

SOME HALICTINE BEES FROM THE MARITIME PROVINCE OF SIBERIA

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The genus *Halictus* is world-wide, with an enormous number of species, many of which are very closely allied and hard to discriminate. The reason for this specific diversity is not wholly apparent, as the insects are much less restricted to particular flowers and seasons than the species of *Andrena*. From Europe we know at present about 128 apparently valid species. The number would be considerably greater were it not for the synonymy recently proposed by Dr. P. Blüthgen, based on his intensive studies. It may be that he has gone too far in reducing names to the synonymy, but it must be admitted that previous authors have proposed many needless names.¹ Errors have been difficult to avoid, partly because adequate collections were not available, and it is by no means easy to describe the peculiarities of form and sculpture in a perfectly intelligible manner. Some future monographer will perhaps illustrate the form of the head, sculpture of the thorax, etc., by enlarged photographic figures, and thus place the whole subject on a much sounder basis. It will also be desirable to figure the mouth parts and male genitalia.

Many of the European species extend into Asia, either as local races or subspecies, or in some cases practically unmodified. Turkestan has an extensive fauna of about 47 supposedly endemic species, but these are poorly represented in museums and rather insufficiently known. I possess specimens of *H. equestris* Morawitz, *curiniventris* Morawitz, and *varipes* Morawitz, but the latter two are now considered synonymous with *H. mucoreus* Eversmann (*pollinosus* Sichel) and *H. subauratus* Rossi, respectively. This Turkestan fauna belongs to a dry country, and has very little in common with that of the moist coast region of southeastern Siberia, where my collecting was done. The insects of the Maritime Province are to be compared with those of Europe rather than with those of Turkestan or Mon-

¹ Blüthgen (in litt.) suggests that my *H. bentoni*, from Persia, is *H. obscuratus* Morawitz, described from Turkestan.

golia, and there is only a small infusion of oriental types from the south.

From other parts of temperate Asia the *Halictus*-fauna is very imperfectly known, so it is not surprising that most of the species collected in the Maritime Province appear to be new. The remarkable *H. dybowskii* Radoszkowski, described from the region of the Amur, was also obtained by me and I have referred it to a new genus *Acanthalictus*, along with a closely related new species (*A. griseipennis* Cockerell). *H. denticollis* Morawitz, from Eastern Siberia, I did not find. *H. monstrosus* Morawitz, from Siberia, is said by both Alfken and Blüthgen to be *H. sextrigatus* Schenck. *H. rufitarsis* Zetterstedt, which Strand records as collected by Eschscholtz in Kamtchatka, was not recognized in the Maritime Province, nor could I identify any of my specimens with the species described by Strand from Tsingtau, in China.

Of the 128 European species, I possess only 54, and these have all been carefully compared with the Siberian material. It is, of course, possible that among the species I have not seen and could not properly interpret from the descriptions alone there may be some of those here described as new, but I think it is unlikely. The very widespread species are, as a rule, the better-known ones, although it occasionally happens that a rare and little-known form will turn up in very remote localities. It is very likely that some of the species now described will be found in Sakhalin Island or northern Japan, but I can not identify any of them with known Japanese species.

The present report does not deal with the subgenera *Seladonia* and *Chloralictus*, but it is worth while to note that I found only one *Chloralictus*, the new *H. mayacensis* Cockerell from Low Lighthouse, and two species of *Seladonia*, the European *H. tumulorum* Linnaeus and the new *H. cruditus* Cockerell.

