end of genital tube (fig. 3, *j*) ventrally opened, and here with two small internal paramera bearing 4–5 teeth.

Type ♀ and ♂ in the collection of the Entomological Department of the Experimental Station, Poltava ; paratype ♀♀ sent to the Zoological Museum of the Russian Academy of Sciences and to the British Museum.

The species is named after Mr. B. P. Uvarov, our distinguished investigator of locusts.

Scelio nikolskyi, sp. n.

♀. Length of body, 5·6 mm.

Black ; scape, mandibles (except extreme base), trophi and legs (except coxae), yellowish red ; tegulae and coxae (except yellowish apices) brown.

Head (fig. 5, *b*).—Length, 0·81 mm. ; breadth, 1·32 mm. ; height, 1·16 mm. Occiput large, broadly emarginated behind. Eyes inversely egg-shaped, ratio of long and short diameters as 11 : 9 (0·55 by 0·45 mm.). Vertex elevated ; ocelli in an

obtuse-angled triangle, round; diameter of ocellus 85 μ. Temple broad, inferior inflated, slightly broader than the short diameter of the eye. Forehead distinctly dilated orally, from 0·6 mm. on the line immediately under the front ocellus to 0·93 mm. on the level of the inferior orbits. Frontal process 0·1 mm. long and 0·09 mm. broad, deeply excised at the apex, with 16 stout, thick hairs. Cheeks shorter than the shortest diameter of the eye (0·34 mm.), with an oblique sulcus genalis, which reaches

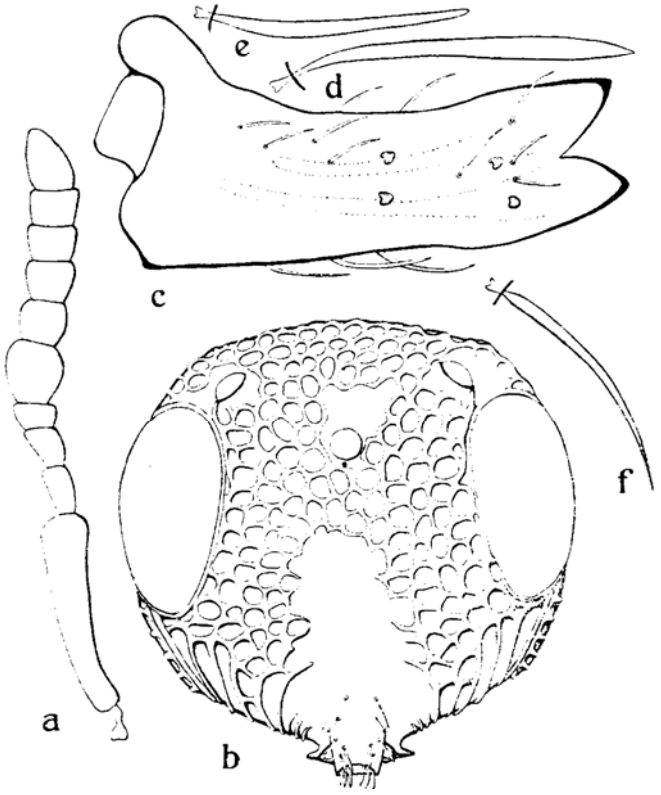

Fig. 5. *Scelio nikolskyi*, sp. n.: *a*, antenna of ♂; *b*, head; *c*, mandible; *d*, scale-like hair from the head; *e*, similar hair of *S. uvarovi*, sp. n.; *f*, similar hair of *S. vulgaris*, Kieff.

the eye-margin at the external orbit and is distinctly longer than the length of the cheek. The general surface of the head covered with large raised punctures, each one bearing a thick white hair. The hairs are longer on the temple and shorter on the forehead near the ocelli; maximum length 0·13 mm., breadth 7 μ, distinctly dilated beyond the middle (fig. 5, *d*). The forehead on both sides with five longitudinal keels; the area close round each ocellus and the inferior three-quarters of the forehead

in the middle smooth, shining and bare. Clypeus (0·12 mm. long, 0·35 mm. broad) nearly trapeziform with the anterior border straight, slightly emarginated on both sides, the lateral angles projecting in form of two obtuse teeth ; an elevated line, bifurcated at the end, connects this tooth with the torulus, the two branches forming the external border of the antennal base. The labrum as in *S. iwarovi* (0·02 mm. broad), with twenty stout apical bristles.

