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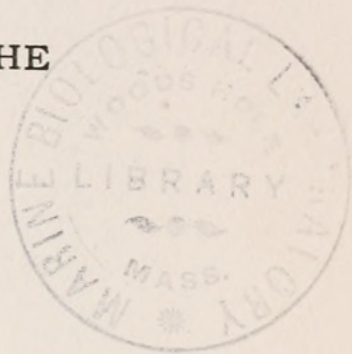
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XIII

**DESCRIPTIONS OF SEVEN ANDRENIDS IN THE
COLLECTION OF THE CALIFORNIA
ACADEMY OF SCIENCES**

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The Andrenids described below were received some years ago from the California Academy of Sciences through Mr. Charles Fuchs.

1. *Andrena* (*Trachandrena*) *coactifera* Viereck, new species

Related to *A. (T.) multiplicata* Cockerell.

Female: Length 10 mm.; body black, mostly covered with pale ochreous and whitish hairs; head with its facial line : transfacial line ::55:63; axial line: temporal line ::27:18; elevated portion of malar space crowded out or nearly so; malar line : joint 3 of antennæ ::2:6; head with whitish hairs, front rather indistinctly, longitudinally striate, not elevated into a welt along the fovea; fovea at most : ocellocular line ::9:12; fovea virtually contiguous to the upper end of the inner eye margin; distance between fovea and ocelli : ocellocular line ::2:12; fovea decidedly constricted near its middle where it is apparently only a little more than half as wide as the greatest width of the fovea, the latter continued below the constriction as a narrowing furrow down to a point apparently on the clypeal line; hairs of fovea pale ochreous; fovea widest at the middle of the fovea, angulated at its widest point where it is three-fourths as wide as the fovea is wide opposite the angulation of the fovea, the latter polished and with a few punctures; face polished, with adjoining or nearly adjoining punctures; clypeus elevated above the apical margin, convex, pol-

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ished, punctured much like the face but with some of its punctures larger; clypearea poorly developed on the lower half of the nearly bare clypeus; labrarea truncate, width at base : length down the middle ::10:3, width at apex : length down the middle ::4:3; labrarea at base : distance between lower corners of clypeus ::10:19; labrum with a fringe of pale hairs; joint 3 of antennæ: 4 + 5 ::7:8; joint 4 as thick as long, the succeeding joints a little longer than thick; antennæ blackish to brownish throughout; mandibles atypical, robust, extending to the outer edge of the labrum, black except for the apical half which is mostly clear dark reddish; palpi nearly typical; thorax above covered with an abundance of whitish thick hairs that are shorter on the dorsulum, where they are thick, than the thin hairs on the mesopleura; dorsulum with disc of the hind half set off from the margins by brownish, thick hairs; notauli represented by an impressed dullish line; mesopleura with whitish hairs that are thin except along the upper margin where the hairs are thick; scutel hairy and sculptured much like the dorsulum except for being more closely punctured and devoid of brownish hairs; metanotum hairy and sculptured like the dorsulum except that the sculpture is less defined; tegulæ dark and pale stramineous, polished; wing base partly blackish brown; subcosta blackish brown like the stigma, rest of veins dull brownish stramineous; legs blackish brown except for the small joints of the tarsi and hind tibiæ which are more or less pale brownish; legs covered with pale whitish and golden hairs; scopa typical, its hairs whitish, and concolorous throughout with the hairs at base above slightly darkened; hind metatarsi at most apparently as wide as mid metatarsi; propodeum with its enclosure fairly well defined, bounded at apex by a trenchant carina, coarsely plicate, rest of upper face of propodeum sculptured somewhat like the mesopleura but not so coarsely, and covered with thin whitish hairs; propodeal pleura with scattered punctures recalling cutis anserinus; floccus whitish; abdomen with its tergum polished, punctured, the punctures clear cut but small and mostly adjoining or nearly adjoining on the elevated portions, sparser on the depressed portions; second tergite with its elevated portion down the middle : depressed portion ::8:16; fifth tergite with coarse adjoining punctures; pygidium convex, nearly pointed at apex; tergum with inconspicuous pale hairs, second, third and fourth tergites with a broadly interrupted whitish hair band; fimbria brownish-golden.

Type: Female, No. 1723, Mus. Calif. Acad. Sci., collected by Dr. F. E. Blaisdell, in July, at Tallack, California.