HALICTUS MOLTRECHTI, new species

Female.—Length about 7.5 mm., anterior wing 6 mm.; black, shining, rather robust, with scanty pubescence; head broad, about circular seen from in front, face and occiput with thin pale hair; clypeus produced, polished, with well-separated strong punctures; supraclypeal area entirely different, with minute punctures; front dull above, but shining along the sides and near the antennae; antennae entirely black; cheeks rounded, not enlarged; mesothorax and scutellum shining, well and distinctly punctured; scutellum with a median groove; hair of thorax scanty, tinged with brownish, fringe on tubercles comparatively short (a point of distinction from *H. calceatus* Scopoli); area of metathorax with distinct but irregular (wavy and bent) longitudinal rugae; the posterior limit of area

well defined; posterior truncation dullish, and with thin reddish hair, the lateral margins very sharply defined; tegulae dark rufous; wings dusky, stigma and nervures dusky amber; basal nervure close to nervulus; second cubital cell very broad, receiving recurrent nervure well before end; outer intercubitus and recurrent weakened; legs with pale reddish hair, becoming golden on inner side of hind tarsi; hind spur pectinate, with three spines; abdomen broad, highly polished, minutely punctured, hind margins of segments rather obscurely brown; thin inconspicuous hair patches at lateral bases of second and third segments.

Okeanskaja, Siberia, August 5, 1 female (Cockerell).

Type.—Cat. No. 27338, U.S.N.M.

Superficially very closely resembles *H. interruptus* Panzer, of Europe, but certainly distinct by the lack of a transverse groove on clypeus, and the much better defined and more distinctly sculptured area of metathorax. The posterior truncation of metathorax is sparsely and weakly punctured, with a little irregular striation at the extreme top; in *H. interruptus* it is conspicuously striate or plicate all over. The hind tibial spur of *H. interruptus* is coarsely pectinate, much as in the Siberian species.

Named after Dr. A. Moltrecht, the learned lepidopterist of Vladivostok.

HALICTUS KRALOFFI, new species

Female.—Length about 7 mm., anterior wing 5.5 mm.; similar to *H. moltrechti*, but smaller, and differing also as follows: Face narrower; disk of mesothorax more closely punctured, and with a distinct median groove; area of metathorax more closely sculptured, the rugae variously incomplete and forming an irregular network; second cubital cell narrower; abdomen narrower, basal hair-band white and complete at least on second segment; hind spur pectinate with at least five rather short teeth; margin of second abdominal segment more conspicuously pale; hair on inner side of hind tarsi paler, less golden; hair fringe of tubercles white (tinged with reddish in *H. moltrechti*). The tegulae are rufous.

Kongaus, Siberia, August, 1 female (Cockerell).

Type.—Cat. No. 27339, U.S.N.M.

Certainly very close to *H. moltrechti*, but surely a distinct species. There is a very close general resemblance to *H. opacus* Pérez, from Corsica, but that species differs by the strongly reddened wings, much broader second cubital cell, and closely and very finely punctured apical part of first abdominal segment.

Named after Nicolai Petrovich Kraloff, of the Vladivostok Museum, who has collected many bees in the Maritime Province.

HALICTUS SOLOVIEFFI, new species

Female.—Length about 7.5 mm., anterior wing 5.4 mm.; superficially so much like *H. kraloffi* that I took it for the same, but it differs as follows: Tegulae piceous; mesothorax dullish (without polished surface), very closely and rather coarsely punctured; rugae of metathoracic area fewer and not forming a network. In *H. kraloffi* the disk of the mesothorax has the small punctures separated by, on the average, considerably more than a puncture's width; in this form the punctures are large and dense, separated by hardly half a puncture's width, and the intervals are sculptured. The hind margins of the second and following abdominal segments are pallid, those of the third and fourth quite broadly so; and there are no conspicuous basal hair bands. The hind spur is long-pectinate. The short fringe of the tubercles, and smaller size, readily separate it from *H. calceatus* Scopoli.

Kongaus, Siberia. August 9, female (Cockerell).

Type.—Cat. No. 27340, U.S.N.M.

Named after Nicolas Solovieff, of the Vladivostok Museum, who has maintained a center for zoological work and education in spite of difficulties of many kinds, and deserves the good wishes and thanks of all scientific men.