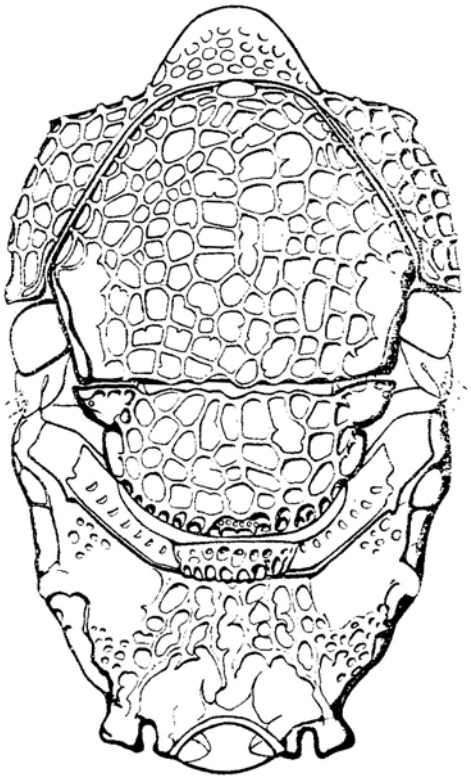

Fig. 6. *Scelio nikolskyi*, sp. n., thorax.

Mouth-parts.—Mandible (length 0·47 mm. ; breadth, 0·23 mm. ; length of tooth, 0·1 mm.) moderately curved, with two equal teeth apically, externally with 14 bristles and 4 sensoria (fig. 5, *c*). Maxilla I : cardo 6 : 7 ; stipes 24 : 23 : lacinia with two stout bristles near the base of the palpus and with five terminal bristles ; palpus three-jointed (lengths, 0·09, 0·067, 0·09 mm.) with 4, 6 and 10 bristles respectively. Palpus of maxilla II (lengths 0·062, 0·057 mm.) with the first joint bearing two, the second four bristles.

Antenna.—Bulla, length 0·13 mm., breadth 0·05 mm. ; scape, length 0·67 mm., breadth 0·08–0·14 mm., distinctly dilated toward the apex, finely shagreened, evenly covered with fine dense hairs from 23 to 37 μ long, ventrally smooth, the remaining joints are missing.

Thorax (fig. 6).—Length 1·77 mm., breadth. 1·08 mm. Pronotum from above 0·74 mm. long (at the middle 0·17 mm.), from below 0·96 mm. long, 1·08 mm. broad. Two longitudinal keels separate the dorsal surface from the ventral on the shoulders. Ventral surface reticulate-rugulose with a smooth space immediately under the keel. The dorsal surface, like the whole scutum of the mesonotum and scutellum, with large raised punctures, each with a thick scale-like hair. The spiracle at the upper posterior angle of the pronotum, diameter 0·05 mm. Pronotum postero-ventrally with eight short longitudinal ridges. Propectus (fig. 7, *c*) divided longitudinally, the postero-median angles forming sharp teeth, smooth, with sparse tiny hairs at the middle, externally coarsely rugulose with a few thick hairs : the posterior margin opposite to

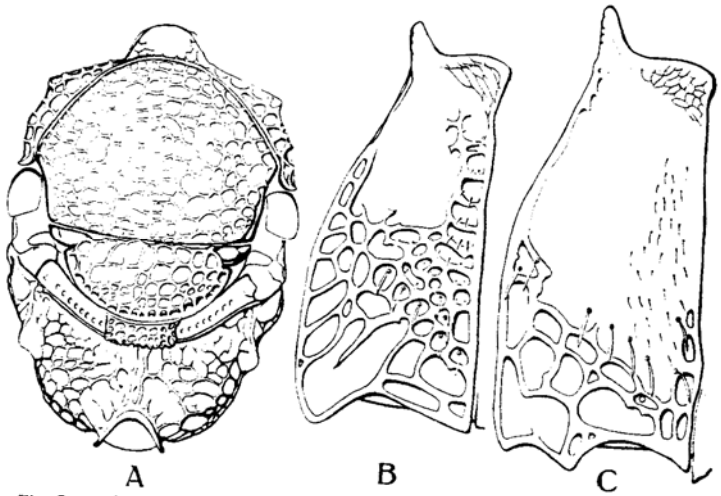

Fig. 7. A, thorax of *Scelio vulgaris*, Kieff. ; B, right half of propectus of *S. uvarovi*, sp. n. ; C, the same of *S. nikolskyi*, sp. n.

