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## New species of the augochlorine bee genus *Stilbochlora*, with a preliminary key (Hymenoptera: Halictidae)

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**Abstract.** Three new species of the augochlorine bee genus *Stilbochlora* Engel *et al.* (Halictinae: Augochlorini) are described and figured from Peru. The new species are distinct from the type species, *Stilbochlora eickworti* (Engel *et al.*), in the more densely and extensively striate propodea, and can be distinguished from each other on the basis of propodeal sculpturing and coloration. The new taxa are: *S. graceae* Engel, new species; *S. kateae* Engel, new species; and *S. wedmanorum* Engel, new species. A key is provided to the species of *Stilbochlora*.

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### INTRODUCTION

The genus *Stilbochlora* Engel *et al.* is a distinctive group of augochlorine bees occurring to the east of the Andes in Amazonian Colombia, Ecuador, Peru, Bolivia, and Brazil (Engel *et al.*, 1997). Originally proposed as a subgenus of *Megommation* Moure, following the precedent of Eickwort (1969) for recognizing a broad concept for this genus (*e.g.*, Engel *et al.*, 1997; Engel, 2000; Michener, 2007), *Stilbochlora* and other former subgenera are today considered distinct genera in their own right. Such a classificatory decision was particularly supported by the recent realization that *Megommation s.l.* was paraphyletic as conceived by previous authors (Gonçalves, 2016), the present writer included. *Stilbochlora* belongs to the *Megaloptidia*-genus group (*sensu* Eickwort, 1969; Engel, 2000, 2019a), wherein it differs rather noticeably from related genera. *Stilbochlora* includes smaller species, typically around 6–8 mm in length, that are largely brilliant metallic in coloration and lack the enlarged ocelli of the much larger *Megommation*, *Megaloptidia* Cockerell, and *Trichommation* Engel (*vide* Engel, 2019a). In addition, the genus has a pectinate inner metatibial spur, a metabasitibial plate with

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the anterior border obsolescent, a smooth and shining propodeal basal area between radiating striae (rather than pronouncedly coriarius in the other genera and usually without striae), and small, triangular clypeal angles widely separated by a straight margin (rather than enlarged angles with a deeply concave margin between as in *Megaloptina* Eickwort and *Megommation*). Engel (2019a) provided a key to genera for the *Megaloptidia*-genus group (note that the key also includes *Chlerogelloides* Engel *et al.* owing to its narrowed prementum although it is not a member of the clade). Although the normal ocelli and more brilliant coloration implies diurnal foraging and the well-developed scopa excludes cleptoparasitism, nothing is known of the biology for any of the species in *Stilbochlora* aside from a few floral records (*e.g.*, Vásquez & Webber, 2010).

Heretofore the genus has included a single species, *Stilbochlora eickworti* (Engel *et al.*). Nonetheless, additional species have been known for several years, each exceedingly similar to the type species (their great similarity can be readily noted from the descriptions herein), but differing in important details of integumental sculpturing, particularly that of the propodeum, as well as aspects of coloration. Three new species are described here from Peru and the opportunity is taken to present a key to the diversity as it is currently understood.

## MATERIAL AND METHODS

Material presented herein is deposited in the Division of Entomology, University of Kansas Natural History Museum, Lawrence, Kansas (SEMC). Terminology of morphological structures is adapted from Eickwort (1969), Engel (2000, 2001, 2009), and Michener (2007). The format of the descriptions follows that used elsewhere for Augochlorini (*e.g.*, Engel, 1995, 2013, 2019b). Specimens were examined using an Olympus SZX12 stereomicroscope, and measured using an ocular micrometer on this system. Photographs were taken using a Canon 7D digital camera and fitted with various microscopic objective lenses.

## SYSTEMATICS

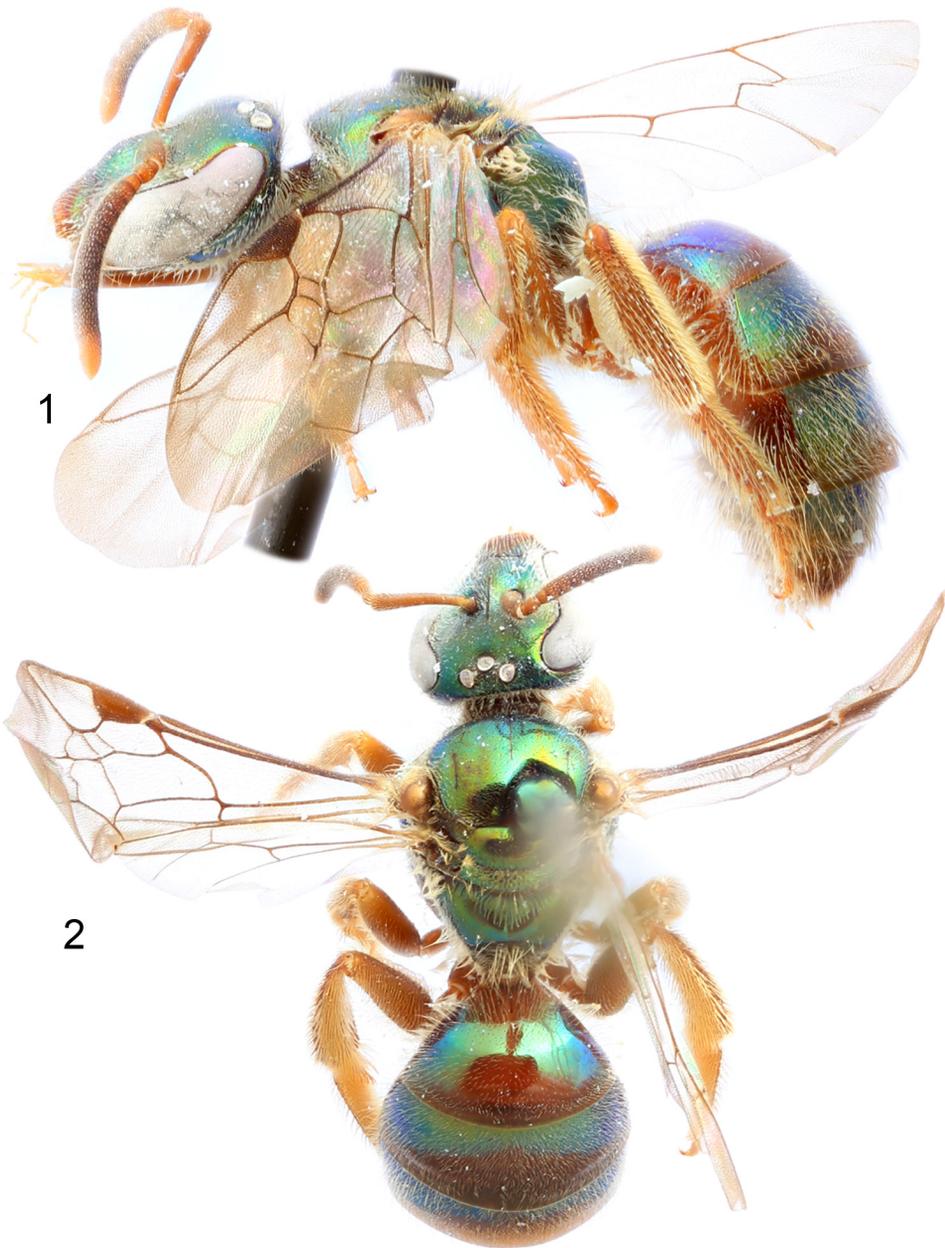
Genus *Stilbochlora* Engel, Brooks, & Yanega