The following table separates a series of moderately large black females of *Halictus* from the Maritime Province of Siberia:

Mesothorax highly polished, sparsely punctured, and with a sharp edge in front (Kongaus and Okeanskaja).....	<i>morbillosus orientis</i> Cockerell.
Mesothorax dull, or if shining, closely or rather closely punctured.....	1
1. Large species, with hair-bands at apices of segments; third cubital cell more than twice as long as second, the second not particularly narrow; wings strongly reddened (Okeanskaja).....	<i>tetrazonius</i> Klug.
Third cubital cell not nearly twice as long as second, or if so, second very narrow, and species relatively small.....	2
2. Apical part of first abdominal segment polished, little or not punctured..	3
Apical part of first abdominal segment conspicuously punctured.....	6
3. Tubercles with a very long fringe; wings dusky; head not circular (Okeanskaja).....	<i>calceatus</i> Scopoli.
Tubercles with a relatively short fringe.....	4
4. Larger; head circular.....	<i>moltrechtii</i> , new species.
Smaller; head narrower.....	5
5. Tegulae dark; mesothorax densely punctured.....	<i>solovieffi</i> , new species.
Tegulae red; mesothorax shining and more sparsely punctured.	<i>kraloffi</i> , new species.
6. Larger; second cubital cell broad (Kongaus).....	<i>tacitus</i> Cockerell.
Smaller; second cubital cell narrow (Okeanskaja, Olga, Amagu village, Kudla River).....	<i>alinensis</i> Cockerell.

The last is closely related to *H. leucozonius* Schrank.

HALICTUS LUTZENKOI, new species

Male.—Length about 8 mm., anterior wing 5.7 mm.; black, with white hair, long and pale fulvous in region of scutellum; head broad, circular seen from in front; cheeks moderately swollen, rounded; face and front densely covered with white hair; clypeus not much produced, with an apical transverse yellowish-white mark; antennae long, entirely black, flagellar joints submoniliform; mesothorax and scutellum polished, with distinct but not very close punctures; area of metathorax shining, with strong longitudinal rugae; posterior truncation sharply defined, and with conspicuous transverse rugae; tegulae large, very dark brown with broad whitish margins; wings grayish hyaline, stigma and nervures dusky yellowish; second cubital cell narrow, hardly half as broad as third, receiving recurrent nerve a little before end; outer nervures not distinctly weakened; legs entirely black, with light hair, spurs pale ferruginous; abdomen shining, finely punctured, conspicuous and entire white basal hair-bands on segments 2 to 4; venter of abdomen with a patch of pale red hair subapically.

Okeanskaja, Siberia, August 18, 1 male (Cockerell).

Type.—Cat. No. 27341, U.S.N.M.

Apparently nearest to *H. zonulus* Smith, but differing sufficiently in sculpture and venation to be separable. In Crawford's table of North American species it runs close to *H. similis* Smith. I had supposed *H. similis* to be inseparable from *H. leucozonius*, but the male, as determined by Crawford, is certainly not *leucozonius*. Crawford himself remarks that it is what I regard as *H. discus* Smith.

Named after the able director of the Commercial School at Vladivostok, who has done much to stimulate scientific interest among his pupils.

HALICTUS WITTENBOURGI, new species

Male.—Length about 8 mm., anterior wing 6.7 mm.; black with white hair, on head and thorax above distinctly tinged with yellow; head broad, but face rather narrow, and clypeus strongly produced, its apical margin with a broad pale yellow band; cheeks flattened, not prominent; antennae black, reaching quite to end of scutellum; mesothorax and scutellum dull and rugosopunctate, the mesothorax anteriorly rather densely clothed with short pale hair, on a surface which is punctured as closely as possible; area of metathorax poorly defined, coarsely rugose; posterior truncation sharply defined, strigato-rugose; tegulae dull rufous, piceous at base; wings grayish-hyaline, stigma and nervures reddish-brown, stigma ending more obtusely than usual; second cubital cell broad, receiving recurrent nerve near end, third not very much broader than second; abdo-

men dull and glaucous, finely punctured, conspicuous entire white hair-bands at bases of segments 2 to 4; two tufts of reddish hair beneath near apex; legs black, with light hair; spurs white.

Kongaus, Siberia, August, 1 male (Cockerell).

Type.—Cat. No. 27342, U.S.N.M.