the fore coxa broadly excised. Mesoscutum 0·8 mm. long, 0·86 mm. broad ; the large irregular punctures from 0·03 to 0·11 mm., increasing towards the disk ; the wide space near the straight lateral border smooth, shining ; the white scale-like hairs on meso-scutum and scutellum directed as in *S. uvarovi*. Scutellum 0·37 mm. long, 0·79 mm. broad, with produced anterior angles, each with one sensorial pustula. Scutellum separated from metanotum by a row of deep punctures, followed by a smooth space ; on the posterior border with a row of six round sensorial pustulae among deep punctures. Mesosternopleurae 0·63 mm. long, length at middle 0·53 mm., breadth 1·3 mm. ; the pleural part diagonally depressed from the base of the fore wing to the mid coxa, finely reticulate, bare. The anterior border of the mesopleurae and sternal part with sparse thick hairs. Sternal part coarsely irregularly reticulate, twice excised anteriorly, slightly produced to the mid coxae, the space between the coxae

with a few short longitudinal ribs and a central shallow groove. Tegula 0·17 mm. long, 0·14 mm. broad. The axillaries close together (generic character) with four groups of round sensorial pustulae; the first axillary with 4, 15 and 3, the second with 11 sensoria in three close rows, 3, 4, 4. Metanotum twice as broad as long (0·45 mm. by 0·9 mm), length at the middle 0·11 mm. and 0·29 mm. broad.; lateral parts smooth, each with 7 small grooves; the median part elevated, irregularly rugulose anteriorly, with seven grooves in one row. Metasternopleurae 0·62 mm. long, 1 mm. broad, at the middle 0·4 mm. long; anterior border of the pleural part with a row of large punctures each bearing a thick hair.

Pleural part with seven longitudinal ridges, partly anastomosing. Sternal part divided by a longitudinal median suture, finely reticulate, with smooth spaces under the mid coxae and around the base of the hind coxae. Propodeon 0·8 mm. long, 1·07 mm. broad, length at the middle 0·33 mm., breadth at the spiracles 0·98 mm. The posterior angles produced into two robust blunt teeth, slightly dilated to the apex (length 0·08 mm., breadth 0·1 mm.). The dorsal surface at the middle with six longitudinal ridges, the lateral ramifications of these anastomosing ridges forming a rugulose surface on both sides of the propodeon. The dorsal part of the propodeon laterally covered with small silver hairs, which become denser towards the pleural area between the spiracle and the posterior tooth of the propodeon; this area densely covered with woolly short silvery hairs concealing the structure of the chitin. (The propodeon of *S. vulgaris*, Kieff., lacks the woolly field and the posterior teeth, fig. 7, *a*.).

Wings similar to those of *S. uvarovi*. Forewing with pale yellow stigma; length 3·4 mm., breadth 1·15 mm., one-third as broad as long, with the submarginal vein reaching two-fifths of the wing length (1·55 mm. long); the stigmal vein can be traced to the end (0·23 mm. long). Hind wing 2·6 mm. long, 0·59 mm. broad, the hooklets distant 1·6 mm. from the base; the longest hairs of the fringe 0·19 mm.