*Stilbochlora graceae* Engel, new species  
(Figs. 1, 2, 9, 12, 16)

ZooBank: urn:lsid:zoobank.org:act:1CA65FFD-5DA7-4D9B-A371-F39FD6E62003

**DIAGNOSIS:** This species, like the others described herein, differs most readily from the type species, *S. eickworti*, in the more densely striate propodeum. Among the remaining species it is one two in the genus with the striae extending beyond midlength and medially reaching nearly to the posterior border (Figs. 12, 16), such that the striate area is roughly triangular in form (Figs. 12, 16). Additionally, the species is noticeably green in color (Figs. 1, 2) rather than the predominantly blue coloration of the other species. It can also be recognized by the testaceous clypeal apex (Fig. 9), similar in this regard to *S. eickworti* (Fig. 10), and the largely testaceous legs (Figs. 1, 2).

**DESCRIPTION:** ♀: Total body length 6.70 mm; forewing length 5.02 mm. Head slightly wider than long (length 1.80 mm, width 1.87 mm); distal half of clypeus projecting below lower tangent of compound eyes; frontal line carinate from approximately 0.25× torular diameter below toruli to point slightly more than torular diameter above toruli;



**Figures 1–2.** Holotype female of *Stilbochlora graceae*, new species. 1. Lateral habitus. 2. Dorsal habitus.

upper interorbital distance 1.03 mm; lower interorbital distance 0.77 mm; ocellocular distance approximately  $1.5\times$  ocellar diameter. Scape long, extending to level of lateral ocelli; pedicel longer than first flagellomere; first and second flagellomeres subequal in length. Gena narrower than compound eye in profile. Mesoscutum with median and parapsidal lines moderately impressed, parapsidal line approximately  $0.75\times$  length of median line; intertegular distance 1.43 mm; mesoscutellum nearly twice as long as metanotum, approximately subequal to basal area of propodeum. Forewing with

basal vein distad 1cu-a by 4× vein width; 1rs-m straight, confluent with 1m-cu, roughly parallel to 2Rs; 3Rs subequal to r-rs, and subequal to 4Rs; 5Rs comparatively straight, thus marginal cell tapering uniformly to acutely rounded apex; 2M slightly longer than 3Rs; 3M approximately 2× length 2M; 2rs-m weakly curved, distad 2m-cu by 4× vein width; hind wing with distal hamuli arranged 2-1-2. Inner metatibial spur with five branches, not including apical portion of rachis.

Clypeus centrally with weak, coarse punctures separated by less than a puncture width, integument between such punctures smooth, punctures near margins slightly smaller and separated by a puncture width or less, with integument between marginal punctures weakly and finely coriarius; supraclypeal area with punctures separated by 0.75–2× a puncture width, integument between punctures weakly and finely coriarius; face below tangent of antennal toruli with minute punctures separated by a puncture width or often less, except more widely spaced near antennal torulus, integument between punctures smooth; face above tangent of antennal toruli with minute punctures nearly contiguous, integument between punctures, where evident, smooth; punctures becoming more spaced toward ocellar area and in ocellular area, separated by 1–4× a puncture width, integument between punctures smooth; vertex with integument as described for ocellular area; gena as on vertex, blending ventrally to coriarius integument of postgena; postgena prominently coriarius and impunctate. Pronotum smooth; mesoscutum with minute punctures separated by 2–4× a puncture width, except more closely spaced around parapsidal line, integument between punctures smooth; tegula largely smooth and impunctate except a few, sparsely scattered, minute, weak, shallow punctures; mesoscutellum with integument as on central disc of mesoscutum except punctures along posterior border larger and weaker; metanotum minutely nodulose, integument otherwise smooth; preëpisternum with coarse punctures separated by less than a puncture width, integument between punctures smooth, hypoepimeral area with sparse, small punctures, otherwise smooth; mesepisternum with small, shallow punctures separated by 1–3× a puncture width; metepisternum smooth with sparsely scattered minute punctures; basal area of propodeum smooth, glabrous, shining, with prominent striae radiating from basal margin, striae long, extending beyond midlength of basal area, medially extending nearly to posterior rounded margin, striae closely spaced (versus widely spaced and short in *S. eickworti*); lateral and posterior surfaces of propodeum smooth with scattered minute punctures. Metasomal tergum I largely smooth, with scattered minute punctures, such punctures more numerous in narrow area near to apical margin, apical margin finely, weakly, transversely coriarius and impunctate; terga II–IV as on tergum I except minute punctures of disc more numerous, separated by 1–3× a puncture width, becoming weaker toward apical margin, apical margin as on tergum I; tergum V as on preceding terga except punctures more prominent and more closely spaced; sterna with basal areas smooth and impunctate, central discs finely coriarius and nodulose at setal bases.