2. *Andrena* (*Parandrena*) *cuneilabris* Viereck, new species

Related to *A. (P.) parachalybea* Viereck.

Female: Length 12 mm.; body greenish, mostly covered with pale ochreous and whitish hairs; head with its facial line : transfacial line ::55:70; axial line : temporal line ::31:20; malar line : joint 3 of anten-

næ ::1:10; ocelloccipital line : greatest diameter of lateral ocellus ::4:3.5; elevated portion of malar space crowded out or nearly so; head with whitish and black hairs; front rather indistinctly, longitudinally striate, not elevated into a welt along the fovea; fovea at most : ocellocular line ::10:14; foveal band wanting; distance between fovea and ocelli : ocellocular line ::4:14; fovea gradually attenuated below its middle and continued to a point apparently between the clypeal and the antennal line, filled with dark seal-brown hairs; vertex and temples along the upper edge of the eye and sides of front along the foveæ with black hairs; face dullish, with distinct punctures that are as many as five puncture-widths apart; clypeus in the middle not elevated above the apical margin, nearly planate, sculptured like the face except that the punctures are smaller; clypearea wanting; clypeus thinly hairy, its sculpture not at all hidden by hairs; labrarea unituberculate, its width at base : length down the middle ::6:4, width at apex : length down the middle ::2:4; labrarea at base : distance between lower corners of clypeus ::6:18; labrum with a fringe of golden hairs, without a median longitudinal crista between the labrarea and apical edge of labrum; joint 3 of antennæ :4 + 5 ::10:7, joints 4 & 5 thicker than long, the succeeding joints as thick as long or little longer than thick except joint 12 which is distinctly longer than thick; antennæ blackish throughout; mandibles nearly typical, slender, extending to beyond the lower angles of the clypeus, black except for the apex which is dark reddish; palpi atypical, slender; thorax covered with an abundance of pale ochreous almost white and whitish hairs that are as long on the dorsulum, where they are pale ochreous, as are the whitish hairs on the mesopleura; dorsulum dullish, finely reticulated and distinctly punctured like the face, but not so closely; notauli represented by an impressed shining line; mesopleura densely sculptured nearly rugose, indefinitely punctured; scutel hairy and sculptured much like the dorsulum; metanotum hairy and sculptured like the dorsulum except that the sculpture is denser and less distinct; tegulæ dark brown, partly polished; wing base partly blackish brown; subcosta blackish brown; stigma pale brownish stramineous, rest of veins dull stramineous; legs blackish, except for the tarsi which are more or less brownish, covered with brownish golden and ochreous hairs; scopa typical, its hairs pale ochreous, almost white, the hairs at base above decidedly darkened; hind metatarsi at most apparently a little wider than mid metatarsi; propodeum with its enclosure poorly defined, dullish and finely reticulated and with a few basal plicæ; rest of upper face of propodeum finely reticulated, coarsely pitted and covered with fine whitish hair; propodeal pleura coarsely sculptured, wrinkled; abdomen with its tergum dullish, finely reticulated and finely punctured, the punctures from two to six or more puncture-widths apart on the first tergite, hardly closer on the succeeding tergites; second, third and fourth tergites without an apical hair band; apical edge of first, second, third and fourth tergites with a pale stramineous border, second tergite with its elevated portion down the middle : depressed portion ::12:15; fifth tergite shining, reticulate, its coarse punctures closer together than the punctures on the other

tergites; pygidium rounded at apex, nearly planate, with a median triangular slightly embossed area and a shallow furrow on each side, tergum with inconspicuous nearly erect pale hairs, fimbria pale brownish.

Type: Female, No. 1724, Mus. Calif. Acad. Sci., collected by Dr. F. E. Blaisdell, in April, at **Mokelumne Hill, California.**

3. *Andrena (Andrena) shasta* Viereck, new species

Related to *A. (A.) pascoensis* Cockerell of which it may prove to be only a race or variety.