Compared with *H. seaxnotatus* Kirby, this differs at once by the dull abdomen, sharply margined truncation of metathorax, more produced and apically narrower clypeus, more slender flagellum, etc. The metathorax is more like that of *H. major* Nylander, but the abdomen is totally different. In the North American fauna it recalls *H. trizonatus* Cresson, which also has a glaucous abdomen, but other characters differ greatly.

Named after Dr. Paul de Wittenbourg, author of an extremely valuable account of the geology of the region about Vladivostok, who rendered our expedition many invaluable services. I considered the possibility that this might be the male of *H. tacitus* Cockerell, but on comparison was obliged to reject this hypothesis.

HALICTUS SHISHKINI, new species

Male.—Length about 6.5 mm., anterior wing 5.4 mm.; black, with rather thin white hair, not at all tinged with yellow on thorax above; head broad, but inner orbits subemarginate, and eyes strongly converging below; face and front with white hair; clypeus with a large pale yellow patch, sending a median process upward; labrum yellow; mandibles pale yellow in middle and rufous apically; antennae black, reaching to the end of thorax, flagellum stout; a polished space in front of anterior ocellus; mesothorax shining, rather closely and quite distinctly punctured; scutellum coarsely rugosoplicate; area of metathorax well defined, with about sixteen vermiform rugae; posterior truncation well defined, and with a series of lateral pits; pleura rugose; tegulae clear rufous; wings hyaline, stigma and nervous light ferruginous; second cubital cell rather narrow, but much more than half width of third, receiving recurrent nervure well before end; outer nervures somewhat weakened; legs black, with knees, anterior tibiae in front, all tibiae at both ends, and tarsi, creamy-white, more reddened on front tibiae; spurs white; abdomen long and slender, highly polished, with very minute punctures; no hair-bands or spots; hind margin of second segment narrowly reddened; no subapical ventral tuft of reddish hair. The tubercles have a small light spot.

Kongaus, Siberia, August, 1 male (Cockerell).

Type.—Cat. No. 27343, U.S.N.M.

Something like *H. fulvicornis* Kirby, but at once separated by the shining mesothorax and dark antennae. In the American fauna it

falls near *H. aberrans* Crawford. The long antennae recall *H. rufocinctus* Sichel.

Named after J. K. Shiskin, the accomplished botanist of Vladivostok.

HALICTUS EMELIANOFFI, new species

Male.—Length about 8 mm., anterior wing 6 mm.; black, with white hair, tinged with yellow on head and thorax above; face broad; clypeus with a broad transverse apical white band; labrum brown; mandibles black, ferruginous subapically; antennae reaching about to scutellum; flagellum ferruginous beneath; mesothorax and scutellum shining but quite closely punctured; area of metathorax large, with closely set longitudinal rugae, but a transverse polished smooth band apically; posterior truncation distinctly defined, shining, without strong sculpture, but rugose at sides; tubercles entirely black; tegulae large, pale rufotestaceous, piceous at base; wings hyaline, faintly grayish; stigma large, deep rufous; nervures fuscous; basal nervure quite distant from nervulus; second cubital cell narrow, receiving recurrent nervure before the end; third cubital not twice as broad as second; outer nervures hardly weakened; anterior tibiae in front very pale reddish; middle and hind basitarsi yellowish white; small joints of tarsi dusky; all the tibiae reddish at extreme base and apex; spurs white; abdomen narrow, shining, finely punctured; dull white bands of tomentum, failing in middle, at bases of segments 2 to 4; tip of abdomen rufous; no subapical ventral tuft of red hair.

Okeanskaja, Siberia, August 18, 1 male (Cockerell).

Type.—Cat. No. 27343, U.S.N.M.

This insect is rather suggestive of *H. laevis* Kirby, but the color of the tegulae and wings and the details of sculpture are conspicuously different, so that there is perhaps little real affinity. The hind margins of the abdominal segments are obscurely brownish, but not reddish as in *H. laevis*. In Crawford's table of American species it runs to *H. arcuatus* Robertson, but is not allied.