Mandible yellow brown, with reddish brown apex and brown base; labrum yellow brown; clypeus largely brown with apex transversely yellow brown, and some metallic green highlights along lateral and basal margins; supraclypeal area brown with strong metallic green and golden highlights; remainder of face brilliant metallic green with golden highlights, with areas of weak, blue opalescence on vertex; gena and postgena as on face; antennal scape, pedicel, and first flagellomere yellowish brown to brown, remainder of flagellum brown except apex and venter of distalmost flagellomere brownish yellow. Pronotum brown with strong metallic green highlights; propleuron brown with weaker metallic green highlights; mesoscutum brilliant me-

tallic green with some golden highlights and areas of weak blue opalescence; tegula brownish yellow, semi-translucent; mesoscutellum and metanotum as on mesoscutum; mes- and metepisternum as on mesoscutum; propodeum as on mesoscutum; legs largely light brown to brownish yellow. Wing membranes hyaline and clear; veins dark brown to brown. Metasoma largely brown; terga with strong metallic green highlights, highlights weaker to absent in marginal areas giving metasomal dorsum superficial banded appearance.

Pubescence largely white to pale yellow; face with scattered, fine, simple, suberect to erect setae, such setae intermingled with shorter, highly branched to plumose setae on lower face and along ocular borders, such setae not obscuring integument, on upper face fine erect setae short, becoming longer again on vertex and between ocelli; gena with setae as on vertex except long, erect to suberect setae with a few apical branches; postgena with sparse, elongate, erect setae, some setae with a few apical branches but largely simple. Mesoscutum with scattered, short, fine, erect, simple setae, such setae longer anteriorly, some setae, particularly along borders, with a few, short branches; mesoscutellum as on mesoscutum except intermingled with thicker, elongate, erect setae with short branches, some lateral setae almost feathery in appearance; metanotum as on mesoscutum except elongate setae more prominent; pleura with long, erect to suberect, simple setae, such setae becoming progressively slightly longer ventrally; basal area of propodeum glabrous; lateral and posterior surfaces with setae as on pleura except more numerous on lateral surface and sparser and more erect on posterior surface. Setae of legs largely pale yellow, except darker on outer surface of metatibia, and particularly dark fuscous at bases around metabasitibial plate. Metasomal tergum I with long, erect, simple setae on anterior-facing surface, such setae becoming sparse, short, and more inclined medioapically, dorsal-facing surface with sparse, short, suberect setae, narrow apical margin glabrous; terga II–IV with fine, short, suberect to subappressed, simple setae, largely directed toward obliquely outward from midline, intermingled, particularly laterally, with longer, suberect, simple setae, such longer setae progressively more numerous on succeeding terga and slightly fuscous; tergum V with setae more numerous than on preceding terga and more coppery in appearance; central discs of sterna with abundant, elongate, erect, simple setae, a few with short branches.

♂: *Latet*.

HOLOTYPE: ♀, Peru: Dept. Loreto, 1.5 km N Teniente Lopez, 2°35.66'S, 76°06.92'W, 20 July 1993, 210–240 m, Richard Leschen, ex: flight intercept trap (SEMC).

ETYMOLOGY: The specific epithet honors Ms. Grace Alexandra Laille (b. 2004), beloved niece.

*Stilbochlora kateae* Engel, new species

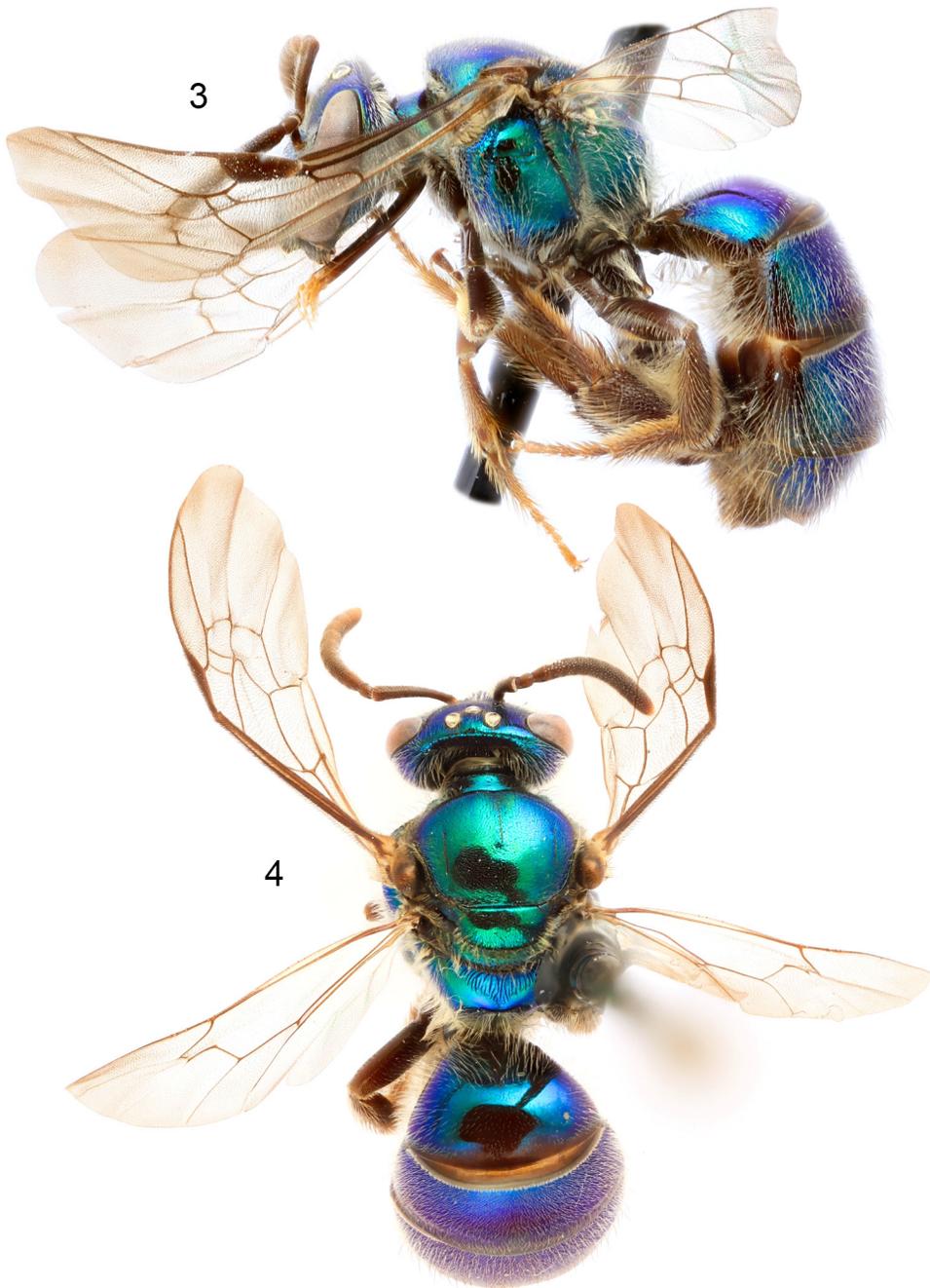
(Figs. 3, 4, 8, 13, 17)