Female: Length 12 mm.; body black, mostly covered with tawny hairs; head with its facial line : transfacial line ::65:82; axial line : temporal line ::34:19; malar line : joint 3 of antennæ ::3:12; elevated portion of malar space nearly crowded out, ocelloccipital line : greatest diameter of lateral ocellus ::4:5; head covered with tawny hairs; front rugoso-punctate, not elevated into a welt along the fovea; fovea at most : ocellocular line ::12:14; distance between fovea and ocelli : ocellocular line ::2:14; foveal band wanting; fovea slightly gradually attenuated below its middle and continued to a point apparently on the clypeal line, filled with golden hairs; face dullish, closely punctured, the punctures adjoining or nearly so; clypeus elevated above the apical margin, convex, polished and coarsely punctured, the punctures from adjoining to three puncture-widths apart; clypearea present but poorly defined; clypeus thinly hairy its sculpture not at all hidden by hairs; labrarea truncate, its width at base : length down the middle ::10:5; width at apex : length down the middle ::7:5; labrarea at base : distance between lower corners of the clypeus ::10:20; labrum with a fringe of golden hairs; joint 3 of antennæ :4 + 5 ::12:10; joints 4 and 5 thicker than long; first six joints of antennæ blackish excepting the apex of the scape which is dark stramineous; mandibles atypical, robust, extending to the outer edge of the labrum, dark stramineous, blackish near apex; palpi typical; thorax covered with an abundance of tawny hairs that are much shorter on the dorsulum where they are darker than the hairs on the mesopleura; dorsulum shining, with conspicuous adjoining or nearly adjoining punctures; notauli represented by a shining line; mesopleura with adjoining pits; scutel hairy and sculptured much like the dorsulum; metanotum hairy and sculptured like the dorsulum except that the sculpture is denser and less distinct; tegulæ pale stramineous, polished; wing base stramineous; subcosta blackish; stigma pale brownish stramineous, rest of veins dark stramineous; membrane uniformly tinged with brown; legs blackish except for the apex of femora and all of the tarsi and tibiæ, which are more or less yellowish stramineous; legs covered with pale ochreous and golden hairs; scopa typical, its hairs nearly golden throughout; hind metatarsi at most apparently a little narrower than mid metatarsi; propodeum with its enclosure poorly defined, coarsely sculptured as in *A.*

(*S.*) *cratægi* Rob.; rest of upper face of propodeum sculptured somewhat like the mesopleura but not so coarsely, and covered with finer golden hair; propodeal pleura with sparse pits; abdomen with its tergum shining and sculptured much like the face; the punctures from adjoining to three puncture-widths apart on the first tergite, the punctures adjoining or nearly so on the succeeding tergites; second, third and fourth tergites with an apical, golden hair band that nearly completely fills the depressed portion of those tergites; apical edge of first, second, third and fourth tergites with a stramineous border; second tergite with its elevated portion down the middle : depressed portion ::22:10; fifth tergite shining, finely reticulate, its punctures not so close but much coarser than on the other tergites; pygidium nearly planate, nearly pointed at apex; tergum with inconspicuous, pale nearly erect hairs in addition to the hair bands; fimbria golden.

Other locality, Shasta Co., Calif.

Type: Female, No. 1725, Mus. Calif. Acad. Sci., collected by Dr. F. E. Blaisdell, at **San Diego, California**.

4. *Andrena (Andrena) sinaloa* Viereck, new species

Related to *A. (A.) kincaidi* Cockerell.

Female: Length 11 mm.; body black, mostly covered with whitish or white hair; head with its facial line : transfacial line ::57:77; axial line : temporal line ::32:18; malar line : joint 3 of antennæ ::2.5:11; elevated portion of malar space virtually crowded out; ocelloccipital line : greatest diameter of lateral ocellus ::3:5; head covered with white hairs; front rather indistinctly rugulose and pitted, not elevated into a welt along the fovea; fovea at most : ocellocular line ::10:13; distance between fovea and ocelli : ocellocular line ::3:13; foveal band wanting; fovea attenuated below its middle and continued to a point apparently a little below the clypeal line, filled with whitish hairs; face shining, closely punctured; clypeus brownish down the middle, not elevated above the apical margin, convex, polished, with well separated distinct punctures; clypearea present but poorly defined; clypeus thinly hairy its sculpture not at all hidden by hairs; labrarea rounded, its width at base : length down the middle ::10:4; labrum with a fringe of pale hairs and without a median longitudinal crista between the labrarea and apical edge of labrum; joint 3 of antennæ : 4 + 5 :: 11 :8; joints 4 and 5 thicker than long, the succeeding joints as thick as long or little longer than thick except joints 11 and 12 which are distinctly longer than thick; antennæ blackish throughout; mandibles atypical, robust, black at base; palpi nearly typical; thorax covered with an abundance of whitish hairs that are much shorter on the dorsulum than the whitish hairs on the mesopleura; dorsulum shining, closely and deeply punctured; notauli

