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Fourteen new species of *Sonoma* Casey (Coleoptera: Staphylinidae: Pselaphinae) with a key to species from western North America

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Fourteen new species of *Sonoma* Casey
(Coleoptera: Staphylinidae: Pselaphinae)
with a key to species from western North America

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Fourteen new species of *Sonoma* Casey (Coleoptera: Staphylinidae: Pselaphinae) with a key to species from western North America

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Abstract. Fourteen **new species** of faronine pselaphines in the genus *Sonoma* Casey are described: *S. agitator* (California); *S. cardiac* (Oregon); *S. carltoni* (Oregon); *S. cataloochee* (North Carolina); *S. caterinoi* (California); *S. chandleri* (California); *S. cobra* (California); *S. colberti* (California); *S. maryae* (Oregon); *S. quellazaire* (Oregon); *S. rossellinae* (California); *S. stewarti* (California); *S. twaini* (California); and *S. virgo* (California, Oregon). Thirteen are from western North America and one from the eastern U.S. These species bring the total diversity of the genus to 57 species—40 from western North America and 17 from the eastern U.S. A key to, and updated distributions for, all western species are provided.

Introduction

Members of the genus *Sonoma* Casey (Coleoptera: Staphylinidae: Pselaphinae: Faronitae) are small, predacious, chiefly leaf litter and rotten wood dwelling beetles. An updated taxonomic history was provided in Ferro and Carlton (2010), who also wrote about biology of the group. Recently, Owens et al. (2015) provided a list of *Sonoma* known from Mount Rainier National Park. After completion of the former manuscript (Ferro and Carlton 2010) the author received requests to provide identifications for specimens of *Sonoma* from western North America, and was invited by Don Chandler to examine several undescribed species of the genus in his collection. As a result of those studies 14 undescribed species were discovered, additional collection localities for described species were obtained (Appendix 1), and genitalia were re-figured for nearly all western species.

Materials and Methods

Specimens of *Sonoma* were examined from the following institutions. Collections and their acronyms are from Evenhuis (2014). Collection managers and curators are indicated.

- CAS** California Academy of Sciences (San Francisco, CA, USA; Norman Penny).
CNC Canadian National Collection of Insects (Ottawa, ON, Canada; Patrice Bouchard).
CSCA California State Collection of Arthropods (Sacramento, CA, USA; Andrew Cline).
DCPC Don Chandler Personal Collection; Durham, NH, USA.
FMNH Field Museum of Natural History (Chicago, IL, USA; James Boone and Crystal Maier).
FSCA Florida State Collection of Arthropods, Division of Plant Industry (Gainesville, FL, USA; Paul Skelley).
LSAM Louisiana State Arthropod Museum, Louisiana State University (Baton Rouge, LA, USA; Victoria Bayless).
MSUC Michigan State University (East Lansing, MI, USA; Anthony Cognato, Gary Parsons).
NCSU North Carolina State University Insect Collection (Raleigh, NC, USA; Bob Blinn).
OSUC C. A. Triplehorn Insect Collection, Ohio State University (Columbus, OH, USA; Luciana Musetti).
RBCM Royal British Columbia Museum (Victoria, BC, Canada; Claudia Copley).
RRPC Rodney J. Rood Personal Collection; Pullman, WA, USA.
SBMN Santa Barbara Museum of Natural History (Santa Barbara, CA, USA; Michael Caterino and Matthew L. Gimmel).
SEMC Snow Entomological Museum, University of Kansas (Lawrence, KS, USA; Zachary Falin).

UAM University of Alaska Museum (Fairbanks, AK, USA; Derek S. Sikes).

UMRM W. R. Enns Entomology Museum, University of Missouri (Columbia, MO, USA; Kristin Simpson).

USNM National Museum of Natural History (Washington, DC, USA; Floyd Shockley and Alexey Tishechkin).

WSU Maurice T. James Entomological Collection, Washington State University (Pullman, WA, USA; Richard Zack).

Verbatim label data are given for all identifiable specimens examined, with specimens separated by an asterisk (“*”), label breaks indicated by a slash (“/”), and the lending institution and number of specimens are indicated, e.g. “(4♂, FMNH)”.

Specimen preparation and dissection followed procedures given in Ferro and Carlton (2010). Head, pronotum, elytra, and antennal measurements were taken from slide-mounted specimens when they were available, otherwise measurements were taken from the holotype. All measurements are in millimeters. All measurements were taken in the dorsal view and represent the maximum value. The head was measured from the anterior margin of the clypeus to the back of the temples (area of greatest constriction of the occiput), and width was measured at the middle of the eyes. Total length was measured from the holotype and was from the anterior margin of the clypeus to the end of the fourth visible abdominal tergite (segment VII). Following Chandler (2001) tergites and ventrites are given Arabic numbers to denote sclerites that are visible (1–5) and Roman numerals to denote the morphological segments to which they belong (IV–VIII).

Systematic Accounts

Classification of *Sonoma* Casey 1886

Order	Coleoptera Linnaeus, 1758
Family	Staphylinidae Latreille, 1802
Subfamily	Pselaphinae Latreille, 1802
Supertribe	Faronitae Reitter, 1882
Genus	<i>Sonoma</i> Casey, 1886

For full synonymy and citations for family- and genus-group taxa, see Bouchard et al. (2011) and Newton et al. (2001). For a full description of the genus see Marsh and Schuster (1962).

For convenience, the 57 species of *Sonoma* are separated into two groups based on general distribution, eastern and western North America, with finer scale distributions, based on literature and specimens examined, noted as state and province codes.

West of the Mississippi River

- S. agitator* **new species** – CA
- S. cardiac* **new species** – OR
- S. carltoni* **new species** – OR
- S. cascadia* Chandler, 1986 – AK, BC, OR, WA
- S. caterinoi* **new species** – CA
- S. cavifrons* Casey, 1887 – CA, OR
- S. chandleri* **new species** – CA
- S. cobra* **new species** – CA
- S. colberti* **new species** – CA
- S. conifera* Chandler, 1986 – OR, WA
- S. corticina* Casey, 1887 – CA, OR
- S. cuneata* Marsh and Schuster, 1962 – CA
- S. dilopha* Marsh and Schuster, 1962 – CA
- S. dolabra* Marsh and Schuster, 1962 – CA
- S. grandiceps* Casey, 1894 – CA
- S. hespera* Park and Wagner, 1962 – BC, CA, OR, WA

S. humilis Marsh and Schuster, 1962 – CA
S. isabellae (LeConte, 1851) – CA
S. konkoworum Chandler, 2003 – CA
S. margemina Park and Wagner, 1962 – AK, BC, OR, WA
S. maryae **new species** – OR
S. olycalida Park and Wagner, 1962 – BC, OR, WA
S. parviceps (Mäklin, 1852) – AK, BC, CA, OR, WA
S. petersi Chandler, 1986 – CA, OR
S. priocera Marsh and Schuster, 1962 – OR
S. quellazaire **new species** – OR
S. quercicola Chandler, 1986 – OR
S. repanda Marsh and Schuster, 1962 – CA
S. rossellinae **new species** – CA
S. rubida Casey, 1894 – CA
S. russelli Chandler, 1986 – OR
S. spadica Marsh and Schuster, 1962 – CA
S. squamishorum Chandler and Klimaszewski, 2009 – AK, BC
S. stewarti **new species** – CA
S. tehamae Chandler, 2003 – CA
S. triloba Marsh and Schuster, 1962 – CA
S. twaini **new species** – CA
S. vanna Marsh and Schuster, 1962 – CA
S. virgo **new species** – CA, OR
S. wintuorum Chandler, 2003 – CA

East of the Mississippi River

S. baylessae Ferro and Carlton, 2010 – NC, TN
S. brasstownensis Ferro and Carlton, 2010 – GA
S. cataloochee **new species** – NC
S. chouljenkoi Ferro and Carlton, 2010 – AL, GA, KY, NC, OH, TN
S. cygnus Ferro and Carlton, 2010 – GA, NC
S. gilae Ferro and Carlton, 2010 – GA, TN
S. gimmeli Ferro and Carlton, 2010 – NC, OH, TN
S. holmes Ferro and Carlton, 2010 – NC, MD, PA, VA, WV
S. mayori Ferro and Carlton, 2010 – TN
S. nhunguyeni Ferro and Carlton, 2010 – AL
S. nicholsae Ferro and Carlton, 2010 – NC
S. parkorum Ferro and Carlton, 2010 – NC, TN
S. sokolovi Ferro and Carlton, 2010 – AL, GA
S. streptophorophallus Ferro and Carlton, 2010 – VA
S. tishechkini Ferro and Carlton, 2010 – GA, NC, SC
S. tolulae (LeConte, 1849) – GA, NC, TN
S. tridens Ferro and Carlton, 2010 – KY

Key to males of *Sonoma*

The only reliable way to identify most species of *Sonoma* is direct comparison of the aedeagus. Aedeagus extraction is a straight forward process requiring no special preparation to the specimen (see Ferro and Carlton 2010) and provides an unambiguous feature for identification. The known range of any given species is probably a function of sampling rather than its actual distribution in nature, therefore the collection of a species far from previously known localities should not be cause for alarm. For the same reason, the existence of several to many additional undescribed species is expected.

1. Endophallus with lateral digitate process ventrad from right paramere (Fig. 55) (reduced but present in *Sonoma tishechkini*); east of the Mississippi River; see key in Ferro and Carlton (2010).

Modification of key in Ferro and Carlton (2010) for *Sonoma cataloochee*:

- #6a. apex of endophallus rounded, with two lateral processes on left (Fig. 55) *S. cataloochee* new species, 4
- apex of endophallus flat, with one lateral processes on left *S. nicholsae* Ferro and Carlton
- Endophallus without lateral digitate process ventrad of right paramere (Fig. 15–54; west of the Mississippi River) 2
- 2(1). Parameres paddle-shaped, extremely thin and elongate, >3x longer than phalobase (Fig. 15–18) 3
- Parameres shorter and wide, <2x length of phalobase (Fig. 19–54) 6
- 3(2). Elongate lateral process arising from midpoint of endophallus and extending to or beyond apex (Fig. 16); CA *S. wintuorum* Chandler
- Lateral process extending halfway to apex of endophallus (Fig. 15), short (Fig. 18), or wanting (Fig. 17) 4
- 4(3). Endophallus with elongate lateral process arising from midpoint and extending halfway to apex; apex of endophallus bulbous with single apical process (Fig. 15); CA *S. stewarti* new species, 12
- Lateral process of endophallus short or wanting; apex of endophallus with elongate process bent at right angle (Fig. 17, 18) 5
- 5(4). Endophallus with two subapical processes; apical ¼ of endophallus bent at a right angle (Fig. 17); CA *S. twaini* new species, 13
- Endophallus with three apical processes: one short; one elongate and bent like a shepard's hook; one bent anteriorly (Fig. 18); CA *S. colberti* new species, 8
- 6(2). Aedeagus more or less bilaterally symmetrical; parameres with large outward facing hook-like apical processes (Fig. 19, 20) 7
- Aedeagus asymmetrical; parameres otherwise (Fig. 21–54) 8
- 7(6). Paramere with hook-like apical process distinctly curved, with 5–6 setae extending beyond tip of endophallus (Fig. 19); AK, BC *S. squamishorum* Chandler and Klimaszewski
- Paramere with hook-like apical process nearly straight with angulate tip, with 3–4 setae not extending beyond tip of endophallus (Fig. 20); CA *S. grandiceps* Casey
- 8(6). Left paramere with two large papillate processes and 3–4 short, thick setae clustered at apex (Fig. 21–25) 9
- Without papillae on parameres (Fig. 26–54) 13
- 9(8). Both parameres with distinct papillate apical processes (Fig. 21); AK, BC, OR, WA *S. margemina* Park and Wagner
- Only left paramere with papillae (Fig. 22–25) 10
- 10(9). Endophallus with two elongate, thin processes; right paramere extending beyond apex endophallus (Fig. 22); AK, BC, OR, WA *S. cascadia* Chandler
- One process of endophallus distinctly slimmer than the other; right paramere no extending beyond apex of endophallus (Fig. 23–25) 11

- 11(10). Right paramere rounded at apex; endophallus with: major process with indistinct flange; and minor process recurved (Fig. 23); CA, OR ***S. petersi* Chandler**
 — Right paramere truncate at apex or teardrop shaped; major process of endophallus with distinct flange (Fig. 24, 25) **12**
- 12(11). Right paramere truncate at apex; major process of endophallus with rounded flange (Fig. 24); CA, OR ***S. corticina* Casey**
 — Right paramere teardrop shaped; major process of endophallus with several layers, apico-ventral most triangular, acute (Fig. 25); OR ***S. quellazaire* new species, 10**
- 13(8). Endophallus spatulata (apex distinctly wider than base), and with a large apical process (Fig. 26–32) **14**
 — Endophallus wider at base, curved, or subparallel sided (Fig. 33–54) **20**
- 14(13). Endophallus with two distinct apical processes (Fig. 26, 27) **15**
 — Endophallus with a single distinct apical process (Fig. 28–32) **16**
- 15(14). Endophallus with medial apical process narrow at apex and with small projection at base; lateral apical process spatulata (Fig. 26); CA ***S. spadica* Marsh and Schuster**
 — Endophallus with medial apical process widened at tip, recurved; lateral apical process acuminate at apex (Fig. 27); CA ***S. dolabra* Marsh and Schuster**
- 16 (14). Left paramere with large subapical semi-transparent flange; apical process of endophallus directed left (Fig. 28, 29) **17**
 — Left paramere without flange; apical process of endophallus directed left or right (Fig. 30–32) **18**
- 17(16). Subapical inner flange of left paramere wider than base at approximately midlength, with thickened cuticle along lateral edge; endophallus without apical process on right corner (Fig. 28); CA ***S. isabellae* (LeConte)**
 — Subapical inner flange of left paramere widest at base, with thickened cuticle along median edge; endophallus with blunt apical process on right corner (Fig. 29); CA ***S. rossellinae* new species, 11**
- 18(16). Parameres with apices rounded, without any apical processes (Fig. 30); CA ***S. tehamae* Chandler**
 — Parameres with apices hooked and/or with apical process (Fig. 31, 32) **19**
- 19(18). Left paramere hooked apically; apical process of right paramere with 4–5 points (Fig. 31); CA ***S. vanna* Marsh and Schuster**
 — Left paramere apex rounded; apical process of right paramere simple (Fig. 32); CA ***S. chandleri* new species, 6**
- 20(13). Endophallus extremely thin, >1/6 width of paramere (Fig. 33, 34) **21**
 — Endophallus much wider, <1/4 width of paramere (Fig. 35–54) **22**
- 21(20). Both parameres quadrate; apex of endophallus with two small rounded bulbs (Fig. 33); OR ***S. carltoni* new species, 3**
 — Left paramere elongate-oval; apex of endophallus bent, acuminate (Fig. 34); OR ***S. russelli* Chandler**