ZooBank: urn:lsid:zoobank.org:act:0193356D-4456-49F9-A0DD-08F18C69B8DE

DIAGNOSIS: As in all of the species described herein, this species has a more densely striate propodeum relative to that of the type species. Like *S. graceae* it has the striae of the propodeum extending beyond midlength and medially nearly reaching to the posterior border (Figs. 13, 17), and the striate area of roughly triangular form (Figs. 13, 17). Relative to *S. graceae* the species is pronouncedly blue in color (Figs. 3, 4) rather than the entirely green coloration of the former. It also differs from *S. graceae* by the absence of lighter coloration at the clypeal apex (Fig. 8) and the dark brown legs (Figs. 3, 4).

DESCRIPTION: ♀: Total body length 6.97 mm; forewing length 5.10 mm. Head slightly wider than long (length 1.87 mm, width 1.93 mm); distal half of clypeus projecting below lower tangent of compound eyes; frontal line carinate from approximately lower tangent of toruli to about one torular diameter above upper tangent of toruli; upper interorbital distance 1.07 mm; lower interorbital distance 0.79 mm; ocellular distance approximately  $1.5\times$  ocellar diameter. Scape long, extending to level of lateral ocelli; pedicel longer than first flagellomere; first and second flagellomeres subequal in length. Gena narrower than compound eye in profile. Mesoscutum with median and parapsidal lines moderately impressed, parapsidal line approximately  $0.75\times$  length of median line; intertegular distance 1.57 mm; mesoscutellum nearly twice as long as metanotum, approximately subequal to basal area of propodeum. Forewing with basal vein distad 1cu-a by  $4\times$  vein width; 1rs-m straight, slightly basad 1m-cu by less than vein width, roughly parallel to 2Rs; 3Rs subequal to r-rs, and subequal to 4Rs; 5Rs comparatively straight, thus marginal cell tapering uniformly to acutely rounded apex; 2M subequal to 3Rs; 3M more than  $2\times$  length 2M; 2rs-m weakly curved, distad 2m-cu by  $4\times$  vein width; hind wing with distal hamuli arranged 2-1-2. Inner metatibial spur with five branches, not including apical portion of rachis (difficult to observe as holotype has hind legs folded beneath the body, but spurs of left leg can be discerned by looking through legs from right side).

Clypeus with coarse punctures separated by much less than a puncture width centrally, integument between punctures faintly and finely coriarius, coriarius integument more prominent in metallic areas and punctures more spaced, separated by a puncture width; supraclypeal area with punctures smaller than on clypeus, separated by  $0.5-2\times$  a puncture width, integument between punctures weakly and finely coriarius; face below tangent of antennal toruli with minute punctures separated by a puncture width or often less, integument between punctures smooth; face above tangent of antennal toruli with minute punctures nearly contiguous, integument between punctures smooth; punctures becoming more spaced toward ocellar area and in ocellular area, in ocellular area separated by  $2-5\times$  a puncture width, integument between punctures smooth; vertex with integument as described for ocellular area; gena with punctures separated by about a puncture width, blending ventrally to coriarius integument of postgena; postgena prominently coriarius and impunctate. Pronotum smooth, with sparsely scattered punctures; mesoscutum with minute punctures separated by  $2-4\times$  a puncture width, except more closely spaced around parapsidal line, integument between punctures smooth; tegula smooth and impunctate except a few, sparsely scattered, weak punctures; mesoscutellum with integument as on central disc of mesoscutum except punctures more widely spaced, punctures along posterior border larger and weaker; metanotum minutely nodulose, integument otherwise finely coriarius; preëpisternum with coarse punctures nearly contiguous, integument between punctures smooth, hypoepimeral area with sparse, small punctures, otherwise smooth; mesepisternum with small, shallow punctures separated by  $2-4\times$  a puncture width; metepisternum smooth with sparsely scattered minute punctures; basal area of propodeum smooth, glabrous, shining, with prominent striae radiating from basal margin, striae long, extending beyond midlength of basal area, medially extending nearly to posterior rounded margin, striae closely spaced; lateral and posterior surfaces of propodeum smooth with scattered minute punctures, punctures of posterior surface sparser than those of lateral surface. Metasomal tergum I largely smooth, with scattered minute punctures, apical margin finely, weakly, transversely coriarius and impunctate; terga II-IV as on tergum I except minute punctures of disc more numer-



**Figures 3–4.** Holotype female of *Stilbochlora kateae*, new species. 3. Lateral habitus. 4. Dorsal habitus.

ous, separated by 1–4× a puncture width, becoming weaker toward apical margin, apical margin as on tergum I; tergum V as on preceding terga except punctures more prominent and more closely spaced; sterna with basal areas smooth and impunctate, central discs finely coriaceous and nodulose at setal bases.

Mandible dark brown; labrum dark brown; clypeus dark brown except metallic blue-green bordering epistomal sulcus; supraclypeal area and remainder of face brilliant metallic blue-green, with bluish color progressively more dominant toward vertex; gena as on vertex; postgena metallic golden-green; antenna dark brown except flagellomeres ventrally progressively lighter from flagellomere VII onward, and apex and venter of distalmost flagellomere brownish yellow. Pronotum dark brown with strong metallic blue-green highlights; propleuron as on pronotum; mesoscutum brilliant metallic blue-green; tegula brown, semi-translucent; mesoscutellum and metanotum as on mesoscutum; mes- and metepisternum as on mesoscutum; propodeum as on mesoscutum; legs largely brown except lighter on tarsi. Wing membranes hyaline and clear; veins dark brown to brown. Metasoma largely dark brown; terga with strong metallic blue highlights and areas of purplish highlights, particularly centrally on discs, highlights absent in marginal areas giving metasomal dorsum superficial banded appearance.