represented by an impressed shining line; mesopleura coarsely pitted; scutel hairy and sculptured much like the dorsulum; metanotum hairy like the dorsulum, densely sculptured; tegulae dark brown, polished; wing base partly blackish brown; subcosta blackish brown; stigma pale brownish stramineous; rest of veins dull stramineous, the costal half of the wings infuscated; legs blackish except for the tarsi which are more or less brownish, covered with whitish and golden hairs; scopa typical, its hairs whitish, hairs at base above darkened; hind metatarsi at most apparently a little narrower than mid metatarsi; propodeum with its enclosure poorly defined, rugose nearly as in *A. (S.) cratægi* Rob.; rest of upper face of propodeum indistinctly sculptured; abdomen with its tergum shining to polished and sculptured much like the face, the punctures mostly from adjoining to two puncture-widths apart on the first tergite, hardly closer on the succeeding tergites; second, third and fourth tergites with an apical, whitish hair band that is interrupted in the middle of the second; apical edge of first, second, third and fourth tergites with a dark stramineous border; second tergite with its elevated portion down the middle : depressed portion ::9:17; fifth tergite shining, reticulate, its punctures coarser and sparser than on the other tergites; pygidium nearly planate; tergum with inconspicuous pale, nearly erect hairs in addition to the hair bands; fimbria brownish.

Type: Female, No. 1726, Mus. Calif. Acad. Sci., collected by Chas. Fuchs, at **Culiacan, Sinaloa, Mexico.**

5. ***Andrena (Andrena) innominata*** Viereck, new species

Related to *A. (A.) interrogationis* Viereck & Cockerell.

Male: Length 7 mm.; body greenish, mostly covered with white hair; head with its facial line : transfacial line ::40:48; axial line : temporal line ::21:11; temples rounded; malar line : joint 3 of antennæ ::1.5:6; elevated portion of malar space virtually crowded out; head covered with white hairs except along the inner eye margin, upper eye margin, and outer eye margin above the middle of temples and on front where the hairs are black; front with longitudinal raised line; ocellocular line : ocelloccipital line ::9:4; face shining, indistinctly punctured, its punctures from one to three puncture-widths apart; clypeus nearly planate, slightly concave, dullish and more distinctly punctured than the face, elevated directly above the apical margin; clypearea wanting; sculpture of the clypeus not hidden by the mustache; labrarea truncate at apex, emarginate beyond on its under side, polished, its width at base : greatest length ::5:2, width at apex : length down the middle ::4:2; labrarea at base apparently half as wide as the distance between the lower angles of the clypeus, with a fringe of whitish hairs; joint 3 of antennæ :4:6:4; joint 4 and following joints from a little longer than thick to nearly one and one-half times as long as thick, dullish; flagel, almost straight

in outline; antennæ brownish throughout; mandibles nearly typical, rather slender, extending a little beyond the lower corners of the clypeus, black except for the apical fourth which is dull dark reddish; palpi slender; thorax covered with an abundance of white hairs; hairs of dorsulum nearly as long as the hair of mesopleura; dorsulum dullish, finely reticulated and sparsely punctured, the punctures indistinct and from two to five or more puncture-widths apart, mostly the latter; notauli represented by an impressed shining line; mesopleura dullish with pale ochreous hairs throughout, finely reticulated and mostly covered with shallow pits that are mostly three or more pit-widths apart; scutellum hairy and sculptured like the dorsulum; metanotum hairy and sculptured like the dorsulum except that the sculpture is denser; tegulæ dark brown, polished; wing base brownish; subcosta blackish; stigma brownish, membrane nearly colorless; legs blackish brown excepting the small joints of the tarsi which are paler, covered with whitish hairs; hind metatarsi at most hardly wider than mid metatarsi and nearly half as wide as hind tibiae at apex of the latter; propodeum with its enclosure poorly defined, irregularly rugulose on basal half, finely granular on apical half, rounded off at apex; rest of upper face sculptured somewhat like the mesopleura but with smaller pits and covered with finer whitish hair; propodeal pleura sculptured apparently like the mesopleura; abdomen with its tergum shining, finely reticulated and indistinctly punctured, the punctures mostly three or four puncture-widths apart; first tergite, with erect whitish hairs; second and third tergites with nearly erect whitish hairs; second tergite with its elevated portion down the middle : depressed portion ::11:7; seventh sternite triangularly emarginate at apex, the emargination as deep as the distance between the tips of the processes of this sternite; apical margin of tergites brownish; process narrow, shaped as in *A. (A.) jessica* C. & C. but slenderer at base and truncate at apex; tergum without hair bands, hair at apex of abdomen of a golden hue; hypopygium somewhat as in *A. (A.) jessica* C. & C. but with the lingam nearly parallel sided and much narrower though thicker at apex; processes also slenderer.