- 22(20). Both parameres with thick apical tufts of 8+ setae as longer or longer than paramere; endophallus simple, subparallel, apex slightly to strongly hooked (Fig. 35–37) **23**
 — Apical setal tufts lacking, subapical, not as long as paramere, or with fewer than 8 setae; endophallus elaborate and or with apical processes (Fig. 38–54) **25**
- 23(22). Left paramere with basal lobe pronounced, symmetrical with midline of phalobase; digitate process of left paramere with two distinct projections; endophallus apex with distinct “apical hook”, inner structures distinct (Fig. 36); AK, BC, CA, OR, WA ***S. parviceps* Mäklin**
 — Basal lobe not symmetrical with phalobase; digitate process with 3 or 4 projections; endophallus with three distinct curves, or slight curve at apex (Fig. 35, 37) **24**
- 24(23). Digitate process of left paramere with 3 projections; apex of endophallus with slight curve (Fig. 35); CA, OR ***S. cavifrons* Casey**
 — Digitate process of left paramere with 4 projections; endophallus with three distinct curves—at base, below the midline, and subapically (Fig. 37); OR ***S. maryae* new species, 9**
- 25(22). Left paramere with apical process with dorsal lobe extending medially but not meeting medial dorsal edge, resulting in a distinct furrow (Fig. 38, 39) **26**
 — Left paramere without apical process, or process ventral (Fig. 40–54) **27**
- 26(25). Apex of endophallus blunt; right paramere without processes (Fig. 38); OR
 ***S. cardiac* new species, 2**
 — Apex of endophallus acute, with distinct subapical process; right paramere with large ventral process (Fig. 39); CA, OR ***S. virgo* new species, 14**
- 27(25). Endophallus or parameres with elaborate, nearly transparent flanges creating an overlapping effect, difficult to see parts distinctly (Fig. 40–42) **28**
 — Without flanges, endophallus and parameres appear distinct (Fig. 43–54) **30**
- 28(27). Right paramere with large dorsal, nearly transparent flange that overlaps endophallus and part of left paramere; left paramere with large ventral nearly transparent flange that extends ventrad of endophallus and medial portion of right paramere’s flange (Fig. 40); OR
 ***S. priocera* Marsh and Schuster**
 — Flange arising from endophallus (Fig. 41, 42) **29**
- 29(28). Vase-shaped flange of endophallus with dorsal distal edge smooth; right paramere with a short, blunt subapical ventral process (Fig. 41); OR, WA ***S. conifera* Chandler**
 — Edge of flange surrounding endophallus jagged ventrally, elongate and acute on right lateral margin; right paramere with multi-digitate ventral process (Fig. 42); BC, CA, OR, WA
 ***S. hespera* Park and Wagner**
- 30(27). Both parameres: 1) globular to quadrate, not much longer than wide (left paramere elongate in *S. agitator* and *S. cuneata*); 2) with lateral apical setal tufts; AND 3) with thick, usually blunt, ventral processes (Fig. 43–49) **31**
 — Without above combination of characters, parameres elongate, without ventral processes, etc. (Fig. 50–54) **37**
- 31(30). Ventral process of paramere extended to level of, or beyond, apex of endophallus (Fig. 43–46) **32**
 — Processes of parameres distinctly shorter than endophallus (Fig. 47–49) **35**
- 32(31). Ventral process of right paramere acuminate and recurved creating a hook (Fig. 43, 44) **33**
 — Ventral process of right paramere wide, flattened, not recurved (Fig. 45, 46) **34**

- 33(32). Endophallus with large lateral basal process on left; width of endophallus at midpoint greater than 1/3 width of paramere (Fig. 43); CA ***S. agitator* new species**, 1
 — Endophallus without large lateral basal process; width of endophallus less than 1/4 width of paramere (Fig. 44); CA ***S. rubida* Casey**
- 34(32). Apex of endophallus acute; ventral process of right paramere not widening toward apex (Fig. 45); CA, Coast Ranges ***S. humilis* Marsh and Schuster**
 — Apex of endophallus obtuse; ventral process of right paramere widening toward apex (Fig. 46); CA, Sierra Nevada and southern Cascade Mountains ***S. konkoworum* Chandler**
- 35(31). Endophallus narrow, <1/2 width of paramere (Fig. 47); CA ... ***S. triloba* Marsh and Schuster**
 — Endophallus wide, >1/2 width of paramere (Fig. 48, 49) **36**
- 36(35). Apical half of endophallus equal width (Fig. 48); CA ***S. cuneata* Marsh and Schuster**
 — Endophallus widest just above midline, narrowing to apex (Fig. 49); BC, OR, WA
 ***S. olycalida* Park and Wagner**
- 37(30). Endophallus distinctly longer than parameres, with apical hook (Fig. 50, 51) **38**
 — Endophallus as long as or shorter than parameres, with or without hook (Fig. 52–54) **39**
- 38(37). Left paramere without apical or ventral process; right paramere with thin, elongate apical process (Fig. 50); CA ***S. repanda* Marsh and Schuster**
 — Left paramere with ventral process forming lateral facing hook; right paramere with short wide ventral process (Fig. 51); OR ***S. quercicola* Chandler**
- 39(37). Right paramere with large subapical process extending mesad perpendicular to midline; apex of endophallus also bent perpendicular to midline (Fig. 52); CA ***S. cobra* new species**, 7
 — Right paramere with large subapical process not bent; apex of endophallus bilobed, or straight (Fig. 53, 54) **40**
- 40(39). Apex of endophallus bilobed (Fig. 53); CA ***S. dilopha* Marsh and Schuster**
 — Apex of endophallus globular with two processes directed rearward (Fig. 54); CA
 ***S. caterinoi* new species**, 5

Species Accounts

1. *Sonoma agitator* new species

Fig. 1, 43; Map 2.

Description. Holotype, male. Measurements: head 0.24 long, 0.30 wide; pronotum 0.29 long, 0.35 wide; elytra 0.60 long, 0.30 wide; antennomeres 1–11 total 0.73; total length 2.01. Body uniformly pale brown. Body covered in elongate setae (greater than half the length of the eye).

Head. Eyes prominent, maximum length in dorsal view 1.06x length of first antennal segment, with approximately 50 facets. Antennomere 2 approximately 0.73x width of 1; 3 smallest.

Thorax. Elytra with indistinct sutural foveae; 2–3 foveae lateral to sutural fovea; central row of 5–6 foveae in basal 1/3. Winged. Metatrochanter rounded; metatibia with process on inner margin approximately halfway from base.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Basal lateral foveae on ventrites V–VI only, reduced. Basal pubescence present on ventrites IV–VII.

Aedeagus. Asymmetrical. Left paramere: apical process with three elongate setae; inner subapical process thin, hooked dorsally, with three basal setae. Endophallus: with large, blunt, lateral basal process on left; width at midpoint greater than 1/3 width of left paramere; blunt apical and subapical

processes. Right paramere: globose; with three apical and three subapical setae; ventral digitate process approximately 1/4 width of paramere; with acute mesad subapical process and reflexed apical process.

Type Material. Holotype, male: *CA: Monterey Co. 36.0812°N, 121.5947°W UC Big Creek Reserve Big/Brunette Ck. confl. iii.28-iv.2.2004, FIT M.Caterino / CA BEETLE PROJ CBP0018666 (1♂). Deposited in SBMNH.

Paratypes (n=6). **UNITED STATES: CALIFORNIA: Monterey Co.:** *CA: Monterey Co. 36.0812°N, 121.5947°W UC Big Creek Reserve Big/Brunette Ck. confl. iii.28-iv.2.2004, FIT M.Caterino / CA BEETLE PROJ CBP0018659 (SBMNH) (1♂) SLIDE. *same data / CA BEETLE PROJ CBP0018675 (SBMNH) (1♂). **San Luis Obispo Co.:** *CA: San Luis Obispo Co. 35.5392°N, 121.0813°W UC Rancho Marino Res. iii.10-25.2009, FIT M.S. Caterino / CA BEETLE PROJ CBP0089346 (SBMNH) (1♂). *same data / CA BEETLE PROJ CBP0089328 (SBMNH) (1♂). *CA: San Luis Obispo Co. 35.5392°N, 121.0813°W UC Rancho Marino Res. ii.26-iii.10.2009, FIT M.S. Caterino / CA BEETLE PROJ CBP0088452 (SBMNH) (1♂). *CA: San Luis Obispo Co. 35.5392°N, 121.0813°W UC Rancho Marino Res. v.28-vi.24.2009, FIT M.S. Caterino / CA BEETLE PROJ CBP0094153 (SBMNH) (1♂).

Geographical Distribution. *Sonoma agitator* is only known from two locations, one each in Monterey and San Luis Obispo counties, California.

Comments. Specimens were collected during March through June using flight intercept traps.

Aedeagal characters of *Sonoma agitator* are similar to those of *S. rubida*. The two can be separated based on the following characters, *S. rubida* in brackets []: endophallus with large lateral basal process on left [basal process wanting], width at midpoint greater than 1/3 width of left paramere [width less than 1/4 width of left paramere], apex blunt [apex narrowly pointed], with blunt subapical process [without subapical process]; right paramere ventral digitate process approximately 1/4 width of paramere [process approximately 1/6 width of paramere].

Etymology. The specific epithet celebrates the three separate times the author became deeply concerned that the species was *S. rubida* (on the grounds that the sketch in Marsh and Schuster 1962 was flawed), and the three separate times he discovered his own illustration of the aedeagus of *S. rubida* that not only vindicated Marsh and Schuster, but clearly showed *S. agitator* to be undescribed.

2. *Sonoma cardiac* new species

Fig. 2, 38; Map 3.

Description. Holotype, male. Measurements: head 0.31 long, 0.38 wide; pronotum 0.37 long, 0.45 wide; elytra 0.57 long, 0.35 wide; antennomeres 1–11 total 0.80; total length 2.30. Body brown, maxillary palps paler. Body with moderate length (approximately 1/2 or less width of eye) setae.

Head. Eyes prominent, maximum length in dorsal view 0.93x length of first antennal segment, with approximately 26 facets. Antennomere 2 approximately 0.80x width of 1; 3 smallest.

Thorax. Pronotum with lateral discal foveae. Elytra with indistinct sutural foveae; 2–3 foveae lateral to sutural fovea; central row of 5–6 foveae in basal 1/3. Apparently brachypterous. Metatibia unmodified.

Abdomen. Tergite IV without transverse patch of microtrichia. Basal lateral foveae obscured, weak if present. Basal pubescence present on ventrites IV–VI, lacking on VII.

Aedeagus. Compact. Left paramere: wide at base, abruptly narrowing in apical 1/3; apical process with dorsal lobe extending medially but not meeting medial dorsal edge, resulting in a distinct furrow; 5 setae along inner margin of apical process extended medially; one seta on outer margin of apical process extending posteriorly. Endophallus: large blunt lateral projection at basal 1/3, projected to the left; thick lateral process at midpoint projected to the right; apex blunt, subequal in width to apical 1/2 of endophallus. Right paramere: oval, lacking processes and setae [possibly damaged].

Type Material. Holotype, male: *USA:OR:Josep.Co, 5 mi S Obrien 1700', XII-18-71 EMBenedict, doug-fir&cedar litter (1♂). Deposited in FMNH.

Geographical Distribution. *Sonoma cardiac* is known from a single specimen collected from Josephine Co., Oregon.

Comments. The specimen was collected during December from Douglas fir and cedar litter.

Aedeagal characters of *Sonoma cardiac* are similar to those of *S. virgo*. The left parameres of each are indistinguishable, but unique among known species of *Sonoma*. The two can be separated based on the following characters, *S. virgo* in brackets []: endophallus with large blunt lateral projection (1/4 length of endophallus) in basal 1/3 [small process approximately 1/10 length]; apex of endophallus blunt, no projections [apex of endophallus with two projections, one narrow and one wide]; right paramere without apical projections or setae [right paramere with ventral process with two apical projections, tuft of lateral apical setae present].

Etymology. The specific epithet is based on the resemblance of the aedeagus to a heart.

3. *Sonoma carltoni* new species

Fig. 3, 33; Map 4.

Description. Holotype, male. Measurements: head 0.22 long, 0.28 wide; pronotum 0.28 long, 0.32 wide; elytra 0.54 long, 0.26 wide; antennomeres 1–11 total 0.55; total length 1.86. Body brown, antennae, maxillary palpi, and legs paler. Body covered in short setae (less than 1/4 length of the eye).

Head. Eyes large, maximum length in dorsal view subequal to length of first antennal segment, with approximately 40 facets. Antennomere 2 approximately 0.75x width of 1; 3 smallest. Elongate setae at temples (greater than 1/2 length of eye).

Thorax. Elytra with 3 sutural foveae; 2 foveae lateral to sutural fovea; central row of 3–4 foveae in basal 1/3. Winged. Metatibia unmodified.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Basal lateral foveae on ventrites V–VI. Basal pubescence present on ventrites IV–VII.

Aedeagus. Blunt. Left paramere: subequal in size to phallobase; mesal margin straight; four large setae on postero-lateral corner, greater than 1/2 length of paramere; central ventral shelf bearing setal tuft; lateral ventral shelf with setal tuft. Endophallus: elongate; thick hook-like basal process on right; cup-like setae-bearing flange on left at mid-point; apical half elongate, parallel sided; tip consisting of apical and subapical knobs. Right paramere: subequal in size to phallobase; with single ventral digitate process extending beyond apex of paramere; 4–5 elongate setae on postero-lateral corner and row of 5 smaller setae arranged mesially.

Type Material. Holotype, male: *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (top part), 1189–1197 m, 44°30.417'N, 123°33.12'W, 17.ix.2012, old-growth *Abies procera* forest, FMHD#2012-030, berl., log & litter, A. Newton & M. Thayer; ANMT site 1245 (1♂). Deposited in FMNH.

Paratypes (n=3). **UNITED STATES: OREGON: Benton Co.:** *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (top part), 1189–1197 m, 44°30.417'N, 123°33.12'W, 17.ix.2012, old-growth *Abies procera* forest, FMHD#2012-030, berl., log & litter, A. Newton & M. Thayer; ANMT site 1245 (FMNH) (1♂) SLIDE. *OREGON:Benton Co., Mary's Peak July 5, 1983 p.l. (FMNH) (1♂). *ORE., Mary's Peak 8 mi.W.Philomath 4000',V.9.1968 Campbell&Smetana (DCPC) (1♂).

Geographical Distribution. *Sonoma carltoni* is only known from Mary's Peak, Benton Co., Oregon.

Comments. Specimens have been collected during May, July, and September from Berlesed log and leaf litter material taken in an old-growth *Abies procera* forest, and at elevations ranging from 1189–1219 m.

Aedeagal characters of *Sonoma carltoni* are similar to those of *S. russelli*. The two can be separated based on the following characters, *S. russelli* in brackets []: postero-lateral setae of left paramere greater

than 1/2 length of paramere [setae approximately 1/4 length of paramere]; central ventral shelf of left paramere not extending beyond apex of paramere [ventral process extending beyond paramere]; apical half of endophallus elongate, parallel sided, tip consisting of apical and subapical knobs [apical 2/3 of endophallus elongate, spine hooked near apex]; postero-lateral setae of right paramere approximately 1/2 length of paramere [setae approximately 1/4 length of paramere].

Etymology. *Sonoma carltoni* is named for Christopher Eugene Carlton, an entomological polymath who has contributed greatly to our understanding of the Pselaphinae.

4. *Sonoma cataloochee* new species

Fig. 4, 55; Map 6.

Description. Holotype, male. Measurements: head 0.26 long, 0.34 wide; pronotum 0.36 long, 0.42 wide; elytra 0.36 long, 0.28 wide; antennomeres 1–11 total 0.84; total length 1.82. Body brown, maxillary palps and legs paler. Body covered in elongate setae (greater than half the length of the eye).

Head. Eyes prominent, maximum length in dorsal view 0.83x length of first antennal segment, with approximately 20 facets. Antennomere 2 approximately 0.86x width of 1; 3 smallest.

Thorax. Elytra sutural foveae obscured, sutural stria distinct; central row of approximately 3 foveae in basal 1/2. Brachypterous. Metatibia unmodified.

Abdomen. Tergite one without transverse patch of microtrichia. Abdominal foveae and basal pubescence obscured.

Aedeagus. Compact; apex of endophallus extending beyond parameres. Left paramere: robust; cluster of 5 thick setae 2/3 from base; distal 1/3 evenly acuminate, apex blunt. Endophallus: lateral digitate process long, base greater than 2x as wide as narrowest point, ventrad from right paramere; sides divergent in apical 2/5; apex rounded, with dorsal recurved process on left overlapping blunt anteriorly directed process. Right paramere: widened at base, dorsal lateral setose process short, with 4 apical setae; lateral constriction at level of digitate process of endophallus narrow, less than medial width of left paramere; apex blunt, directed posteriorly.

Type Material. Holotype, male: *Cataloochee Divide, N.C. / June 10 1940 Quirsfeld (1♂). Deposited in CNC.

Geographical Distribution. *Sonoma cataloochee* is known from a single specimen collected at Cataloochee Divide in North Carolina, presumably in Haywood County. Cataloochee Divide is a ridge that creates the southeastern border of the Cataloochee valley. The northwestern slope of Cataloochee Divide is within the borders of Great Smoky Mountains National Park and *Sonoma cataloochee* is likely to be found within the park.

Comments. *Sonoma cataloochee* was collected in June.