Named after Alexander Adrianovich Emeljanoff, of Vladivostok, keen student of the herpetology of the Maritime Province.

The following table separates a series of black male *Halictus* collected in the Maritime Province:

Basitarsi black.....	1
Basitarsi pale.....	3

1. Nervures fuscous; second cubital cell nearly as broad as third.

wittenbourgi, new species.

Nervures testaceous; second cubital cell very narrow..... 2

2. Mesothorax closely punctured (Kongaus)..... alinensis Cockerell.

Mesothorax sparsely punctured on disk, polished..... lutzenkoi, new species.

3. Antennae very long; face narrower..... shishkini, new species.

Antennae moderate; face broader..... emelianoffi, new species.

In the Amagu region, in July, the males had not begun to appear, but in the southern part of the Province, in August, they were appearing in small numbers before we left. The females of the same species probably emerged a little later, so that of five kinds of males we have only the female for one.

The small black species of *Halictus* collected in the Maritime Province of Siberia, belonging to the subgenus *Evyllaes* Robertson, are referable to two series, separated by the hind spur of the female.

GROUP A, HIND SPUR OF FEMALE HIND TIBIA WITH NUMEROUS (USUALLY ABOUT SIX) RATHER SHORT OBLIQUE SPINES

HALICTUS TRANSPOSITUS, new species

Female.—Length nearly 6 mm., anterior wing 5 mm.; black, with scanty grayish-white hair; hind margins of abdominal segments rather broadly pale reddish; abdomen without any conspicuous hair bands or patches, but a little pale hair at lateral bases of second segment; head broad, approximately circular seen from in front; mandibles obscurely reddish subapically; clypeus shining, with strong punctures; sides of face glistening, front dull; flagellum dull ferruginous beneath except basally; thorax robust; mesothorax and scutellum polished, distinctly but not very densely punctured; median depressed line on mesothorax distinct, but none on scutellum; sides of thorax dull, except a shining area below the wings; area of metathorax large, with fine but distinct longitudinal plicae, not nearly reaching the apex; posterior truncation with the sides sharply margined only halfway up; tegulae bright ferruginous; wings dusky hyaline; nervures pale testaceous; stigma large, pale rufo-testaceous; basal nervure a considerable distance from nervulus; second cubital cell not very much narrower than third, receiving recurrent nervure at apex; legs black, with pale hair, small joints of tarsi rufescent, hind femora red at extreme apex; abdomen broad, shining, the broad hind margins of segments polished. Hind spur with at least six short teeth or spines.

Kongaus, Siberia, August, 1 female (Cockerell).

Type.—Cat. No. 27345, U.S.N.M.

Related to *H. intermedius* Schenck. *H. semilucens* Alfken is readily separated by the dark-brown stigma.

HALICTUS TUTIHENSIS, new species

Female.—Length nearly 6 mm., anterior wing 5 mm.; black, with very scanty whitish pubescence; hind margins of abdominal segments narrowly but distinctly rufescent; head broad; mandibles with apical half dark rufous; clypeus shining and strongly punctured; front slightly shining; flagellum with apical half obscurely reddened beneath; mesothorax and scutellum polished, finely punc-

tured; median depressed line of mesothorax distinct, a trace of one on scutellum; sides of thorax dull, except a shining area beneath wings; area of metathorax large, with fine longitudinal plicae; tegulae ferruginous; wings reddish hyaline, stigma clear amber, nervures dusky testaceous; basal nervure quite a distance from nervulus; second cubital cell much narrower than third; recurrent nervure meeting second intercubitus; legs black, with small joints of tarsi rufescent; abdomen shining, a little white hair at lateral bases of second and third segments. Hind spur with six short spines.

Tutihe, Siberia, July 14, 2 females, type locality (W. P. Cockerell); Kudia River, July 2, female (Cockerell).

Type.—Cat. No. 27346, U.S.N.M.

This greatly resembles the European *H. pauwillus* Schenck, but that species has a hind spur with a stout basal tooth, followed by four successively smaller rounded laminae, an arrangement quite different from that of any of the Siberian forms.