Type: Male, No. 1727, Mus. Calif. Acad. Sci., collected by Dr. F. E. Blaisdell in April at Mokelumne Hill, California.

6. *Andrena (Andrena) marina* Viereck, new species

Related to *A. (A.) bisalici* Viereck.

Male: Length 8 mm.; body black, mostly covered with ochreous hair; head with its facial line : transfacial line ::47:58; axial line : temporal line ::24:14; temples rounded; malar line : joint 3 of antennæ ::2:7; elevated portion of malar space virtually crowded out; head covered with ochreous hairs except along the inner eye margin, upper eye margin, and outer eye margin above the middle of temples and on front where

the hairs are black; front rugulose, shining; ocellocular line : ocellocapital line ::11:4; face shining, rather indistinctly punctured, its punctures from one to two puncture-widths apart; clypeus convex; labrarea broad and truncate, polished, its width at base : greatest length ::7:2, nearly as wide at apex as at base; joint 3 of antennæ :4::7:4; joint 4 and following joints from a little thicker than long to a little longer than thick, dullish; flagel, almost straight in outline; antennæ brownish throughout; mandibles atypical, robust, extending beyond the outer edge of the labrarea, and nearly to end of the basal half of its fellow, black except for the apical third which is reddish; palpi slender; thorax covered with an abundance of dark, dull ochreous hairs; hairs of dorsulum seemingly a little shorter than hair of mesopleura; dorsulum dullish, finely reticulated and sparsely punctured, the punctures indistinct and from two to five or more puncture-widths apart; notauli represented by a shining line; mesopleura dullish with pale ochreous hairs throughout, finely reticulated and mostly covered with shallow pits, that are three or more pit-widths apart; scutel hairy and sculptured like the dorsulum; metanotum hairy and sculptured like the dorsulum except that the sculpture is denser; tegulæ dark brown, polished; wing base mostly brownish; subcosta blackish; stigma brownish stramineous with a blackish tinge, membrane uniformly tinged with brown; legs blackish brown excepting the tarsi which are brownish stramineous; legs covered with ochreous hairs; hind metatarsi at most hardly wider than mid metatarsi and nearly half as wide as hind tibiæ at apex; propodeum with its enclosure poorly defined, irregularly rugulose, rounded off at apex, rest of upper face sculptured somewhat like the mesopleura but with smaller pits and covered with pale ochreous hair; propodeal pleura sculptured apparently like the mesopleura; abdomen with its tergum shining, almost polished, finely reticulated and indistinctly punctured, the punctures mostly three or four puncture-widths apart; first and second tergites with long, erect, pale ochreous hairs; second tergite with its elevated portion down the middle : depressed portion ::14:7; fourth and fifth tergites with brownish appressed hairs on the elevated portion, fifth tergite with its basal blackish portion covered with poorly defined punctures that are as many as four puncture-widths apart; rest of fifth tergite and exposed portion of sixth and seventh tergites with a stramineous margin; anal process subemarginate and slenderer than in *A. (A.) geranii* Rob.; prominences of seventh sternite like an M in outline; hair at apex of abdomen of a golden hue; hypopygium of the *A. (A.) geranii* Rob. type but lobes not at all pointed outwardly and under side of ends of processes not bevelled.

Type: Male, No. 1728, Mus. Calif. Acad. Sci., collected by Chas. Fuchs in **Marin County, California.**

7. *Andrena (Andrena) chapmanæ* Viereck

Andrena chapmanæ Vier. Can. Ent., 36 (191, 223), 1904.