Aedeagal characters of *Sonoma cataloochee* are similar to those of *S. nicholsae*. The two can be separated based on the following characters, *S. nicholsae* in brackets []: left paramere with lateral margin straight from basal 1/3 until level of lateral setae [paramere with lateral margin narrowing then widening below lateral setae]; endophallus with apex rounded, with two left lateral processes [endophallus flat with lateral lobe on right and recurved process on right]; right paramere with dorsal lateral setose process short (approximately 1/2 length of apical setae), midpoint narrower than midpoint of left paramere [dorsolateral process short (more than 1/2 length of setae), midpoint wider than midpoint of left paramere].

Etymology. *Sonoma cataloochee* is named for the Cherokee term “Gadalutsi”, which means “fringe standing erect” used to describe the tall trees on the ridges surrounding the valleys that define the region.

5. *Sonoma caterinoi* new species

Fig. 5, 54; Map 7.

Description. Holotype, male. Measurements: head 0.21 long, 0.33 wide; pronotum 0.34 long, 0.39 wide; elytra 0.43 long, 0.26 wide; antennomeres 1–11 total 0.65; total length 1.90. Body brown, maxillary palpi and legs paler. Body covered in elongate setae (greater than half the length of the eye).

Head. Eyes reduced, maximum length in dorsal view 0.79x length of first antennal segment, with approximately 12 facets. Antennomere 2 approximately 0.95x width of 1; 3 smallest.

Thorax. Elytra with indistinct sutural foveae; 1 fovea lateral to sutural fovea; central row of 3 foveae in basal 1/3. Apparently brachypterous. Metatibia unmodified.

Abdomen. Tergite IV without transverse patch of microtrichia. Basal lateral foveae obscured, weak if present. Basal pubescence present on all ventrites.

Aedeagus. Left paramere: oval; 2/3 length of endophallus; with tuft of lateral subapical setae approximately 1.5x longer than paramere; central ventral shelf with tuft of short setae. Endophallus: deflexed left in basal 1/4; approximately same width throughout; tip widened with apical and subapical processes directed anteriorly. Right paramere: widest at middle; ventral tuft of setae originating below midline, setae subequal in length to paramere; ventral shelf above midline against mesal border with tuft of short setae; three part digitate process at apex.

Type Material. Holotype, male: *CA: Riverside Co. 33.8093°N, 116.7761°W SBNF, UC James Reserve v.19-26.2005, M. Caterino unbaited pitfall / CA BEETLE PROJ CBP0029957 (1♂). Deposited in SBMNH.

Geographical Distribution. *Sonoma caterinoi* is known from a single specimen collected in Riverside Co., California.

Comments. The single specimen was collected in an unbaited pitfall trap during May. The reduced eyes, apparent brachyptery, and collection method indicate that the species may be associated with more subterranean habitats than its congeners.

Aedeagal characters of *Sonoma caterinoi* are similar to those of *S. dolabra*. The two can be separated based on the following characters, *S. dolabra* in brackets []: left paramere with subapical setae longer than paramere [subapical lateral setae equal to or less than length of paramere]; endophallus with apical processes projecting anteriorly [apical processes projecting posteriorly]; right paramere with ventral tuft of setae originating below midline, setae subequal in length to paramere [without ventral tuft of setae, all setae shorter than paramere].

Etymology. *Sonoma caterinoi* is named for Michael Stephen Caterino, collector of the type specimen and creator and first director of the California Beetle Project.

6. *Sonoma chandleri* new species

Fig. 6, 32; Map 9.

Description. Holotype, male. Measurements: head 0.19 long, 0.27 wide; pronotum 0.27 long, 0.31 wide; elytra 0.40 long, 0.22 wide; antennomeres 1–11 total 0.53; total length 1.98. Body brown; antennae, maxillary palpi, legs, and elytra paler. Body with short setae (1/2 or less width of eye).

Head. Eyes small, maximum length in dorsal view 0.86x length of first antennal segment, with approximately 18 facets. Antennomere 2 approximately 0.73x width of 1; 3 smallest.

Thorax. Elytra with indistinct sutural foveae; single fovea lateral to sutural fovea; central row of 3 foveae in basal 1/3. Wings present but reduced. Metatibia unmodified.

Abdomen. Tergite IV without microtrichia. Basal lateral foveae on ventrites IV–VI. Basal pubescence present on all visible ventrites.

Aedeagus. Left paramere: subtriangular; apex with 10+ elongate setae 2/3 length of paramere; ventral medial ridge with row of approximately 8 elongate setae 2/3 length of paramere. Endophallus: distinctly spatulata; longer than parameres; apical process directed to the right, perpendicular to ae-

deagus. Right paramere: with thin elongate apical process; distal 1/4 of inner and outer margin bearing elongate setae.

Type Material. Holotype, male: *USA: Calif., Glenn Co., 6mi NE Alder Springs, 20-XI-1979. / FMHD #79-3021, sift pine & oak litter, D. S. Chandler (1♂). Deposited in FMNH.

Paratypes (n=2). **UNITED STATES: CALIFORNIA: Glenn Co.:** *Calif.:Glenn Co., 5 mi NE Alder Springs,XI-20-79 DSChandler / sift black & live oak litter (DCPC) (2♂) 1 SLIDE.

Geographical Distribution. *Sonoma chandleri* is known from specimens collected at two locations in Glenn Co., California.

Comments. *Sonoma chandleri* was collected in November by sifting black and live oak and pine litter.

Aedeagal characters of *Sonoma chandleri* are similar to those of *S. vanna*. The two can be separated based on the following characters, *S. vanna* in brackets []: left paramere subtriangular [left paramere with large apical hook directed mesad]; endophallus symmetrical until apical process [endophallus asymmetrical beyond midpoint]; right paramere with apical process simple [apical process with 5–6 projections].

Etymology. *Sonoma chandleri* is named for Donald Stewart Chandler, collector of the type series and an important contributor to the study of world-wide Pselaphinae.

7. *Sonoma cobra* new species

Fig. 7, 52; Map 10.

Description. Holotype, male. Measurements: head 0.27 long, 0.36 wide; pronotum 0.41 long, 0.43 wide; elytra 0.40 long, 0.28 wide; antennomeres 1–11 total 0.67; total length 1.80. Body brown, distal portion of antennae, maxillary palpi, and legs paler. Body covered in short setae (less than 1/2 length of the eye).

Head. Eyes reduced, maximum length in dorsal view 0.75x length of first antennal segment, with approximately 9–10 facets. Antennomere 2 approximately 0.78x width of 1; 3 smallest.

Thorax. Elytra with indistinct sutural foveae; 2–3 foveae lateral to sutural fovea; single elongate central fovea in basal 1/3. Apparently brachypterous. Metatibia unmodified.

Abdomen. Tergite IV without microtrichia. Basal lateral foveae obscured, weak if present. Basal pubescence present on all visible ventrites.

Aedeagus. Left paramere: longer than endophallus; blade-like apical projection with 4 setae arranged palmately directed posteriorly to mesad. Endophallus: wide as base, narrowing to apex; s-shaped; apical 1/5 perpendicular to aedeagus; subapical wart with two stout setae. Right paramere: elongate apical hook-like process approximately 2/3 length of paramere, directed mesad with 4–5 setae at base.

Type Material. Holotype, male: *CALIF: Shasta Co. Buckhorn Summit IV.15.1981 T.R.Haig, Coll. / Berlesed from Oak duff (1♂). Deposited in CSAC.

Geographical Distribution. *Sonoma cobra* is known from a single specimen collected in Shasta Co., California.

Comments. The specimen was collected during April from Berlesed oak duff. The reduced eyes, apparent brachyptery, and collection method indicate that the species may be associated with more subterranean habitats than its congeners.

Aedeagal characters of *Sonoma cobra* are unique. Lack of elongate latero-apical setae on the parameres separate it from *S. spadica*, *S. repanda*, and *S. dolabra*. The s-shaped endophallus and hook-like apical process on the right paramere will separate *S. cobra* from all other known species.

Etymology. *Sonoma cobra* is named for its unique serpentine endophallus complete with “fang-like” setae. “Cobra” is derived from *cobra de capelo*, a Portuguese term, and today is commonly used to refer to snakes in the family Elapidae.

8. *Sonoma colberti* new species

Fig. 8, 18; Map 11.

Description. Holotype, male. Measurements: head 0.23 long, 0.27 wide; pronotum 0.27 long, 0.28 wide; elytra 0.51 long, 0.26 wide; antennomeres 1–11 total 0.62; total length 1.90. Body uniformly brown. Body setae covered in elongate (greater than half the length of the eye).

Head. Eyes prominent, maximum length in dorsal view 0.83x length of first antennal segment, with approximately 40 facets. Antennomere 2 approximately equal width of 1; 3 smallest.

Thorax. Elytra with 3 indistinct sutural foveae; 2 foveae lateral to sutural fovea; central row of 2–4 foveae in basal 1/3. Winged. Metatrochanter elongate; metatibia unmodified.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Basal lateral foveae on ventrites IV–VI. Basal pubescence present on ventrites III–VI.

Aedeagus. Elongate. Left paramere: subequal in length to endophallus; subequal in width in basal 4/5; apical 1/5 widened, paddle shaped with 7–10 stout setae directed mesad. Endophallus: widest at basal 1/3; stout subapical projection 3/5 from base on right lateral margin; left apical process with wide posteriorly directed triangular projection, tip bent anteriorly; median apical process thin, elongate, shaped like a shepherd’s hook; right apical process a stout pointed projection; Right paramere: 2/3 length left paramere; subequal in width in basal 3/4; apical 1/4 widened, paddle shaped, with 7–10 stout setae directed mesad.

Type Material. Holotype, male: T.R.Haig Whiskeytown Shasta Co. Cal. III.9.1973 (1♂). Deposited in CSAC.

Paratypes (n=5). **UNITED STATES: CALIFORNIA: Shasta Co.:** T.R.Haig Whiskeytown Shasta Co. Cal. III.9.1973 (CSCA 4♂, one aedeagus only, one SLIDE). *T.R.Haig Whiskeytown Shasta Co. Cal. 1-31-1973 (FMNH) (1♂).

Geographical Distribution. *Sonoma colberti* is only known from one location in Shasta County, California.

Comments. *Sonoma colberti* was collected during January and March.

Aedeagal characters of *S. colberti* are superficially similar to *S. wintuorum*, *S. twaini*, and *S. stewarti* all of which share a similar gestalt comprised of narrow, elongate parameres and an elongate endophallus with elaborate apical hooks or processes. The following combination of characters will separate *S. colberti* from the others: endophallus with three projections [*S. twaini* and *S. stewarti* with one, *S. wintuorum* with two]; subapical lateral projection of endophallus directed posteriorly and short, approximately 1/10 length of endophallus [*S. stewarti* with projection 1/5 length of endophallus, *S. wintuorum* with projection greater than 1/3 length of endophallus, *S. twaini* with two projections perpendicular to endophallus].

Etymology. *Sonoma colberti* is named for Stephen Colbert (silent “t”) a character created by Stephen Tyrone Colbert (sounded “t”), an author, philosopher, humanitarian, champion of science, and humorist.

9. *Sonoma maryae* new species

Fig. 9, 37; Map 23.

Description. Holotype, male. Measurements: head 0.28 long, 0.39 wide; pronotum 0.37 long, 0.43 wide; elytra 0.72 long, 0.39 wide; antennomeres 1–11 total 0.87; total length 1.96. Body brown; antennae, maxillary palpi, and legs paler. Body with short setae (1/4 or less width of eye).

Head. Eyes large, maximum length in dorsal view 1.66x length of first antennal segment, with approximately 70 facets. Antennomere 2 approximately 0.78x width of 1; 3 smallest.

Thorax. Pronotum with lateral discal foveae. Elytra with indistinct sutural foveae; 1 fovea lateral to sutural fovea; central row of 3 foveae in basal 1/3. Winged. Metatibia unmodified.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Basal lateral foveae on ventrites obscured, weak if present. Basal pubescence present on all visible ventrites.

Aedeagus. Left paramere: elongate oval; ventral shelf running along 9/10 mesal margin; subapical digitate process with 5 projections directed mesad; apical tuft of 7–10 setae subequal in length to paramere; 5 additional setae along inner margin in apical 1/3, directed mesad. Endophallus: more or less same width throughout; curved; base projecting behind right paramere, abruptly curving to the left until achieving midline of aedeagus, straightening and projecting posteriorly until apical 1/5 curves right. Right paramere: oval with ventral shelf running from apex to inner margin near base; single subapical digitate ventral process with multiple convoluted projections; apical tuft of 12–15 setae subequal in length to paramere.

Type Material. Holotype, male: *Oregon:Bent. [Benton] Co., Mary's Peak, 1800' II-1-1976 / LRussell sift cedar litter (1♂). Deposited in FMNH.

Geographical Distribution. *Sonoma maryae* is known from a single specimen collected from Marys Peak, Benton Co., California.

Comments. *Sonoma maryae* was collected in February by sifting cedar litter.

Aedeagal characters of *Sonoma maryae* are similar to those of *S. cavifrons* and *S. parviceps*. The three can be separated based on the following characters, *S. cavifrons* in brackets [], *S. parviceps* in braces { }; left paramere with small basal lobe on inner margin that does not project across midline of phalobase [basal lobe larger, projecting slightly beyond midline of phalobase], {basal lobe pronounced, symmetrical with midline of phalobase}; left paramere with digitate process with 5 projections directed mesad [digitate process with three projections], {digitate process with two distinct projections}; endophallus with three distinct curves—at base, below the midline, and subapically [with major curve at base, otherwise projected posteriorly, slight curve at apex], {with major curve at base, apex with distinct “apical hook”, inner structures distinct}; right paramere with single subapical digitate ventral process with multiple convoluted projections [subapical digitate ventral projection with single tip], {ventral projection in two parts, distal part consisting of three short processes, basal part elongate projection shaped like a crooked finger}.

Etymology. *Sonoma maryae* is named for Mary Elizabeth (Mary E.) Ferro Chapa, the author's sister and a longtime supporter of his research endeavors, who shares the name of the locality.

10. *Sonoma quellazaire* new species

Fig. 10, 25; Map 28.

Description. Holotype, male. Measurements: head 0.20 long, 0.28 wide; pronotum 0.28 long, 0.32 wide; elytra 0.50 long, 0.25 wide; antennomeres 1–11 total 0.58; total length 1.90. Body brown, maxillary palpi, antennae, and legs paler. Body with moderate length setae (approximately 1/2 or less width of eye).

Head. Eyes prominent, maximum length in dorsal view 0.87x length of first antennal segment, with approximately 30 facets. Antennomere 2 approximately 0.73x width of 1; 3 smallest.

Thorax. Pronotum with weak lateral discal foveae. Elytra with indistinct sutural foveae; 2 foveae lateral to sutural fovea; central row of 4 foveae in basal 1/3. Winged. Metatrochanter rounded; metatibia with small tubercle on inner margin near middle.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Basal lateral foveae on ventrites VI–V, weak on VII. Basal pubescence present on all visible ventrites.

Aedeagus. Left paramere: oval; subequal in width from base to apex; two large papillate processes and 4 short, thick setae clustered at apex. Endophallus: deflexed to right; apical 1/2 with 4 overlapping

layers, third layer with thin, elongate double pronged posteriorly-directed process; ventral-most layer with thin triangular flange. Right paramere: teardrop-shaped; 3 short, thick setae at apex.

Type Material. Holotype, male: *USA: OR: Lane Co., Siuslaw N.F., Cummins Ck. Tr., 90-210m, 44°16.12'N, 124°05.89'W, 8.xi.2011, old-growth *Picea sitchensis* forest; FMHD#2011-002, berl., leaf & log litter, M. Thayer & A. Newton; ANMT site 1235 (1♂). Deposited in FMNH.

Paratype (n=1). **UNITED STATES: OREGON: Benton Co.:** *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W part), 1050-1070 m, 44°30.52'N, 123°33.56'W, 17.ix.2012, old growth *Abies procera* forest; FMHD#2012-033, berl., log & litter, A. Newton; ANMT site 1204 (FMNH) (1♂) SLIDE.

Geographical Distribution. *Sonoma quellazaire* is known from Benton and Lane counties, Oregon, but both locations are within the Siuslaw National Forest.