Pubescence largely white to off white; face with scattered, fine, simple, suberect to erect setae, such setae intermingled with shorter, highly branched to plumose setae on lower face and along ocular borders, such setae not obscuring integument, on upper face fine erect setae short, becoming longer again on vertex and between ocelli; gena with setae as on vertex except long, erect to suberect setae, some with a few apical branches, intermingled with shorter, plumose setae near ocular border; postgena with sparse, elongate, erect setae, some setae with a few apical branches. Mesoscutum with scattered, short, fine, erect, simple setae, some with a few, minute branches, intermixed with shorter erect setae, posteriorly with more elongate, erect setae with a few minute branches; mesoscutellum as on mesoscutum except elongate setae more numerous and some mid-sized, lateral setae plumose; metanotum as on mesoscutum except elongate setae more numerous; pleura with long, erect to suberect, simple setae, such setae becoming slightly longer ventrally; basal area of propodeum glabrous; lateral and posterior surfaces with setae as on pleura except more numerous on lateral surface and sparser and more erect on posterior surface. Setae of legs largely white to off white, except more tawny on tarsomeres, particularly so on inner surfaces. Metasomal tergum I with long, erect, simple setae on anterior-facing surface, such setae becoming sparse, short, and more inclined medioapically, dorsal-facing surface with sparse, short, suberect setae, narrow apical margin glabrous; terga II–IV with fine, short, suberect to subappressed, simple setae, intermingled with longer, suberect, simple setae, such longer setae progressively more numerous on succeeding terga; tergum V with setae more numerous than on preceding terga and short setae of disc more fuscous; central discs of sterna with abundant, elongate, erect, simple setae, a few with short branches.

♂: *Latet*.

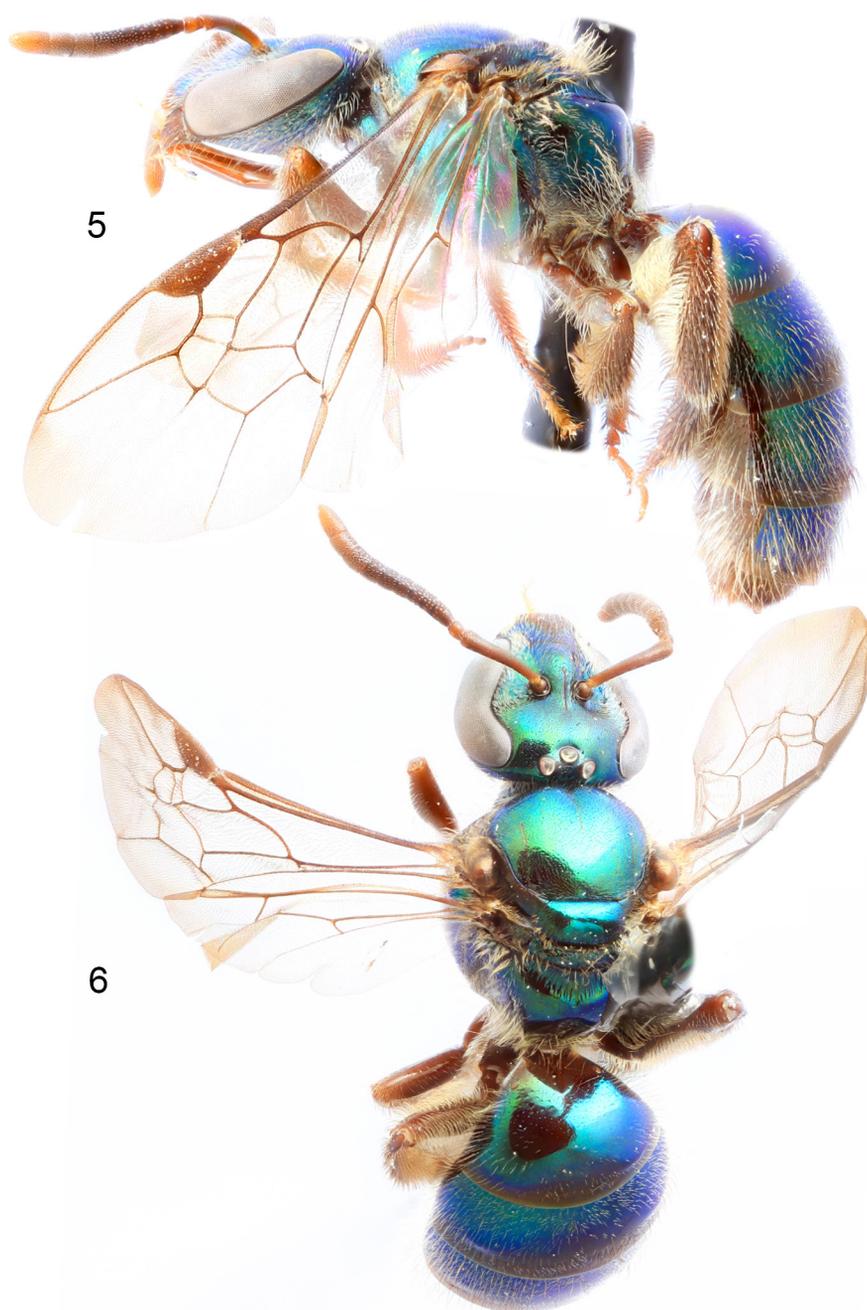
HOLOTYPE: ♀, Peru: Madre de Dios, Pantiacolla Lodge, Alto Madre de Dios River, 400 m, 12°39'22''S, 71°13'55''W, 23–26 Oct 2000, R. Brooks, ex: flight intercept trap (SEMC).

ETYMOLOGY: The specific epithet honors Ms. Kate Alisa Laille (b. 2006), beloved niece.