HALICTUS SUPRAFULGENS, new species

Female.—Length nearly 7 mm., anterior wing 5.3 mm.; black, robust, hind margins of abdominal segments only very narrowly reddish; hair of head and thorax thin and dull whitish, but long and rather abundant on scutellum and pleura; head very broad; mandibles slightly reddish apically; clypeus shining, sparsely punctured; front slightly shining; mesothorax and scutellum shining, distinctly punctured, scutellum broadly depressed in middle; sides of thorax dull and rough, no shining area below wings; area of metathorax sharply defined, polished and shining, with imperfect and irregular basal plicae; posterior truncation shining, the lateral edges complete; tegulae rufous; wings dusky hyaline, slightly reddish; stigma dull reddish, nervures pale but dusky; basal nervure close to nervulus; second cubital cell conspicuously contracted above, receiving recurrent nervure before end; outer nervures weakened; abdomen highly polished, the punctures very small and weak; bases of segments 2 to 4 with broad conspicuous bands of white tomentum, narrowed or failing in middle.

Okeanskaja, Siberia, August 5, 1 female (Cockerell).

Type.—Cat. No. 27347, U.S.N.M.

HALICTUS SULCATULUS, new species

Female.—Length nearly 6 mm., anterior wing 5.2 mm.; black, robust, with scanty grayish-white hair; head rather broad oval; mandibles black, faintly reddish at tip; clypeus somewhat produced, shining, irregularly, and rather closely punctured; front somewhat shining, very densely punctured; antennae black, the flagellum obscurely reddish beneath apically; mesothorax and scutellum shining,

closely and distinctly punctured, median depressed line of mesothorax and scutellum distinct; entire mesopleura shining; tegulae black, reddish outwardly, but the whole effect extremely dark; wings strongly grayish, stigma dark brown, nervures lighter, outer nervures weakened; basal nervure near to nervulus; second cubital cell very broad below, narrowed above, receiving recurrent nervure near its end; third cubital not very greatly broader than second; legs black, including small joints of tarsi, hind basitarsi with pale red apical tuft; hind spur with at least six small spines; area of metathorax large, plicate basally, not polished; posterior truncation shining; abdomen very broad, hind margins of segments hardly perceptibly brownish; surface shining, no distinct hair-bands or spots, hind margins of segments 2 to 4 laterally with thin long pale hair.

Okeanskaja, Siberia, type locality, August 18, 5 females (Cockerell).

Paratype.—Cat. No. 27348, U.S.N.M.

The tegulae vary to rufous. One specimen was taken at the Kudia River, July (W. P. Cockerell).

GROUP B. HIND SPUR OF FEMALE HIND TIBIA WITH THREE LARGE, STOUT, WIDELY SPACED SPINES OR TEETH

HALICTUS PERPLEXANS, new species

Female.—Length about 5.5 mm., anterior wing about 4 mm.; black, with thin grayish-white hair, abundant at sides of prothorax; head approximately circular seen from in front; clypeus shining, with very distinct punctures; front extremely densely punctured, but somewhat glistening; flagellum dull ferruginous beneath except basally; mesothorax and scutellum dullish, very closely punctured, the scutellum without any impressed line; sides of thorax dull; area of metathorax shining, with fine plicae not reaching apex; posterior truncation shining, sharply bounded about halfway up at sides; tegulae dark rufous, piceous at base; legs black, with grayish-white hair, tarsi reddish at apex; wings dusky, distinctly brownish, stigma and nervures dusky reddish; basal nervure close to nervulus; second cubital cell rather narrow; first recurrent nervure meeting second intercubitus; abdomen broad, highly polished; apices of segments laterally with very conspicuous white hair, and end of abdomen conspicuously hairy.

Preobrageniya Bay, Siberia, type locality, July 12, 4 females (Cockerell); Low Lighthouse, July 13, 1 female (Cockerell).

Paratype.—Cat. No. 27351, U.S.N.M.

HALICTUS PERPLEXANS, variety SPECULINUS, new variety

Female.—Differs by the polished and shining mesothorax and scutellum, the latter very brilliant, the punctures evidently separate; area of metathorax less strongly plicate; head distinctly narrower, longer than broad.