Comments. Specimens have been collected during September and November from Berlesed log and leaf litter material taken in old-growth *Abies procera* and *Picea sitchensis* forests at elevations ranging from 90–1070 m.

Aedeagal characters of *S. quellazaire* are similar to those of *S. petersi*. The left parameres of each are indistinguishable, but unique among known species of *Sonoma*. The two can be separated based on the following characters, *S. petersi* in brackets []: endophallus with four distinct horizons, right lateral apical corner acute, elongate posteriorly-directed process double pronged [endophallus with two horizons, right lateral apical corner rounded, posteriorly directed process with single tip]; right paramere teardrop shaped [right paramere round].

Etymology. The apical process of the endophallus is reminiscent of a cigarette holder with its cigarette, an image typified by Audrey Hepburn in the movie *Breakfast at Tiffany's*. “Quellazaire” is a neologism for “cigarette holder”.

11. *Sonoma rossellinae* new species

Fig. 11, 29; Map 31.

Description. Holotype, male. Measurements: head 0.21 long, 0.23 wide; pronotum 0.23 long, 0.27 wide; elytra 0.47 long, 0.23 wide; antennomeres 1–11 total 0.49; total length 1.68. Body dark brown, antennae, maxillary palpi, legs, and elytra paler. Body covered in elongate setae (greater than half the length of the eye).

Head. Eyes prominent, maximum length in dorsal view 1.11x length of first antennal segment, with approximately 30 facets. Antennomere 2 approximately 0.84x width of 1; 3 smallest.

Thorax. Elytra with row of 3 sutural foveae in basal 1/4, evenly spaced; single fovea lateral to sutural fovea; central row of 3 fovea in basal 1/4. Winged. Metatrochanter quadrate; metatibia with process on inner margin approximately halfway from base.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Distinct basal lateral foveae on ventrites IV–VII. Basal pubescence present on ventrites IV–VI, lacking on VII.

Aedeagus. Left paramere: apical digitate process <2x longer than wide, process with three apical setae directed posteriorly and three subapical setae curved toward midline; subapical inner flange widest at base, cuticle becoming thinner laterally. Endophallus: widening to apex; blunt apical process on right corner; elongate apical process extending perpendicular to endophallus directed toward left paramere. Right paramere: elongate apical process and triangular subapical process with six setae, three posteriorly directed and three curved toward midline.

Type Material. Holotype, male: *CA: Los Angeles Co. 34.0871°N, 118.8541°W Santa Monica Mts NRA Zuma Canyon, iv.29.2009 K.J. Hopp, *Quercus* litter / CA BEETLE PROJ CBP0091880 (1♂). Deposited in SBMNH.

Paratypes (n=5). **UNITED STATES: UNITED STATES: CALIFORNIA: Los Angeles Co.:** *CA: Los Angeles Co. 34.0871°N, 118.8541°W Santa Monica Mts NRA Zuma Canyon, iv.29.2009 K.J. Hopp, *Quercus* litter / CA BEETLE PROJ CBP0091877 (SBMNH) (1♂). *Same data / CA BEETLE PROJ CBP0091878 (SBMNH) (1♂). *Same data / CA BEETLE PROJ CBP0091881 (SBMNH) (1♂) SLIDE. *Same data / CA BEETLE PROJ CBP0091882 (SBMNH) (1♂). *CA: Los Angeles Co. 34.0809°N, 118.7958°W Santa Monica Mts NRA Castro Crest, iv.29.2009 K.J. Hopp, *Umbellularia* litter / CA BEETLE PROJ CBP0091917 (SBMNH) (1♂).

Geographical Distribution. *Sonoma rossellinae* is only known from Los Angeles County, California, where it was collected at two locations within the Santa Monica Mountains National Recreation Area.

Comments. Specimens were collected during April from *Quercus* and *Umbellularia* litter.

Aedeagal characters of *Sonoma rossellinae* are similar to those of *S. isabellae*. The two can be separated based on the following characters, *S. isabellae* in brackets []: left paramere with elongate apical process greater than 2x longer than wide [left paramere with apical process shorter, ca. as wide as long]; subapical inner flange of left paramere widest at base, cuticle becoming thinner laterally [subapical inner flange of left paramere wider than base at approximately midlength, with thickened cuticle along lateral edge]; endophallus with blunt apical process on right corner [endophallus without apical process on right corner]; right paramere with triangular lateral subapical process directed laterally [right paramere with small subapical process at base of apical process directed medially]. *Sonoma rossellinae* possess metatibia with a process on inner margin, *S. isabellae* lack a metatibial process.

Etymology. *Sonoma rossellinae* is named after Isabella Fiorella Elettra Giovanna Rossellini, an Italian actress and film maker who wrote and starred in *Green Porno*, a series of short films on animal sexual behavior.

12. *Sonoma stewarti* new species

Fig. 12, 15; Map 36.

Description. Holotype, male. Measurements: head 0.29 long, 0.46 wide; pronotum 0.41 long, 0.47 wide; elytra 0.82 long, 0.42 wide; antennomeres 1–11 total 0.88; total length 2.30. Body brown, maxillary palps paler. Body covered in elongate setae (greater than half the length of the eye).

Head. Eyes large, maximum length in dorsal view 0.74x length of first antennal segment, with approximately 70 facets. Antennomere 2 approximately 0.82x width of 1; 3 smallest.

Thorax. Elytra with indistinct sutural foveae; 2 foveae lateral to sutural fovea; central row of 3 foveae in basal 1/3. Winged. Metatibia unmodified.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Basal lateral foveae on ventrites obscured, weak if present. Basal pubescence present on all visible ventrites.

Aedeagus. Elongate. Left paramere: equal in length to endophallus; subequal in width from base to apex; with 3–4 stout apical setae and 3 ventral subapical setae. Endophallus: widest at basal 1/5; thin elongate processes arising 2/3 from base on right projecting posteriorly; apex bulbous with s-shaped apical process. Right paramere: 2/3 length left paramere; subequal in width from base to apex; with 2–3 stout apical setae and 3 ventral subapical setae.

Type Material. Holotype, male: *CALIF:Butte Co., 4.4 mi SW Rackerby II-6-80 to II-4-81 A.R. Hardy coll. Antifreeze Pit Trap / CDAE (1♂). Deposited in CSEA.

Geographical Distribution. *Sonoma stewarti* is known from a single specimen collected from Butte Co., California.

Comments. *Sonoma stewarti* was collected in a pitfall trap that was active for an entire year, so no meaningful collection date is available.

Aedeagal characters of *S. stewarti* are superficially similar to *S. wintuorum*, *S. twaini*, and *S. colberti* all of which share a similar gestalt comprised of narrow, elongate parameres and an elongate endophallus with elaborate apical hooks or processes. The flowing combination of characters will separate *S. stewarti* from the others: endophallus with single apical projection [*S. wintuorum* with two, *S. colberti* with three]; endophallus with elongate thin posteriorly directed process arising 2/3 from base not projecting beyond tip of endophallus [with process projecting beyond tip of endophallus in *S. wintuorum*; without process in *S. twaini*, and *S. colberti*].

Etymology. *Sonoma stewarti* is named for Jon Stewart (born Jonathan Stuart Leibowitz), a humanitarian, champion of science, and humorist best known for reintroducing skepticism and intelligence to news reporting through a television program called *The Daily Show*.

13. *Sonoma twaini* new species

Fig. 13, 17; Map 39.

Description. Holotype, male. Measurements: head 0.25 long, 0.31 wide; pronotum 0.30 long, 0.34 wide; elytra 0.59 long, 0.28 wide; antennomeres 1–11 total 0.57; total length 1.92. Body brown, maxillary palpi and legs paler. Body with moderate length setae (approximately 1/2 or less width of eye).

Head. Eyes prominent, maximum length in dorsal view 0.47x length of first antennal segment, with approximately 30 facets. Antennomere 2 approximately 0.90x width of 1; 3 smallest.

Thorax. Elytra with indistinct sutural foveae; 2 foveae lateral to sutural fovea; central row of 3 foveae in basal 1/3. Winged. Metatibia unmodified.

Abdomen. Tergite IV with transverse patch of microtrichia narrowly interrupted at midline. Basal lateral foveae on ventrites V–VII. Basal pubescence present on all visible ventrites.

Aedeagus. Elongate. Left paramere: equal in length to endophallus; subequal in width from base to apex; with 4–5 stout apical setae and 3 ventral subapical setae. Endophallus: widest at basal 1/5; with two ventral processes arising 2/3 from base projecting perpendicular to aedeagus; apex bent 90° to the left. Right paramere: 2/3 length left paramere; subequal in width from base to apex; with 4–5 stout apical setae and 3 ventral subapical setae.

Type Material. Holotype, male: *T.R.Haig Whiskeytown Shasta Co.Cal. III.9.1973 (1♂). Deposited in CSCA.

Paratypes (n=4). **UNITED STATES: CALIFORNIA: Shasta Co.:** *T.R.Haig Whiskeytown Shasta Co.Cal. III.9.1973 (CSCA) (2♂). *T.R.Haig Whiskeytown Shasta Co.Cal. I.31.1973 (CSCA) (1♂). **Trinity Co.:** *CALIF:Trinity Co. Junction City III-12-1981 T.R.Haig coll. (FMNH) (1♂).

Geographical Distribution. *Sonoma twaini* is only known from two locations, one each in Shasta and Trinity counties, California.

Comments. *Sonoma twaini* was collected in January and March, collection method is unknown.

Aedeagal characters of *S. twaini* are superficially similar to *S. wintuorum*, *S. stewarti*, and *S. colberti* all of which share a similar gestalt comprised of narrow, elongate parameres and an elongate endophallus with elaborate apical hooks or processes. The flowing combination of characters will separate *S. twaini* from the others: endophallus with two ventral processes arising 2/3 from base projecting perpendicular to aedeagus [absent in *S. wintuorum*, *S. stewarti*, and *S. colberti*]; without elongate thin posteriorly directed process arising 2/3 from base of endophallus [present in *S. wintuorum* and *S. stewarti*]; endophallus with single apical process [two in *S. wintuorum*, three in *S. colberti*].

Etymology. *Sonoma twaini* is named for the character Mark Twain, developed by Samuel Langhorne Clemens, an author, lecturer, philosopher, humanitarian, champion of science, and humorist. Clemens lived in California for awhile, but traveled nowhere near where this species occurs—the author forgives the oversight.

14. *Sonoma virgo* new species

Fig. 14, 39; Map 41.

Description. Holotype, male. Measurements: head 0.25 long, 0.29 wide; pronotum 0.30 long, 0.34 wide; elytra 0.49 long, 0.25 wide; antennomeres 1–11 total 0.65; total length 2.12. Body brown; maxillary palpi, antennae, and legs paler. Body with moderate length setae (approximately 1/2 or less width of eye). Elongate setae at temples (greater than 1/2 length of eye).

Head. Eyes prominent, maximum length in dorsal view subequal to length of first antennal segment, with approximately 30 facets. Antennomere 2 approximately 0.75x width of 1; 3 smallest.

Thorax. Elytra with 3 indistinct sutural foveae; 2 foveae lateral to sutural fovea; central row of 4 foveae in basal 1/3. Brachypterous. Metatibia unmodified.

Abdomen. Tergite IV without transverse patch of microtrichia. Basal lateral foveae on ventrites IV–V, weak on VII. Basal pubescence present on all visible ventrites.

Aedeagus. Compact. Left paramere: wide at base, abruptly narrowing in apical 1/3; apical process with dorsal lobe extending medially but not meeting medial dorsal edge, resulting in a distinct furrow; 5 setae along inner margin of apical process extended medially; one seta on outer margin of apical process extending posteriorly. Endophallus: deflexed to the right; small blunt lateral projection (1/10 length of endophallus) in basal 1/3; nearly transparent lateral process at midpoint extending to the right with multiple short projections on tip; two apical processes subequal in length, one on left wide, one on right narrow. Right paramere: oval; 1/2 length of left paramere; with large ventral process extending beyond endophallus with 2–3 apical processes; apical tuft of 5–7 setae directed posteriorly.

Type Material. Holotype, male: *USA: OR: Lane Co., Siuslaw N.F., Cummins Ck. Tr., 90-210m, 44°16.12'N, 124°05.89'W, 8.xi.2011, old-growth *Picea sitchensis* forest; FMHD#2011-002, berl., leaf & log litter, M. Thayer & A. Newton; ANMT site 1235 FIELD MUSEUM NAT. HIST. / [second label with same information folded beneath] (1♂). Deposited in FMNH.

Paratype (n=2). **UNITED STATES: CALIFORNIA: Humboldt Co.:** *Fieldbrook 28.5.03 [1903] Cal / HSBarber Collector (USNM) (1♂). **OREGON: Lane Co.:** USA: OR: Lane Co., Siuslaw N.F., Cummins Ck. Tr., 90-210m, 44°16.12'N, 124°05.89'W, 8.xi.2011, old-growth *Picea sitchensis* forest; FMHD#2011-002, berl., leaf & log litter, M. Thayer & A. Newton; ANMT site 1235 FIELD MUSEUM NAT. HIST. (FMNH) (1♂) SLIDE.

Geographical Distribution. *Sonoma virgo* is known from two locations—Lane Co., Oregon and Humboldt Co., California—separated by approximately 400 km.

Comments. Two specimens were collected during November from Berlesed leaf and log litter taken from an old-growth *Picea sitchensis* forest in Oregon, and one specimen was collected during May in California. The California location, Fieldbrook, was the site of lumber companies around the time the specimen was collected in 1903, and is located near remaining redwood forests that include *Picea sitchensis*. Therefore, *S. virgo* may be associated with old-growth forests.

Aedeagal characters of *S. virgo* are similar to those of *S. cardiac*. The left parameres of each are indistinguishable, but unique among known species of *Sonoma*. The two can be separated based on the following characters, *S. cardiac* in brackets []: basal third of endophallus with small process approximately 1/10 length of endophallus [large blunt lateral projection approximately 1/4 length of endophallus]; apex of endophallus with two projections, one narrow and one wide [apex of endophallus blunt, no projections]; right paramere with ventral process with two apical projections, tuft of lateral apical setae present [right paramere without apical projections or setae].

Etymology. The specific epithet refers to old-growth or “virgin” forests from which specimens have been collected.

Discussion

Despite more than a century and a half of work—beginning with LeConte (1849)—the genus *Sonoma* is still poorly known. Of the 14 species newly described, nearly half (6) are known from only a single specimen. *Sonoma*, like most other invertebrate taxa, offers a standard but exciting heap of mysteries for the future student of the group.

Females. While a few female descriptions exist and some females can be accurately distinguished based on unambiguous morphology (Chandler 2003), most females are virtually unidentifiable within the genus.

Phylogeny. The key, prior to couplet 39, represents a rough-sort of “natural” groups based on aedeagal morphology. For example, the lateral digitate process of the endophallus that is ventrad from the right paramere represents an autapomorphy possessed by all eastern, but no western, species. A future, thorough phylogenetic analysis should include genetic characters, but those are currently unavailable for the majority of species.

Life History. Other than collection date, method, and gross habitat descriptions, nothing is known about the life history of the genus: immature, life span, prey, behavior (hunting, feeding, mating, nesting, etc.), etc. Variations in eye size and possession or loss of wings indicate some variability of life histories among species. Predatory feeding habits are inferred based on the morphology of the mouthparts and documented feeding habits of other pselaphines, see the review in Ferro and Carlton (2010).

Ecology. Despite similar morphology, habitat use, and presumably prey, numerous species of *Sonoma* are apparently able to coexist at a single location. Currently nine species are known from Great Smoky Mountains National Park (Tennessee and North Carolina, USA). The park’s fractured landscape of rivers, mountains, and valleys offers the opportunity to test geographic barriers as the reason for coexistence. However, 11 species have been collected from Mary’s Peak, Benton Co., Oregon (*S. carltoni*, *S. cascadia*, *S. conifera*, *S. hespera*, *S. margemina*, *S. maryae*, *S. olycalida*, *S. parviceps*, *S. priocera*, *S. quellazaire*, *S. russelli*) where geographic barriers are seemingly less important. Researchers interested in species competition and niche differentiation may find an interesting opportunity in the *Sonoma* of Mary’s Peak. After all, MacArthur (1958) based his ground-breaking niche partitioning work on only five species.