*Stilbochlora wedmanorum* Engel, new species  
(Figs. 5–7, 14, 18)

ZooBank: urn:lsid:zoobank.org:act:1C4305F5-1F24-42D0-AEB3-E037B7AA6C34

DIAGNOSIS: As in all of the new species reported herein, this species has a more densely striate propodeum relative to the type species of the genus. Unlike *S. graceae* and *S. kateae*, however, the striae only extend to about midlength and the striate area is



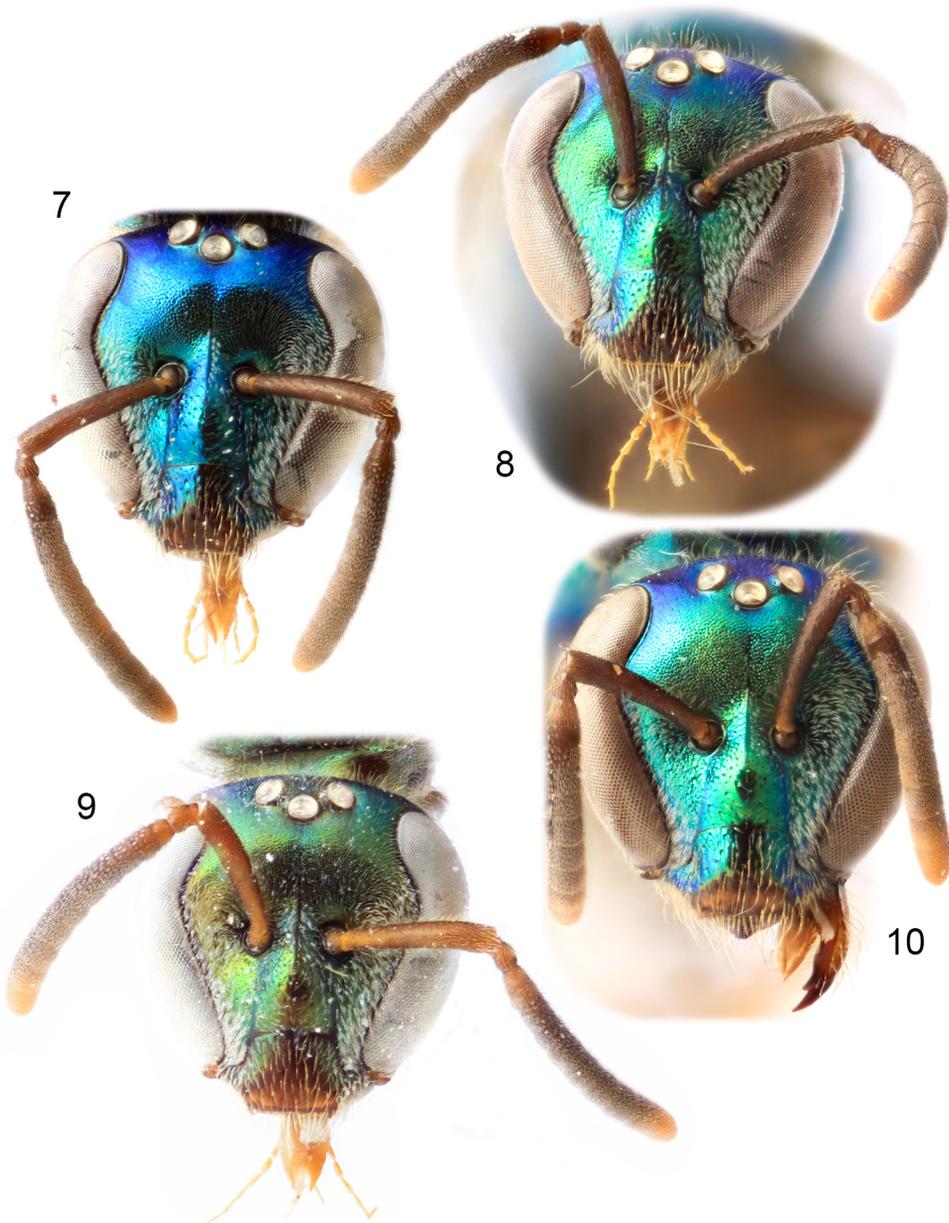
**Figures 5–6.** Holotype female of *Stilbochlora wedmanorum*, new species. 5. Lateral habitus. 6. Dorsal habitus.

roughly crescent shape (Figs. 14, 18). Like *S. kateae*, this species is predominantly blue, with dark brown legs and clypeal apex (Figs. 5–7).

**DESCRIPTION:** ♀: Total body length 6.74 mm; forewing length 4.68 mm. Head slightly wider than long (length 1.60 mm, width 1.73 mm); distal half of clypeus projecting below lower tangent of compound eyes; frontal line carinate from approximate-