Legs.—Fore coxa (0·37 mm. by 0·25 mm.) anteriorly with three oblique rugae, with short pilosity on the inner side and longer hairs outwardly; the dorso-anterior surface shagreened. Trochanter (0·31 mm. by 0·01 mm.) with a few short hairs and four sensorial pustulae. Femur (0·7 mm. by 0·18 mm.) basally with four close sensoria, dorsally and distally with short pilosity. Tibia (0·6 mm. by 0·12 mm.) with fine short dense pilosity, distally with 26 thick spines; spur 0·24 mm. long, basally 0·05 mm. broad. Fore metatarsus (0·31 mm. by 0·08 mm.) with a comb of nearly 52 spines, distally with 12 stout spines; second joint (0·21 mm. by 0·05 mm.) with a ventral row of 11 spines, apically with 9 spines; third (0·15 mm. by 0·05 mm.) with 7 ventral and 5 apical spines; fourth (0·12 mm. by 0·04 mm.) with 5 apical spines; fifth, 0·18 mm. by 0·044 mm., claw, 0·08 mm.

Mid coxa, 0·53 mm. by 0·31 mm.; trochanter (0·22 mm. by 0·11 mm.) with two sensoria; femur (0·87 mm. by 0·17 mm.) with five close sensoria basally, smooth, with sparse short pilosity, denser on the scaly apical end; tibia (0·83 by 0·12 mm.) with four dorsal and one ventral sensoria basally, ventrally with a row of 26 spines, apically with 18 spines; spur 0·16 mm. long, with minute hairs. First tarsal joint (0·33 by 0·095 mm.) with 11 ventral and 17 apical spines; second (0·21 by 0·05 mm.) with 10 ventral and 7 apical spines; third (0·15 by 0·13 mm.) with 4 ventral and 5 apical spines.

Hind coxa (0·36 by 0·24 mm.) anteriorly with three oblique rugae and short pilosity, the ventral surface shagreened. Trochanter (0·24 by 0·12 mm.) with a few short hairs and two sensoria. Femur (0·99 by 0·2 mm.) basally with six close sensoria, externo-dorsally with sparse pilosity.

Abdomen.—Length, 3·16–3·19 mm., nearly four-sevenths of the body length. First tergite broadly excised anteriorly, with raised margin, laterally with two teeth visible from above; dorsally with ten parallel ridges from the anterior margin; laterally pilose, with about ten long parallel thick hairs. Second tergite basally with

a slight transverse depression, with 14 longitudinal ridges not reaching the apical border; apically with a smooth shining space. Third tergite with 18 ridges slightly divergent on both halves (9 and 9), distinct only basally, apically anastomosing and obliterated, leaving a semicircular smooth space. Fourth and fifth tergites medially with a smooth longitudinal line, the former with 14 and 14, the latter with 10 and 11 longitudinal ridges. Sixth tergite basally with 12 ridges, then rugulosely punctate before the smooth apex. All the pleurae shining, smooth.

First ventrite coarsely rugulose, with large punctures basally, pilosity sparse but thick. Second ventrite basally with a transverse row of 12 deep punctures, with 11 anastomosing ridges not reaching the smooth apical margin; laterally at the middle, like the third ventrite, with a large tubercle, finely longitudinally striated, perforated by numerous pori. Third, fourth and fifth ventrites with a smooth median longitudinal line, third with 8 and 8, fourth with 10 and 10, fifth with 5 and 5 longitudinal ridges. Sixth ventrite with 14 elongate punctures, and bisinuate at the apex, with a bundle of ten parallel thick scale-like hairs. Measurements of abdominal segments :—

		I.	II.	III.	IV.	V.	VI.
Tergite :	Length	34	50	73	66	48	30
	Breadth ...	61	77	84	86	60	31
Ventrite :	Length	34	64	65	62	55	32
	Breadth ...	45	60	63	56	42	21

♂. Unfortunately the male specimen was lost, but Mr. V. Nikolsky made a sketch of its antenna good enough to judge of the proportions of the joints (fig. 5*a*). From this drawing we can see that *S. nikolskyi* belongs to the group of species with the considerably swollen fifth joint.

Described from two damaged female specimens bred from eggs of *Locusta migratoria* from the Perovsk district, Turkestan, by Mr. V. A. Nagaibakov, and communicated to me by the Central Asian Station for Plant Protection in Tashkent through Mr. B. P. Uvarov. Named after Mr. V. V. Nikolsky, our well-known specialist on locusts. The types will be deposited in the Zoological Museum of the Russian Academy of Sciences.