Field Trips. With the completion of this research the majority (but not quite all) of specimens of *Sonoma* within museums have been reviewed. Go collect some more!

Acknowledgments

The author thanks collection managers and curators that contributed specimens to this research. Special thanks go to Donald Chandler for loan of specimens of many of the species described herein. Christopher Carlton and Donald Chandler reviewed this manuscript and made many fine contributions. Partial funding for this research was made possible by donations from backers to the project “Lucid Key to Staphylinidae Subfamilies” posted at Experiment.com (DOI: 10.18258/0674).

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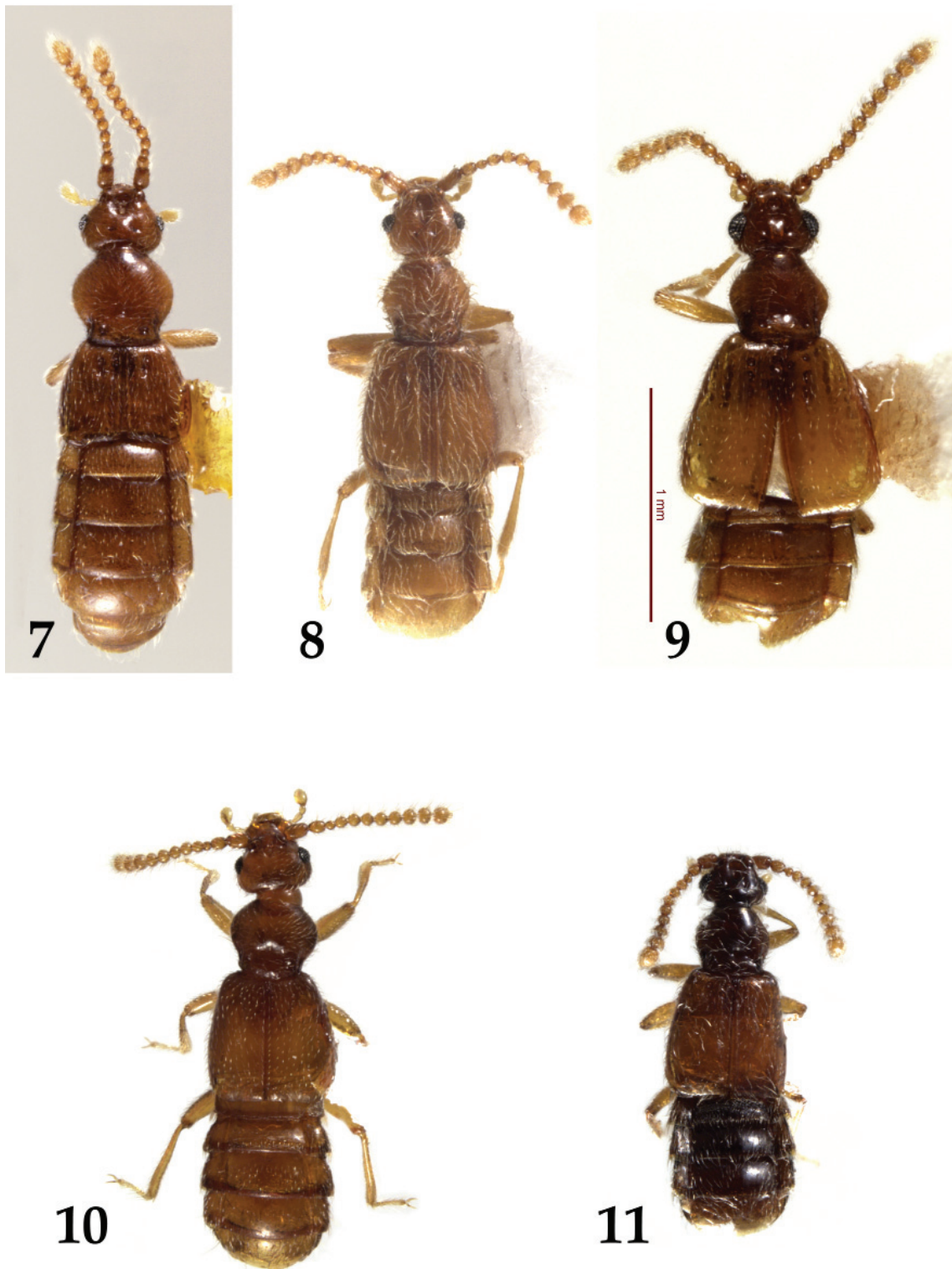
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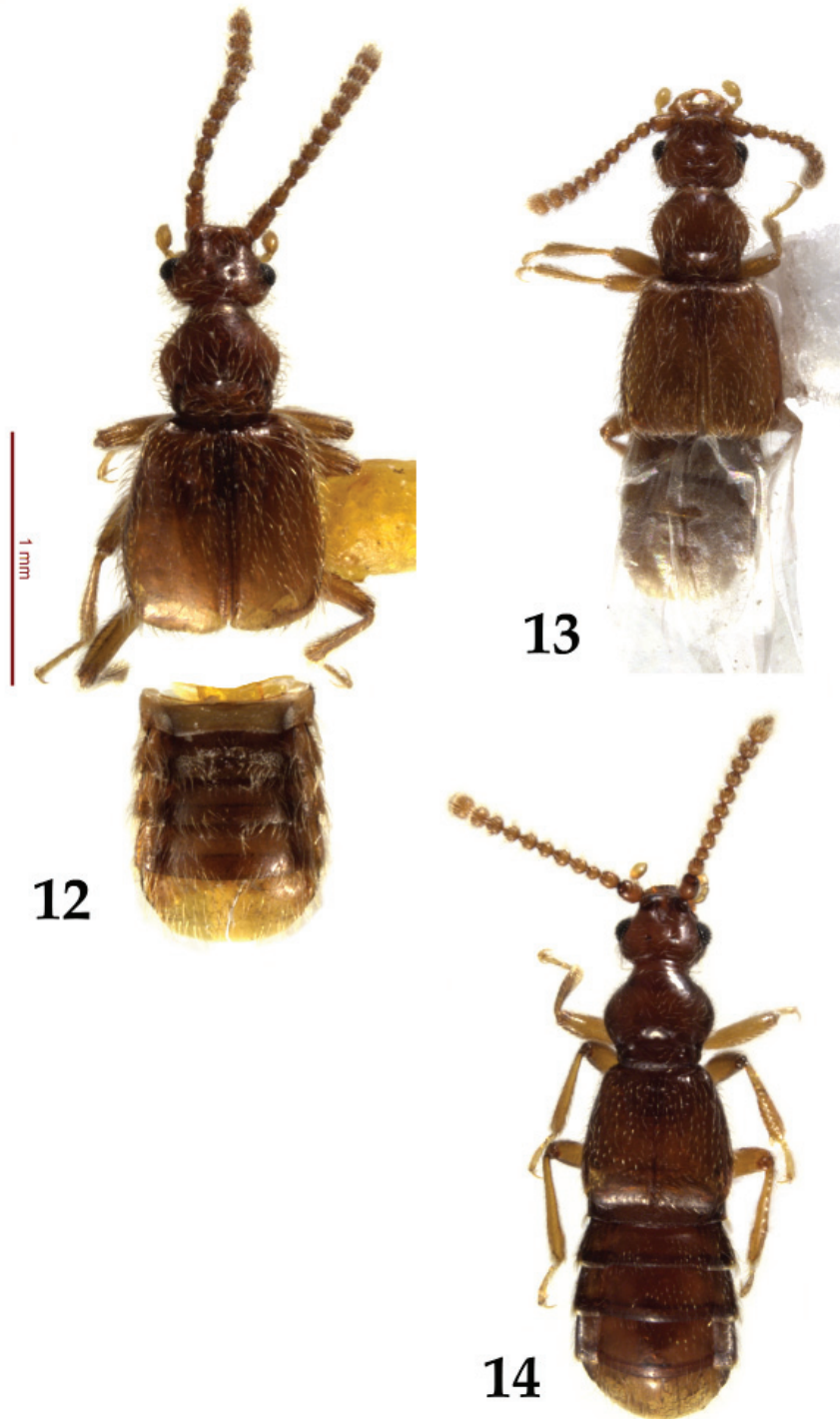
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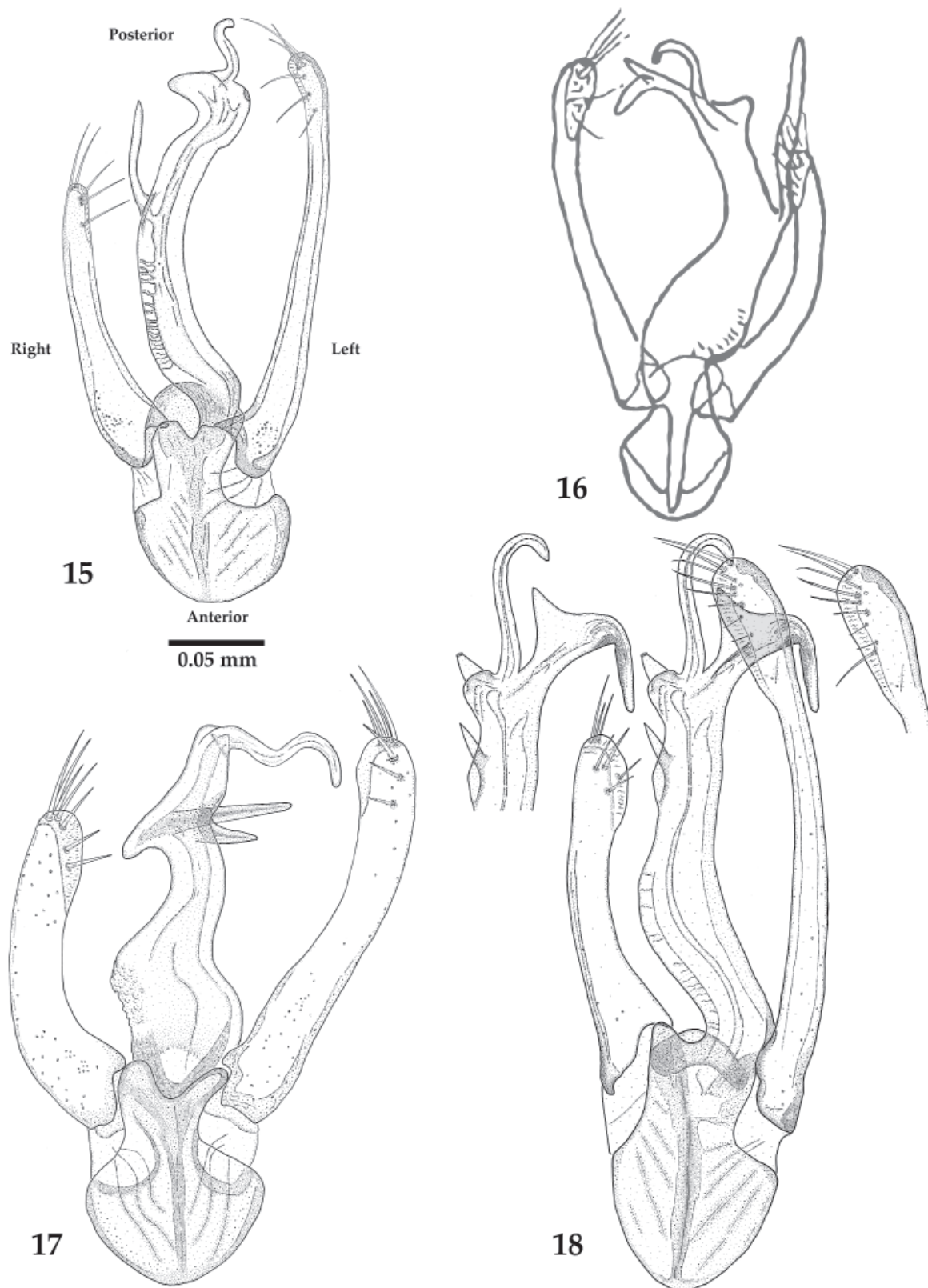
Figures 1–6. *Sonoma* spp. holotype habiti. 1) *S. agitator*. 2) *S. cardiac*. 3) *S. carltoni*. 4) *S. cataloochee*. 5) *S. caterinoi*. 6) *S. chandleri*.



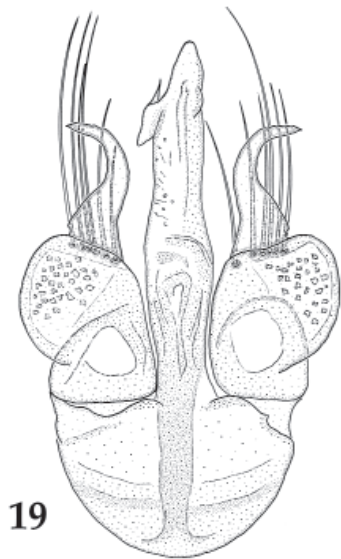
Figures 7–11. *Sonoma* spp. holotype habiti. 7) *S. cobra*. 8) *S. colberti*. 9) *S. maryae*. 10) *S. quellazaire*. 11) *S. rossellinae*.



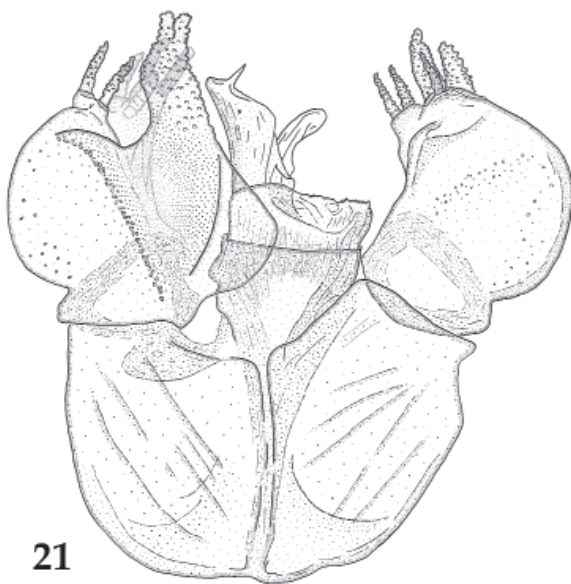
Figures 12–14. *Sonoma* spp. holotype habiti. 12) *S. stewarti*. 13) *S. twaini*. 14) *S. virgo*.