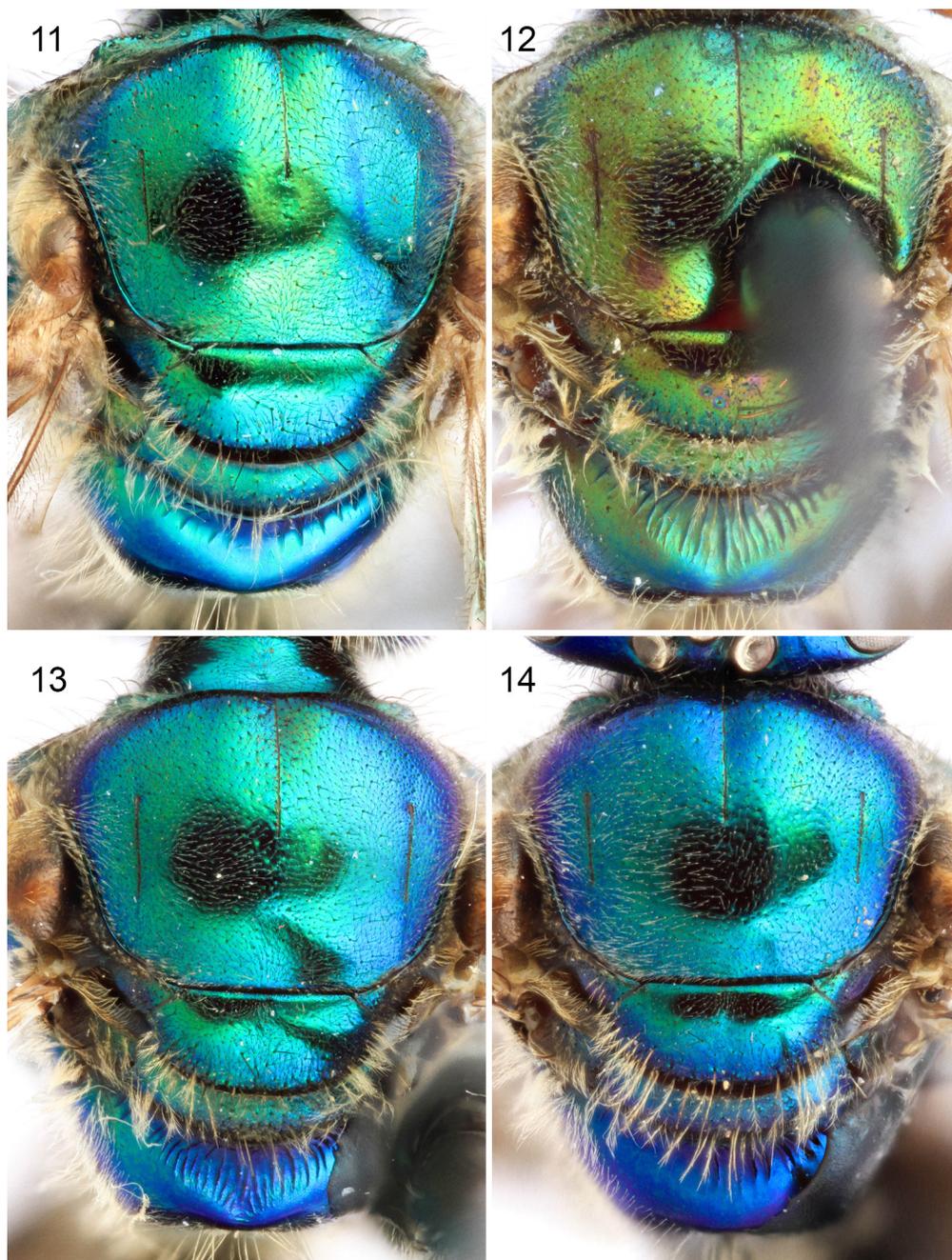
ly lower tangent of toruli to about one torular diameter above upper tangent of toruli; upper interorbital distance 0.93 mm; lower interorbital distance 0.67 mm; ocellocular distance approximately  $1.75\times$  ocellar diameter. Scape long, extending to level of lateral ocelli; pedicel longer than first flagellomere; first and second flagellomeres subequal in length. Gena narrower than compound eye in profile. Mesoscutum with median and parapsidal lines moderately impressed, parapsidal line approximately  $0.75\times$  length of median line; intertegular distance 1.33 mm; mesoscutellum nearly twice as long as metanotum, approximately subequal to basal area of propodeum. Forewing with basal vein distad 1cu-a by  $4\times$  vein width; 1rs-m straight, confluent to slightly basad 1m-cu, roughly parallel to 2Rs; 3Rs subequal to r-rs, and subequal to 4Rs; 5Rs comparatively straight, thus marginal cell tapering uniformly to acutely rounded apex; 2M subequal to 3Rs; 3M more than  $2\times$  length 2M; 2rs-m nearly straight, distad 2m-cu by  $5\times$  vein width; hind wing with distal hamuli arranged 2-1-2. Inner metatibial spur with five branches, not including apical portion of rachis.

Clypeus with coarse punctures separated by less than a puncture width centrally, puncture smaller and a bit more spaced near borders, integument between punctures faintly and finely coriarius to nearly smooth, coriarius integument more prominent in metallic areas; supraclypeal area with punctures smaller than on clypeus, separated by  $2-5\times$  a puncture width except denser above near intertorular area, integument between punctures weakly and finely coriarius; face below tangent of antennal toruli with minute punctures separated by a puncture width or less, integument between punctures smooth; face above tangent of antennal toruli with minute punctures nearly contiguous, integument between punctures smooth; punctures becoming more spaced toward ocellar area and in ocellocular area, in ocellocular area separated by  $3-7\times$  a puncture width, integument between punctures smooth; vertex with integument as described for ocellocular area; gena with punctures separated by  $2-3\times$  a puncture width, blending ventrally to coriarius integument of postgena; postgena prominently coriarius and impunctate. Pronotum smooth, with sparsely scattered punctures; mesoscutum with minute punctures separated by  $2-5\times$  a puncture width, not noticeably more closely spaced around parapsidal line, integument between punctures smooth; tegula smooth and impunctate except a few, sparsely scattered, weak punctures; mesoscutellum with integument as on central disc of mesoscutum except punctures more widely spaced, punctures along posterior border larger and weaker; metanotum minutely nodulose, integument otherwise finely coriarius; preëpisternum with coarse, shallow punctures nearly contiguous, integument between punctures smooth, hypopimeral area with sparse, small punctures, otherwise smooth; mesepisternum with small, shallow punctures separated by  $3-5\times$  a puncture width; metepisternum smooth with sparsely scattered minute punctures; basal area of propodeum smooth, glabrous, shining, with prominent striae radiating from basal margin, striae short, extending to about midlength of basal area, striae not longer medially, striae closely spaced; lateral and posterior surfaces of propodeum smooth with scattered minute punctures, punctures of posterior surface sparser than those of lateral surface. Metasomal tergum I largely smooth, with scattered minute punctures, apical margin finely, weakly, transversely coriarius and impunctate; terga II-IV as on tergum I except minute punctures of disc more numerous, separated by  $2-4\times$  a puncture width, becoming weaker toward apical margin, apical margin as on tergum I; tergum V as on preceding terga except punctures more prominent and more closely spaced; sterna with basal areas smooth and impunctate, central discs finely coriarius and nodulose at setal bases.



**Figures 7–10.** Facial views of species of *Stilbochlora* Engel *et al.* 7. *Stilbochlora wedmanorum*, new species. 8. *S. kateae*, new species. 9. *S. graceae*, new species. 10. *S. eickworti* (Engel *et al.*).