Type: No. 4121, The Academy Nat. Sci., Phila.

Andrena yosemitensis Cockerell, Pan-Pacific. Ent., 1, (51, 62), 1924.

Type: No. 1586, The Calif. Acad. Sci.

Type locality: Yosemite, Calif., June 24, 1902 (B. Chapman.)

Related to *A. (A.) purpurina* Vier. & Ckll.

Female: Length 10 mm.; body mostly bluish green, mostly covered all over with black hairs; head with its facial line : transfacial line :: 64 : 76; axial line : temporal line :: 31 : 19; malar line : joint 3 of antennæ :: 3 : 10; elevated portion of malar space nearly crowded out; ocelloccipital line : greatest diameter of lateral ocellus :: 6 : 5; front punctured and longitudinally striate, not elevated into a welt along the fovea; width of fovea at most : ocellocular line :: 10 : 15; distance between fovea and ocelli : ocellocular line :: 5 : 15; foveal band virtually wanting at upper end of the inner eye margin; fovea nearly parallel sided, narrowed below the middle and continued to a point apparently a little below the clypeal line, filled with dark seal brown hairs; face polished or nearly so, partly indistinctly reticulate, with distinct punctures that are as much as two puncture-widths apart; clypeus mostly black, distinctly elevated above the apical margin, convex, polished, with large scattered punctures that are as much as six puncture-widths apart down the middle, but sculptured like the face along the edges excepting the anterior edge; clypearea poorly defined; clypeus thinly hairy its sculpture not at all hidden by hairs; labrarea emarginate, its width at base : length down the middle :: 12 : 4; width at apex : greatest length :: 4 : 5; labrum with a fringe of blackish hairs, with a faint median longitudinal welt between the labrarea and apical edge of labrum; joint 3 of antennæ : 4 + 5 :: 10 : 8; joints 4 and 5 thicker than long, the succeeding joints as thick as long except joint 12 which is distinctly longer than thick; antennæ blackish throughout; mandibles atypical, robust, extending about half way to the outer edge of the labrum, dark reddish throughout; palpi nearly typical; thorax above thinly covered with hairs that are shorter on the dorsulum than the hairs on the mesopleuræ; dorsulum dullish in front, mostly shiny, finely reticulated and punctured like the face but more distinctly so and not so closely; notauli represented by a shining line; mesopleuræ shiny, sculptured somewhat like the dorsulum but not so closely or distinctly punctured; scutel hairy and sculptured much like the dorsulum but with some longer hairs and with pale hairs laterally near the edge; metanotum with some pale hairs, partly shiny, mostly dullish, densely, finely sculptured and punctured; tegulæ dark brownish stramineous, partly almost polished; wing base dark stramineous; subcosta blackish brown; stigma pale yellowish brown-stramineous with a blackish border, rest of veins dull blackish stramineous; first recurrent vein received by the second submarginal cell be-

yond the middle and nearly as near to the second transverse cubitus as the first transverse cubitus is to the stigma on the radial vein; nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein; membrane uniformly tinged with brown; legs blackish brown throughout and covered with black hairs; scopa typical, its hairs black all over; hind metatarsi at most apparently a little narrower than mid metatarsi; propodeum with its enclosure poorly defined, dullish and finely reticulated, as well as with some delicate wrinkles, rest of upper face of propodeum sculptured somewhat like the mesopleuræ but with smaller punctures, and covered with finer hair; propodeal pleuræ shiny, finely reticulated and with sparse shallow punctures, floccus well developed; abdomen with its tergum shining and sculptured much like the propodeal pleuræ but with well defined small punctures from two to six or more puncture-widths apart on elevated portion of the first tergite, the punctures hardly closer on the elevated portions of the succeeding tergites; the depressed portion of the first, second, third and fourth tergites almost impunctate; apical edge of first, second, third and fourth tergites with a stramineous edge; second tergite with its elevated portion down the middle : depressed portion :: 18 : 9; fifth tergite shining, reticulate, its punctures differing from those on the other tergites, its sculpture recalling cutis anserina; pygidium planate, truncate at apex; tergum with conspicuous, short, nearly erect black hair bands; fimbria black.



Viereck, Henry Lorenz. 1926. "Descriptions of seven andrenids in the collection of the California Academy of Sciences." *Proceedings of the California Academy of Sciences, 4th series* 15, 399–408.

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