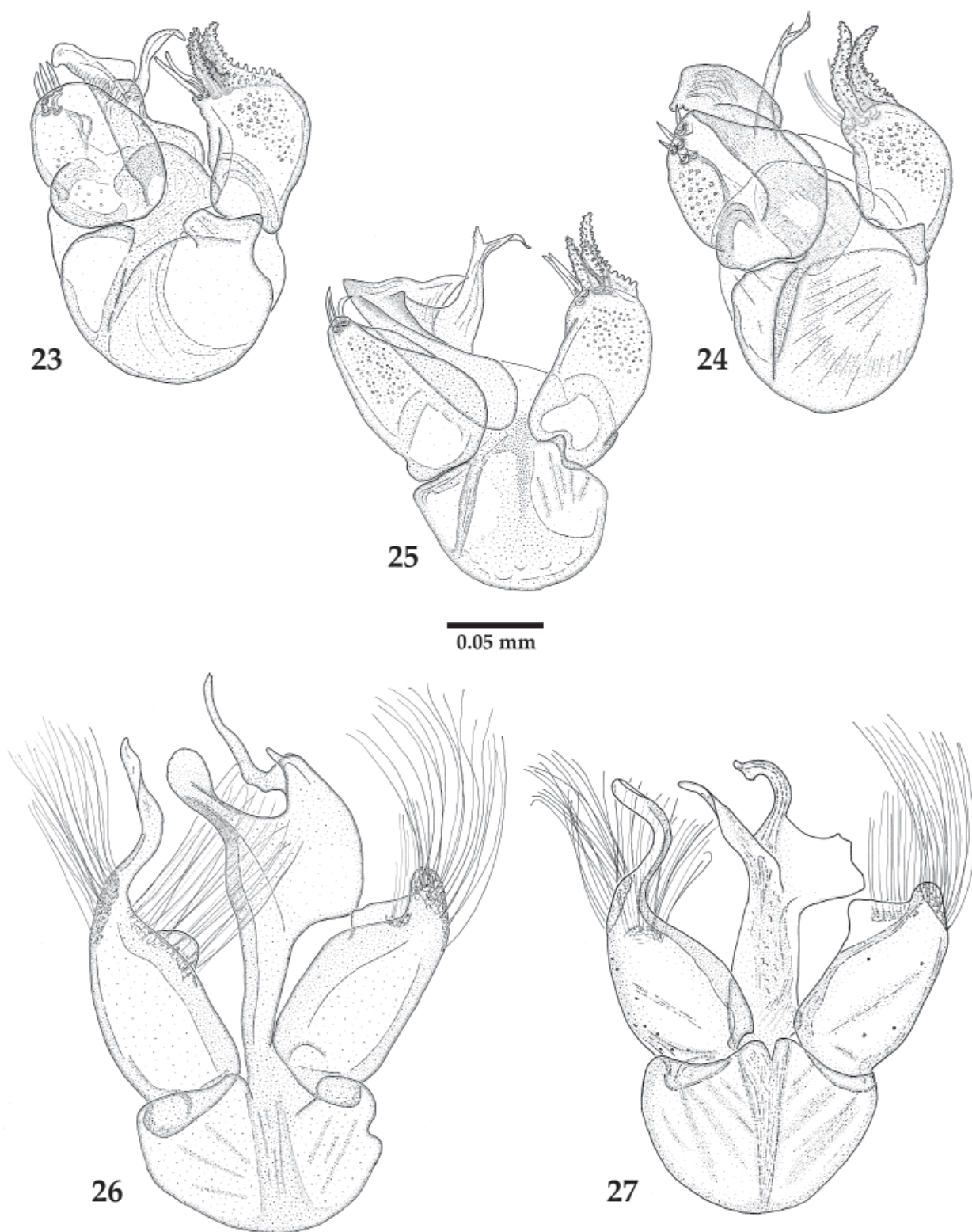
Figures 15–18. Aedeagi of *Sonoma* spp. 15) *S. stewarti* new species. 16) *S. wintuorum* Chandler. Modified from Chandler (2003). 17) *S. twaini* new species. 18) *S. colberti* new species. Right side of figures is anatomical left.



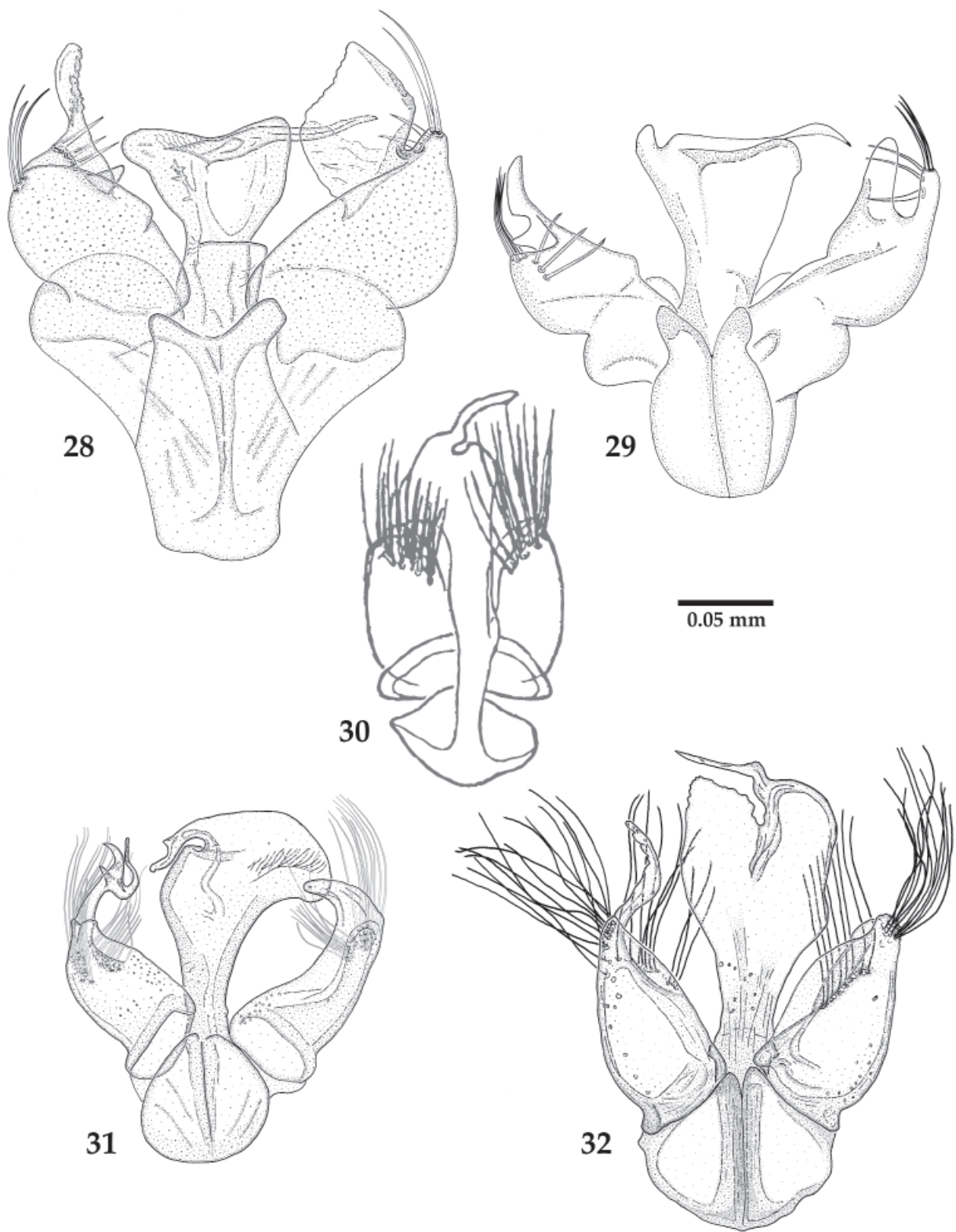
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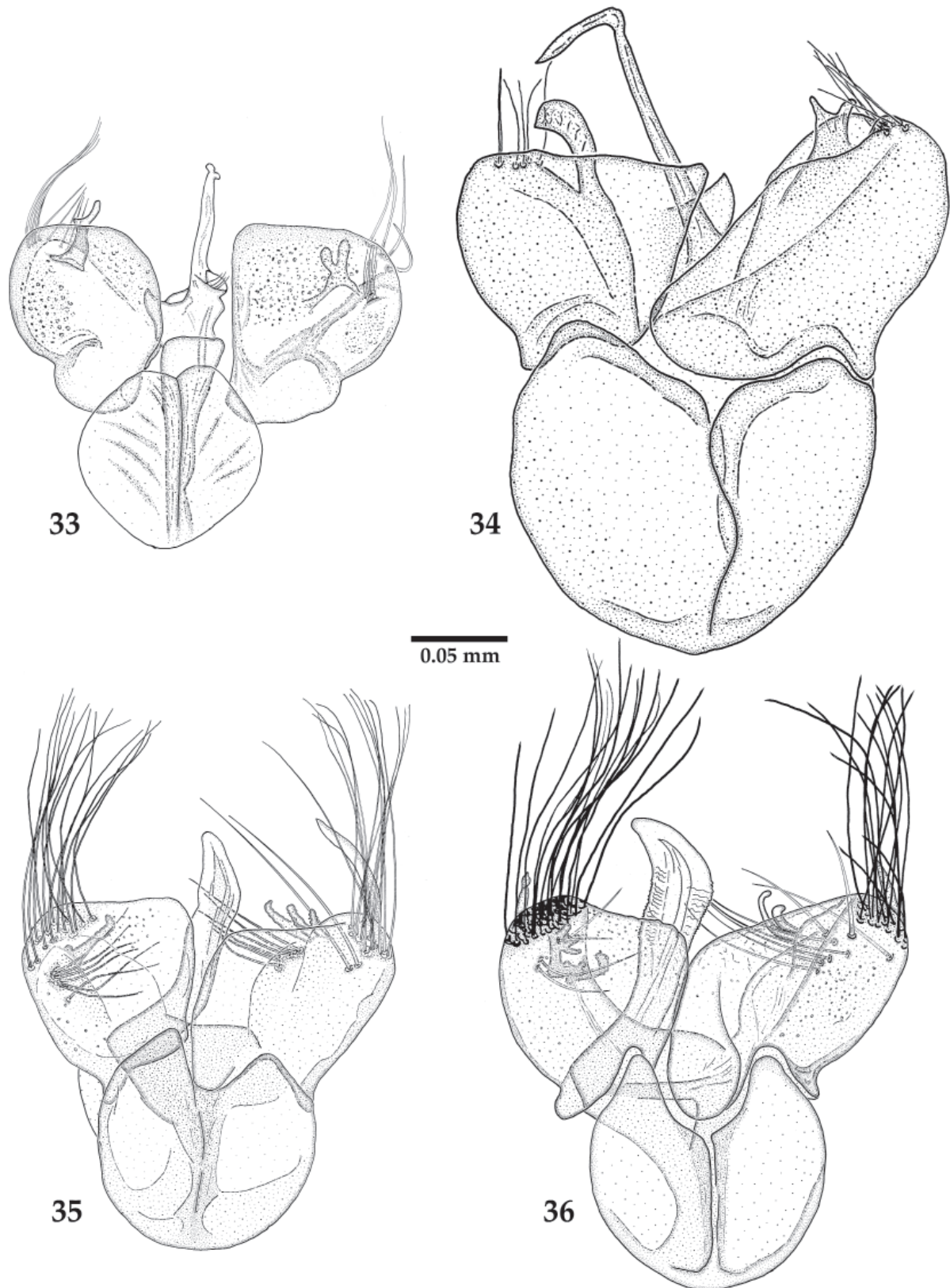
Figures 19–22. Aedeagi of *Sonoma* spp. **19)** *S. squamishorum* Chandler and Klimaszewski. **20)** *S. grandiceps* Casey. Modified from Marsh and Schuster (1962). **21)** *S. margemina* Park and Wagner. **22)** *S. cascadia* Chandler. Right side of figures is anatomical left.



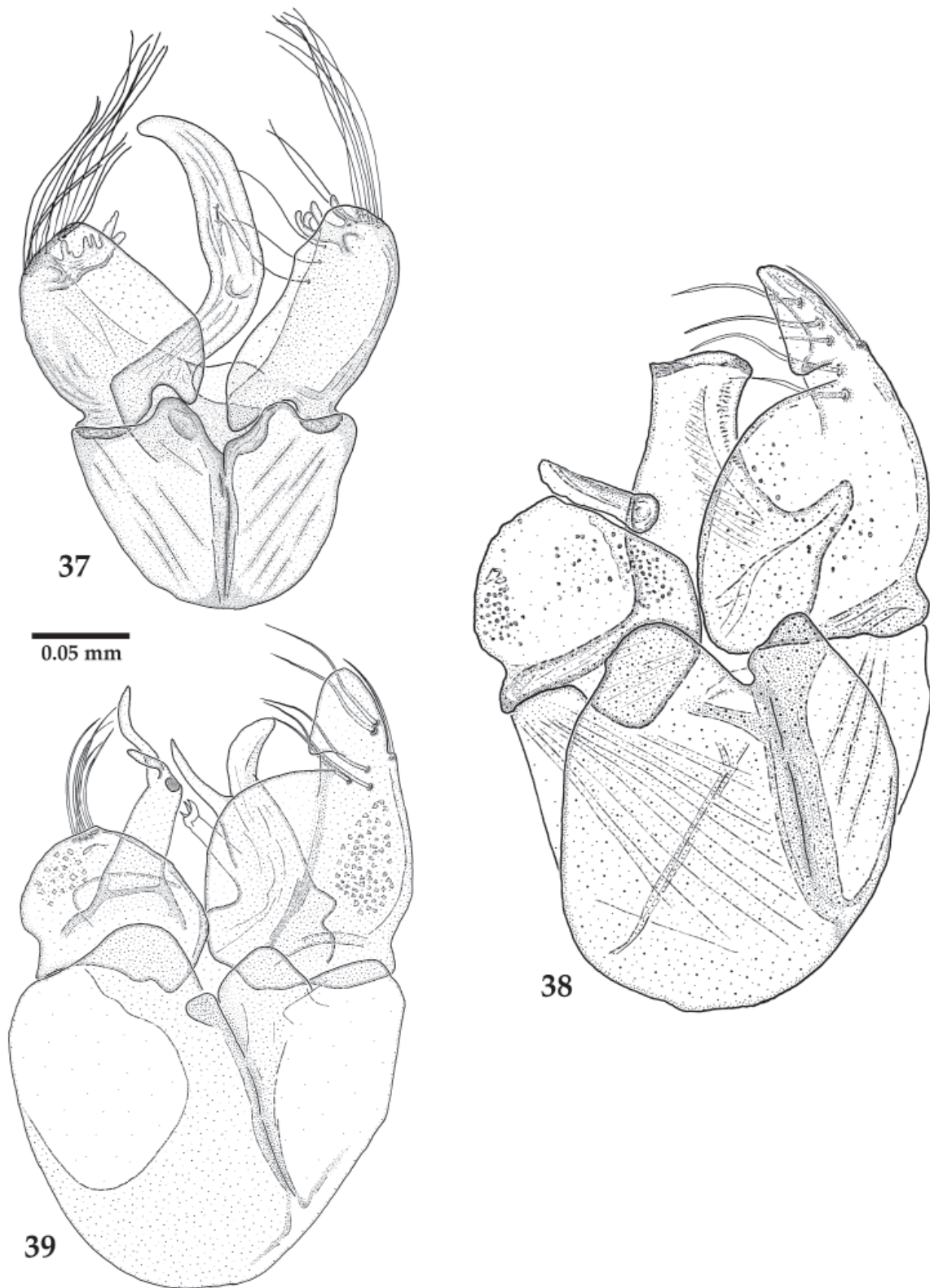
Figures 23–27. Aedeagi of *Sonoma* spp. **23)** *S. petersi* Chandler. **24)** *S. corticina* Casey. **25)** *S. quellazaire* new species. **26)** *S. spadica* Marsh and Schuster. **27)** *S. dolabra* Marsh and Schuster. Right side of figures is anatomical left.