Mandible brown with reddish apex and lighter center; labrum brown; clypeus brown except metallic blue bordering epistomal sulcus; supraclypeal area and remainder of face brilliant metallic blue with greenish highlights in parocular area; gena as on face; postgena metallic blue-green; antenna dark brown except flagellomeres ventrally lighter, particularly apex and venter of distalmost flagellomere brownish yellow. Pronotum and propleuron dark brown with strong metallic blue highlights and weaker greenish highlights; mesoscutum brilliant metallic blue with greenish highlights;



**Figures 11–14.** Mesosomal dorsa of species of *Stilbochlora* Engel et al. 11. *Stilbochlora eickworti* (Engel et al.). 12. *S. graceae*, new species. 13. *S. kateae*, new species. 14. *S. wedmanorum*, new species.

tegula brown, semi-translucent; mesoscutellum and metanotum as on mesoscutum; mes- and metepisternum as on mesoscutum; propodeum as on mesoscutum except greenish highlights lacking; legs largely brown except lighter on tarsi. Wing membranes hyaline and clear; veins dark brown to brown. Metasoma largely dark brown; terga with strong metallic blue highlights and areas of purplish highlights, highlights



**Figures 15–18.** Mesoscutella, metanota, and propodea of species of *Stilbochlora* Engel *et al.* **15.** *Stilbochlora eickworti* (Engel *et al.*). **16.** *S. graceae*, new species. **17.** *S. kateae*, new species. **18.** *S. wedmanorum*, new species.

absent in marginal areas giving metasomal dorsum superficial banded appearance.

Pubescence largely white to off white; face with scattered, fine, simple, suberect to erect setae, such setae intermingled with shorter, highly branched to plumose setae on

lower face and along ocular borders, such setae not obscuring integument, on upper face fine, short, erect setae, setae becoming longer again on vertex and between ocelli; gena with setae as on vertex except long, erect to suberect setae, with a few apical branches, intermingled with shorter, plumose setae medially; postgena with sparse, elongate, erect setae, some setae with a few apical branches. Mesoscutum with scattered, short, fine, erect, simple setae, some with a few, minute branches, intermixed with shorter erect setae; mesoscutellum as on mesoscutum except intermixed with elongate setae with short branches, such setae most abundant posteriorly, laterally with scattered mid-sized, feathery setae; metanotum as on mesoscutum except elongate setae more numerous; pleura with long, erect to suberect, simple setae, such setae becoming slightly longer ventrally; basal area of propodeum glabrous; lateral and posterior surfaces with setae as on pleura except more numerous on lateral surface and sparser and more erect on posterior surface. Setae of legs largely white, except more yellowish on tarsomeres. Metasomal tergum I with long, erect, simple setae on anterior-facing surface, such setae becoming sparse, short, and more inclined medioapically, dorsal-facing surface with sparse, short, suberect setae, narrow apical margin glabrous; terga II–IV with fine, short, suberect to subappressed, simple setae, intermingled with longer, suberect, simple setae, such longer setae progressively more numerous on succeeding terga; tergum V with setae more numerous than on preceding terga and short setae of disc more fuscous; central discs of sterna with abundant, elongate, erect, simple setae, a few with short branches.

♂: *Latet.*

HOLOTYPE: ♀, Peru: Madre de Dios, Cocha Salvador, Reserved Zone, Manu National Park, 310 m, 12°0'13''S, 71°31'36''W, 20–21 Oct 2000, R. Brooks, ex: flight intercept trap (SEMC).

PARATYPES: 3 ♀♀, same data as holotype (SEMC).

ETYMOLOGY: The specific epithet honors Scott D. and L. Kim Wedman, inspiring and supportive friends to the author and his spouse, Kellie.

Preliminary Key to Species of *Stilbochlora*  
(females only)

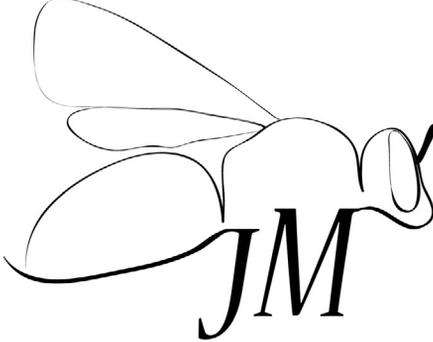
1. Basal area of propodeum with numerous, closely spaced, basal striae (Figs. 16–18), striae reaching to midlength of basal area or beyond ..... 2
- Basal area of propodeum with short, sparse, basal striae (Fig. 15), striae scarcely reaching midlength of basal area and widely separated (Figs. 11, 15), sometimes striae somewhat effaced ..... *S. eickworti* (Engel *et al.*)
2. Basal area of propodeum with striae extending well beyond midlength, medially reaching or nearly to rounded posterior border with posterior surface (Figs. 12, 13), giving striate area a roughly triangular shape (Figs. 16, 17) ..... 3
- Basal area of propodeum with striae reaching to about midlength of basal area (Figs. 14, 18), separated from rounded posterior border with posterior surface by about ocellar diameter, not projecting medially, thus striate area of a crescent shape (Fig. 18) ..... *S. wedmanorum*, n. sp.
3. Integument brilliant metallic green with predominantly golden coppery highlights (Figs. 1, 2, 9, 12, 16); scape largely testaceous; clypeal apex testaceous (Fig. 9); legs largely light testaceous ..... *S. graceae*, n. sp.
- Integument brilliant metallic blue green with green to purple highlights (Figs. 3, 4, 8, 13, 17); scape dark brown; clypeal apex dark brown (Fig. 8); legs largely dark brown ..... *S. kateae*, n. sp.

## ACKNOWLEDGEMENTS

This work has been long dormant but rather than wait another decade for more material to come to light it is hoped that the presentation of descriptions and a key to species will inspire melittologists to seek out these bees, discover the males, and, most importantly, learn of their nesting and floral biology. I am grateful to Jennifer C. Thomas for assistance, to my colleagues Zachary H. Falin and Victor H. Gonzalez for support in many capacities, and to two anonymous reviewers for their helpful input. This is a contribution of the Division of Entomology, University of Kansas Natural History Museum.

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# Journal of Melittology

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