Preobrageniya Bay, Siberia, type locality, July 12, 1 female (Cockerell); Kudia River, July 2, females (Cockerell).

Paratype.—Cat. No. 27349, U.S.N.M.

Comparing the types of *perplexans* and *speculinus*, they certainly seem to be different species, although the rather striking abdomen is exactly the same in both. Some of the other specimens, however, are more or less intermediate, so I feel obliged to treat *speculinus* as a variety. The species is somewhat related to *H. opacus* Pérez, but quite distinct. It is still closer to *H. interruptus* Panzer, but readily separated by the area of metathorax.

HALICTUS BRACHYCEPHALUS, new species

Female.—Length about 5 mm., anterior wing a little over 4 mm.; black, with scanty grayish-white hair; head about as broad as long; clypeus short and little produced, shining, with scattered punctures; supraclypeal area large, convex, shining; sides of face glistening; front dull, but region about ocelli shining; flagellum ferruginous beneath; mesothorax and scutellum moderately shining, very finely punctured; scutellum with no impressed line; mesopleura dull, a little shining above; area of metathorax granular, dull, feebly plicate at base; posterior truncation shining; tegulae ferruginous; wings hyaline, slightly reddish; basal nervure rather close to nervulus; stigma and nervures dusky testaceous; second cubital cell rather broad, third also unusually broad for this group; recurrent nervure meeting second intercubitus; legs black, with red knees and small joints of tarsi; hind tibiae robust; abdomen broad, polished, hind margins of segments very narrowly rufous; narrow white hair bands on lateral apices of segments 3 and 4; apex of abdomen ferruginous.

Kongaus, Siberia, August, 3 females (Cockerell).

This may be compared with *H. gracilis* Morawitz, but is very distinct.

HALICTUS TRICHO RHINUS, new species

Female.—Length about 6 mm., anterior wing 5.8 mm.; black, very robust, with rather copious pale hair, which is very faintly yellowish dorsally; face very broad, densely covered with grayish hair; clypeus shining; front very densely punctured but distinctly shining; antennae black, at most very obscurely reddish beneath

subapically; mesothorax and scutellum moderately shining (not polished), closely and distinctly punctured, the median line of mesothorax not evidently impressed, and no line on scutellum; upper part of mesopleura shining; area of metathorax with strong plicae, not reaching apex, the latter not sharply defined; posterior truncation with median sulcus very strong; tegulae rufous, dark at base; wings strongly dusky (dilute fuliginous), stigma and nervures dusky testaceous; basal nervure rather near to nervulus; second cubital cell conspicuously narrowed above, receiving recurrent nervure near its end; legs black, with white hair; abdomen very broad, shining (dull at base of second segment), hind margins of segments not reddened; very narrow white hair bands on lateral hind margins of segments 2 and 3; much pale hair at apex.

Low Lighthouse, Siberia, July 3, 3 females (Cockerell).

Type.—Cat. No. 27350, U.S.N.M.

The following notes will assist in the separation of the above species:

- H. transpositus* has the punctures of mesothorax much larger than in *H. tutihensis*.
 - H. suprafulgens* is easily separated from *H. trichorhinus* by the shining mesothorax and lines between punctures on front.
 - H. brachycephalus* is easily known from *H. perplexans*, variety *speculinus*, by the sides of mesothorax rough and sculptured between punctures.
 - H. perplexans* is readily known from *H. sulcatulus* by the hind margins of segments 1 to 4 with dense fringe of white plumose hairs laterally. *H. sulcatulus* has the punctures of mesothorax weaker than in *perplexans*.
- The impressed lines on scutellum readily separate *H. sulcatulus* from *H. perplexans*, *H. trichorhinus*, and *H. brachycephalus*.
- H. transpositus* and *H. tutihensis* are noteworthy for the remoteness of the basal nervure from the nervulus.
 - H. suprafulgens* differs from all the others by the broad white bands at bases of segments 2 to 4.