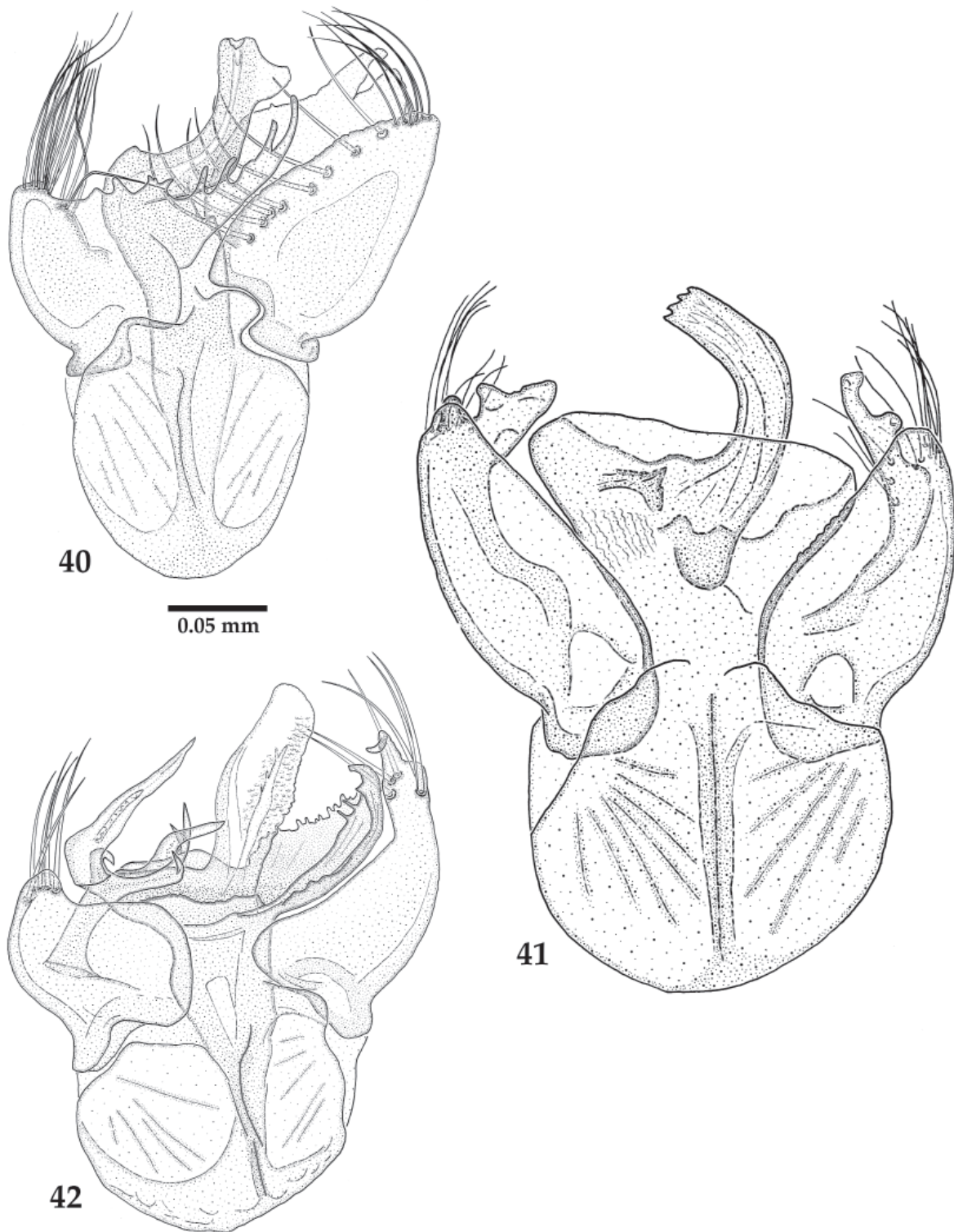
Figures 28–32. Aedeagi of *Sonoma* spp. **28)** *S. isabellae* (LeConte). **29)** *S. rossellinae* new species. **30)** *S. tehamae* Chandler. Modified from Chandler (2003). **31)** *S. vanna* Marsh and Schuster. **32)** *S. chandleri* new species. Right side of figures is anatomical left.



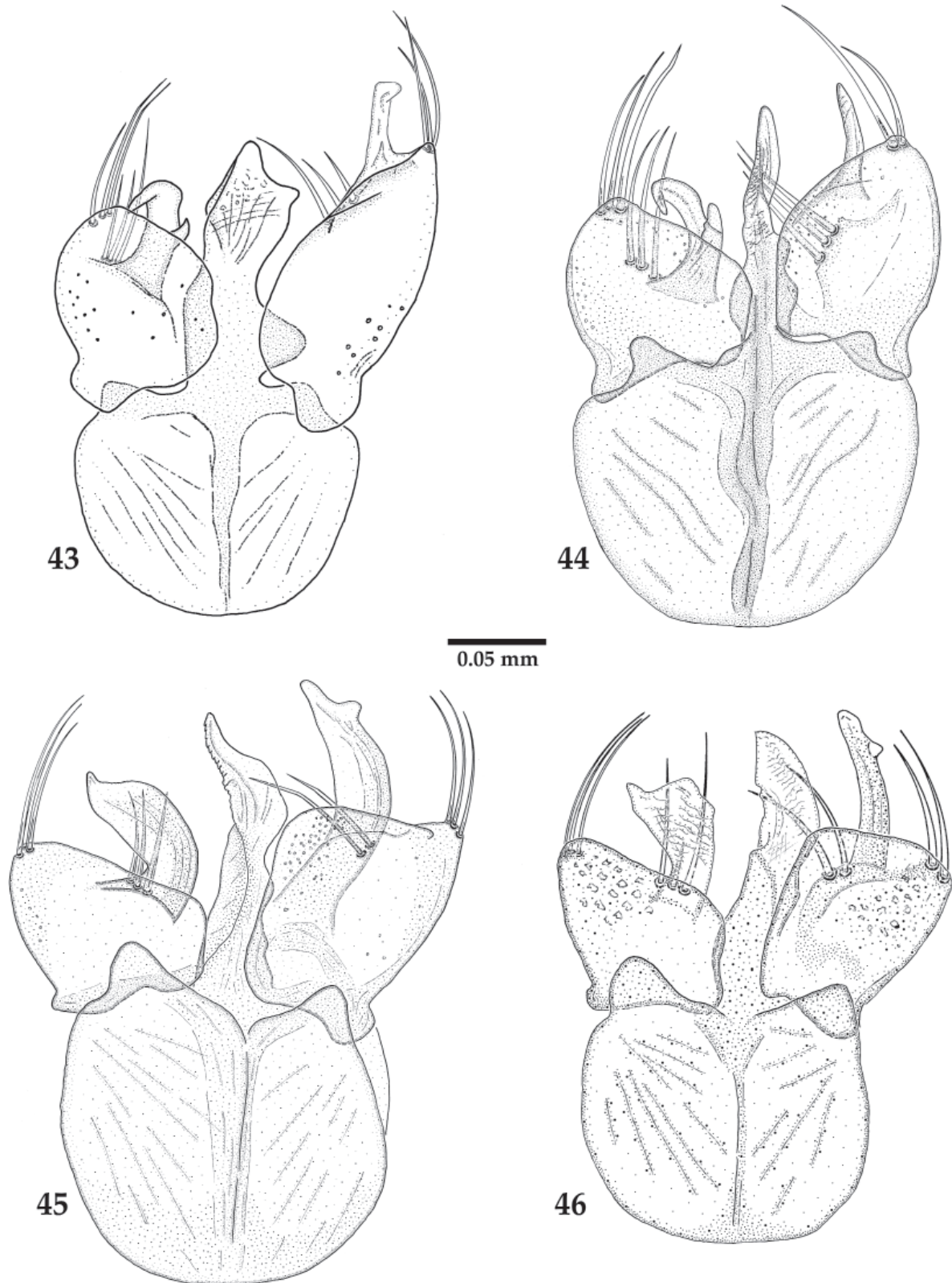
Figures 33–36. Aedeagi of *Sonoma* spp. **33)** *S. carltoni* new species. **34)** *S. russelli* Chandler. **35)** *S. cavifrons* Casey. **36)** *S. parviceps* Mäklin. Right side of figures is anatomical left.



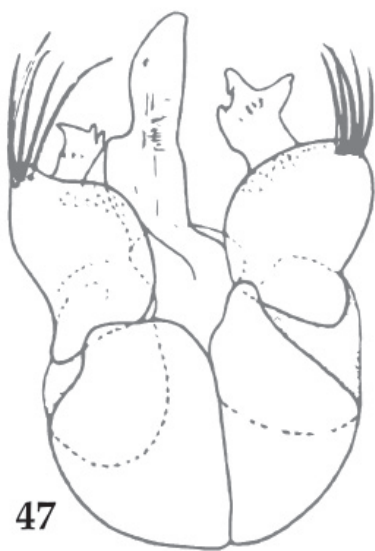
Figures 37–39. Aedeagi of *Sonoma* spp. **37)** *S. maryae* new species. **38)** *S. cardiac* new species. **39)** *S. virgo* new species. Right side of figures is anatomical left.



Figures 40–42. Aedeagi of *Sonoma* spp. 40) *S. priocera* Marsh and Schuster. 41) *S. conifera* Chandler. 42) *S. hespera* Park and Wagner. Right side of figures is anatomical left.



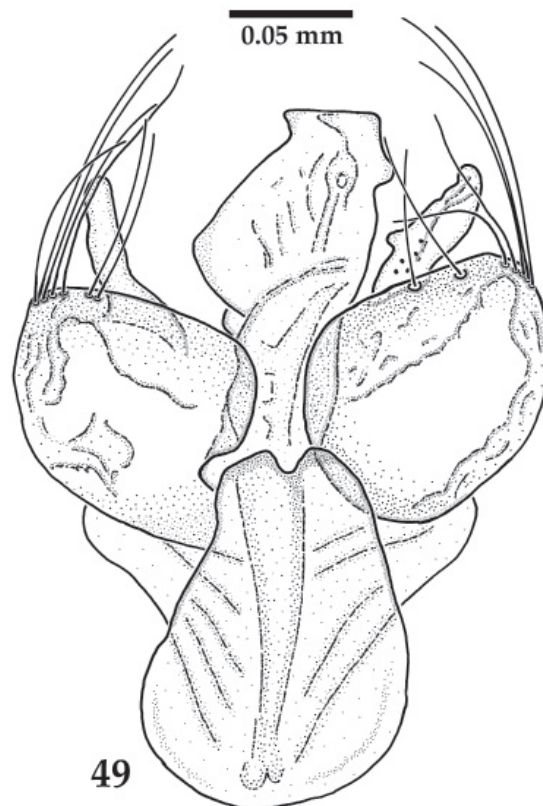
Figures 43–46. Aedeagi of *Sonoma* spp. 43) *S. agitator* new species. 44) *S. rubida* Casey. 45) *S. humilis* Marsh and Schuster. 46) *S. konkoworum* Chandler. Right side of figures is anatomical left.



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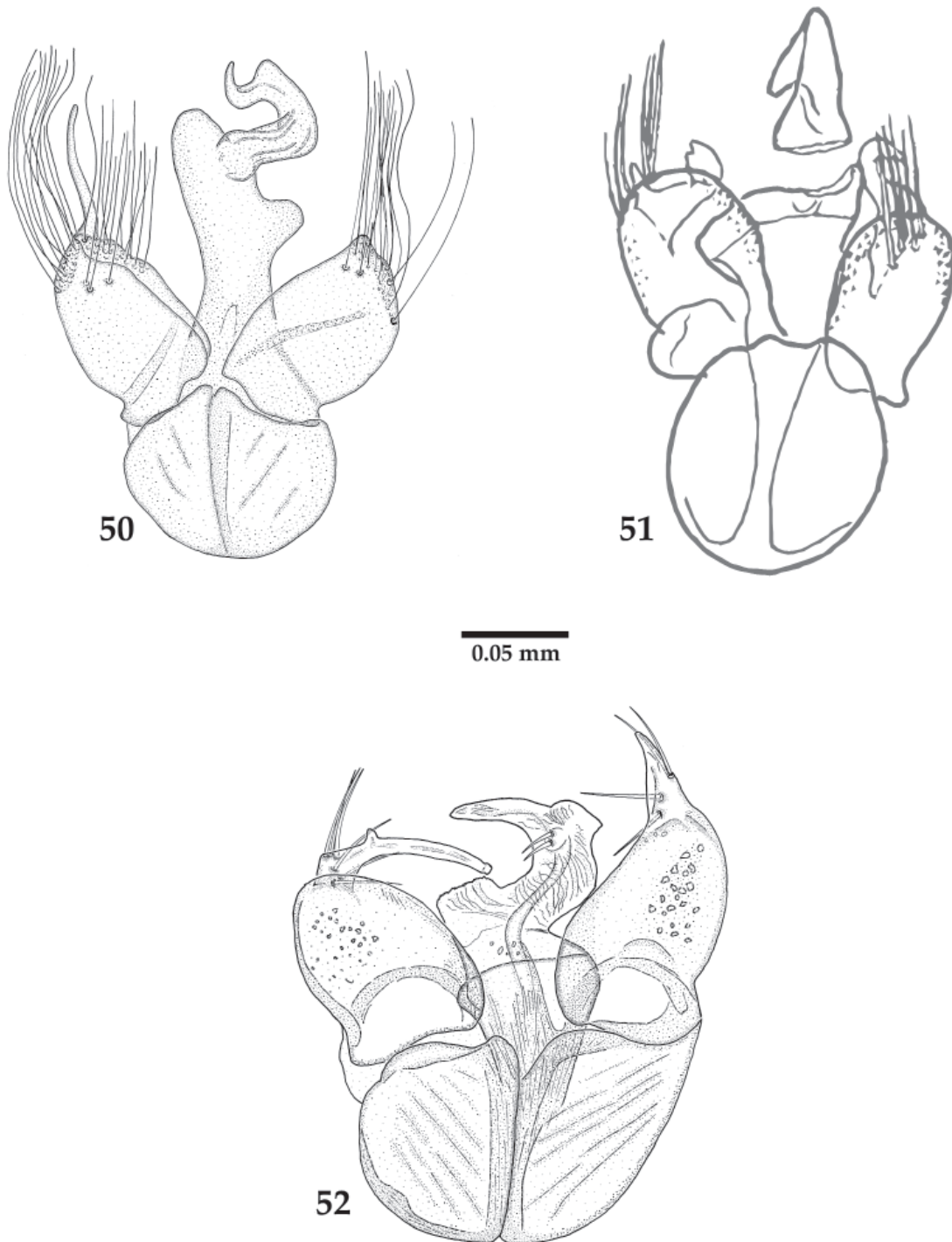


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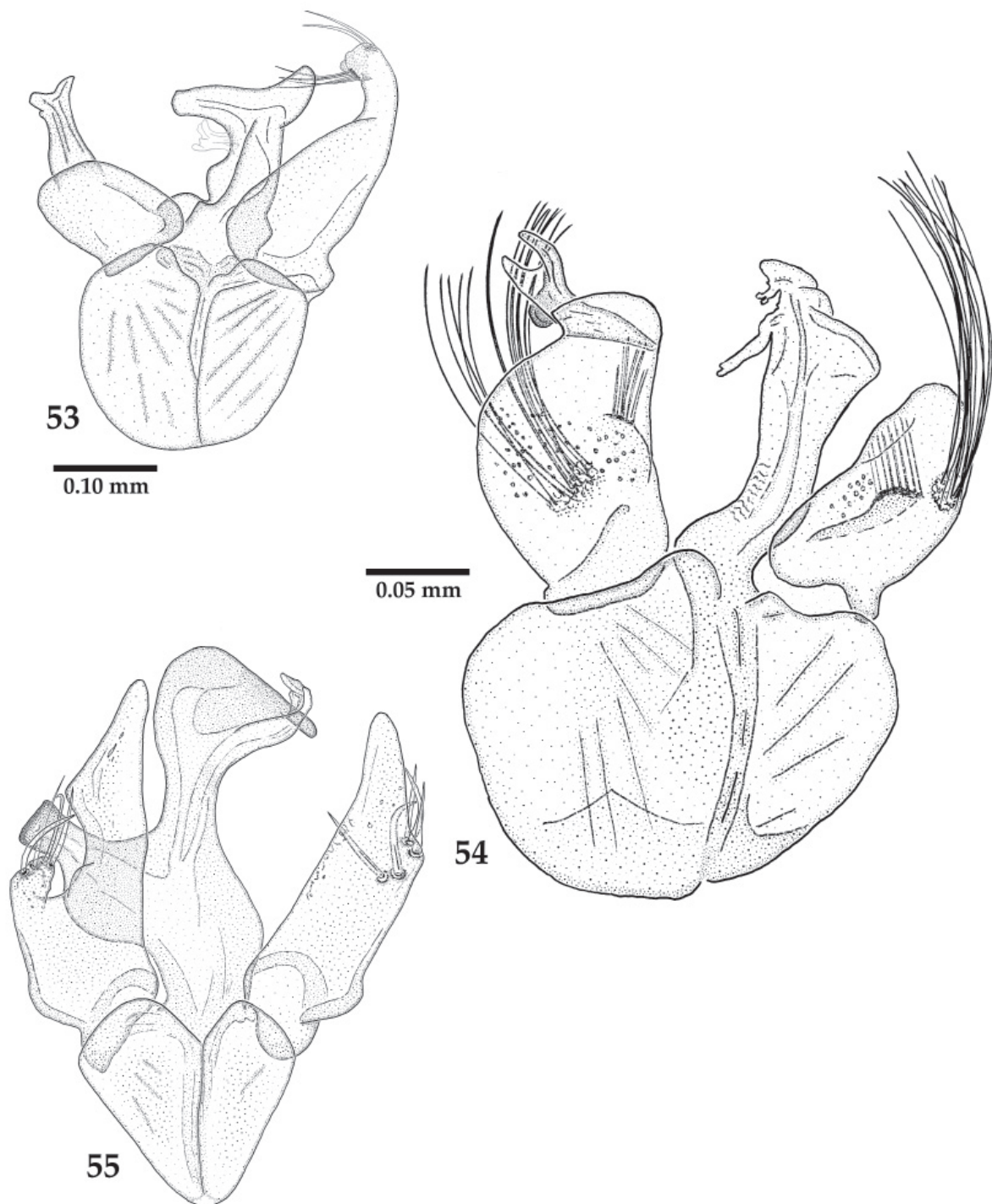


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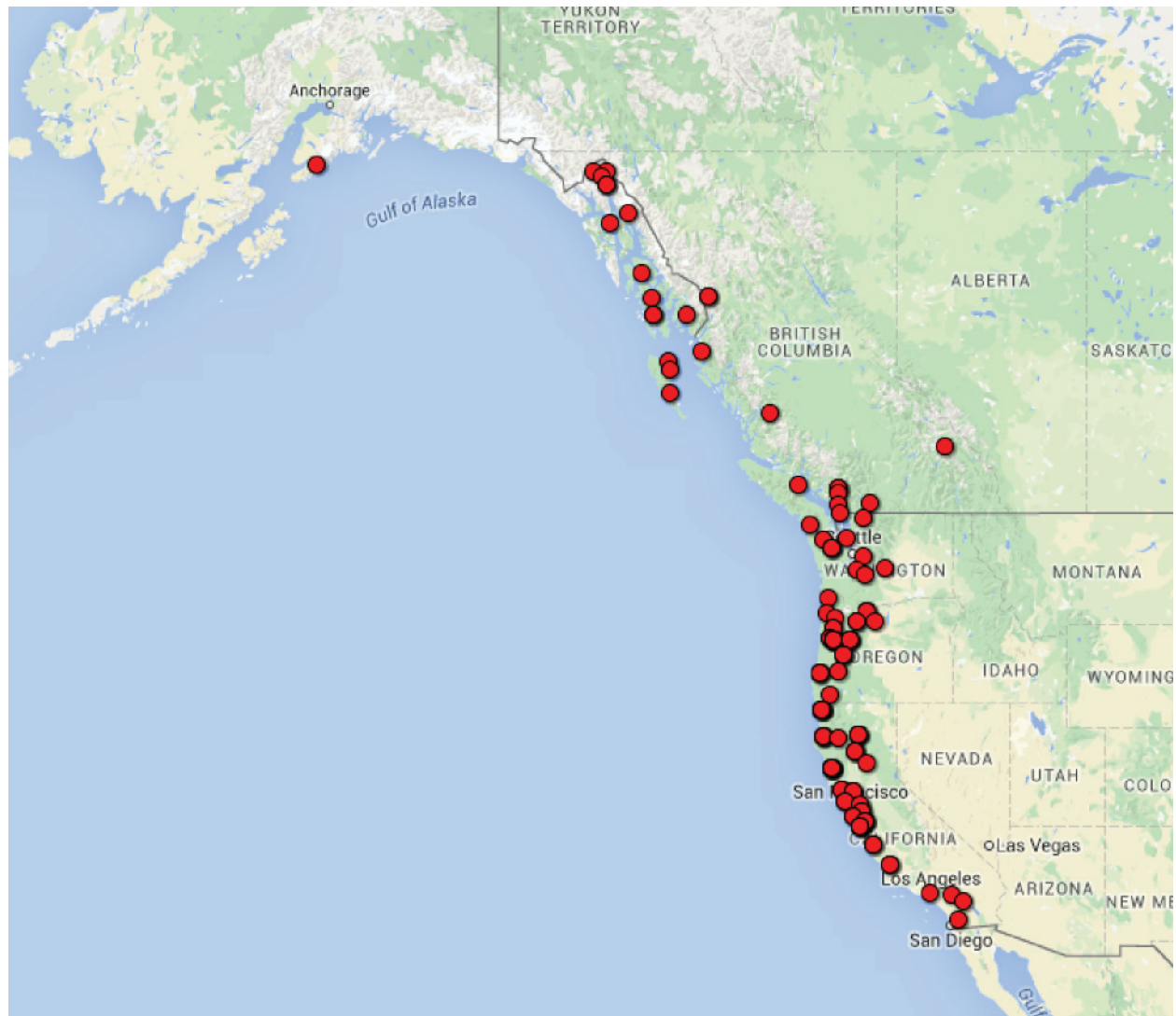
Figures 47–49. Aedeagi of *Sonoma* spp. 47) *S. triloba* Marsh and Schuster. Modified from Marsh and Schuster (1962). 48) *S. cuneata* Marsh and Schuster. 49) *S. olycalida* Park and Wagner. Right side of figures is anatomical left.



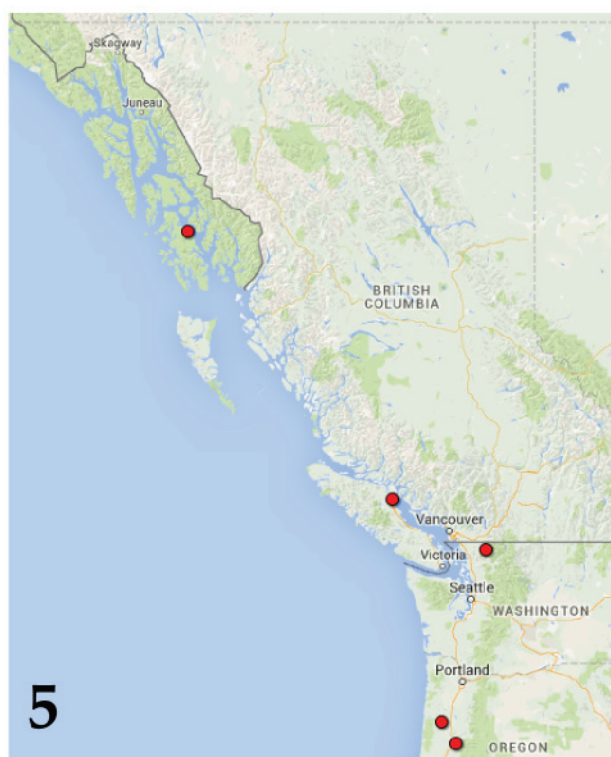
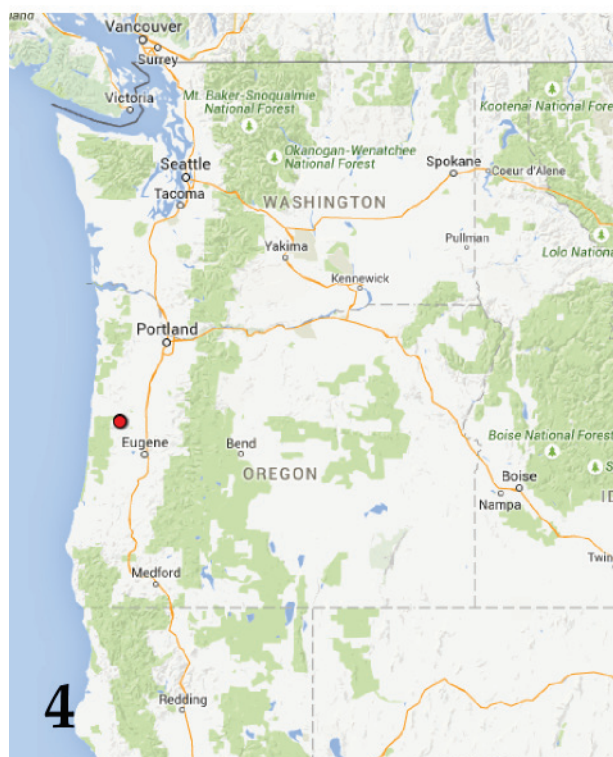
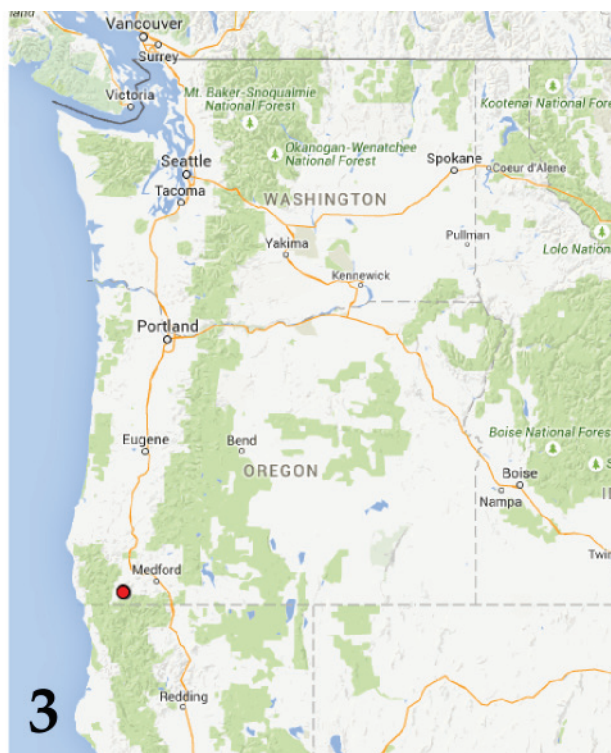
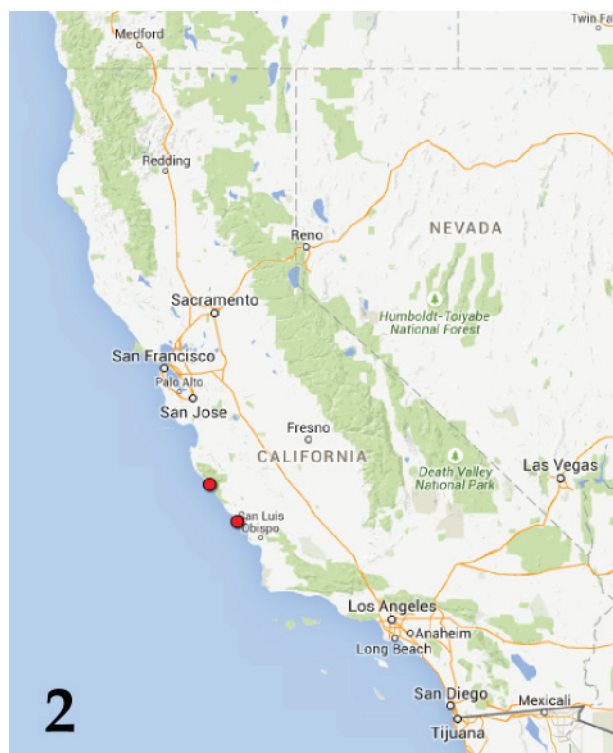
Figures 50–52. Aedeagi of *Sonoma* spp. **50)** *S. repanda* Marsh and Schuster. **51)** *S. quercicola* Chandler. Modified from Chandler (1986). **52)** *S. cobra* new species. Right side of figures is anatomical left.



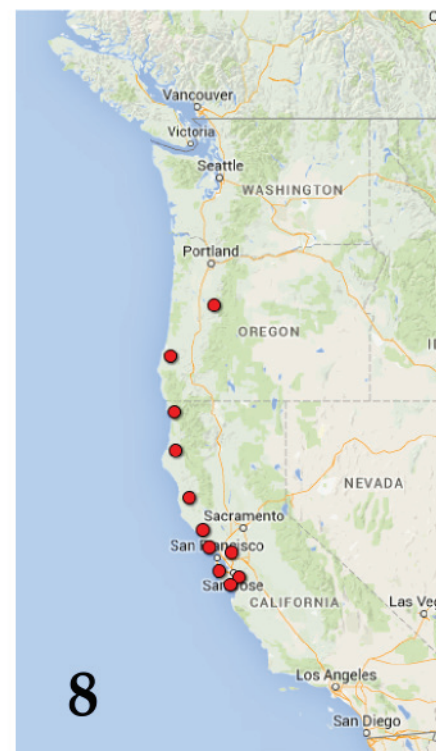
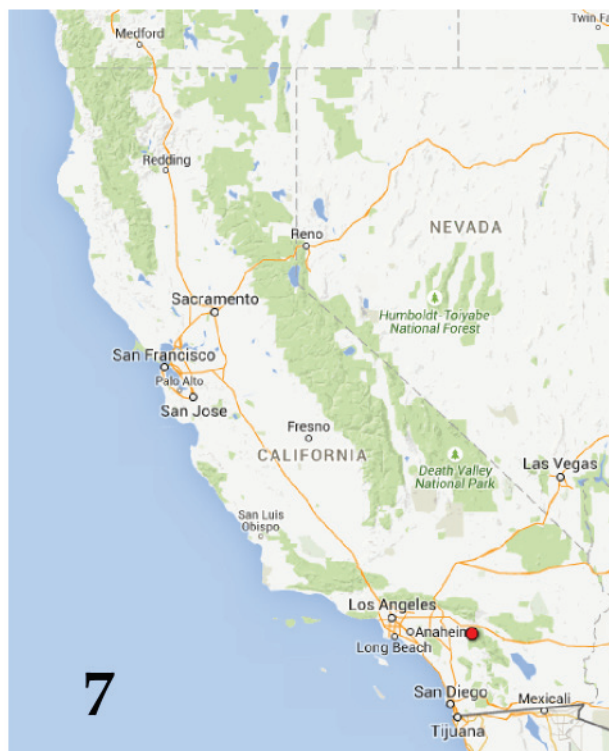
Figures 53–55. Aedeagi of *Sonoma* spp. **53)** *S. dilopha* Marsh and Schuster. **54)** *S. caterinoi* new species. **55)** *S. cataloochee* new species. Right side of figures is anatomical left.



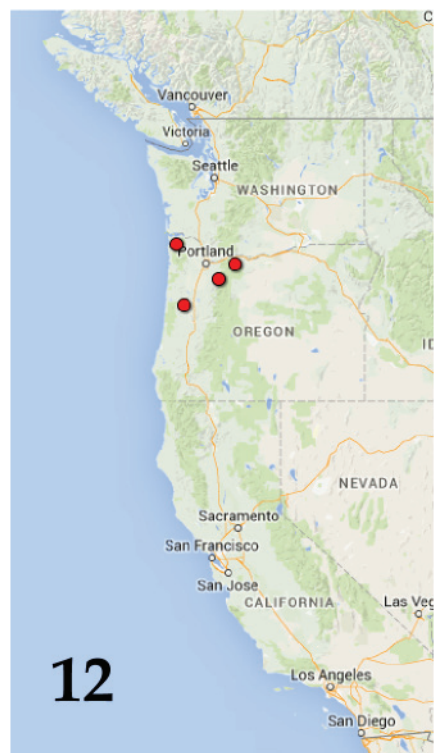
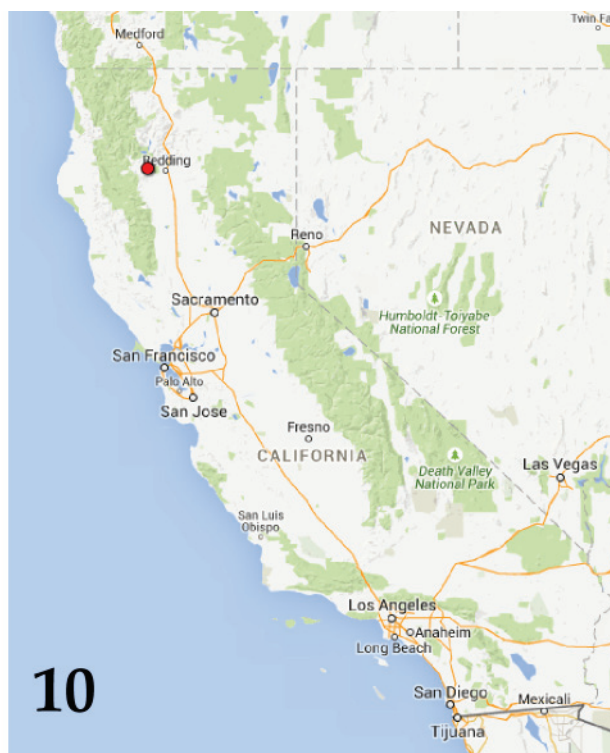
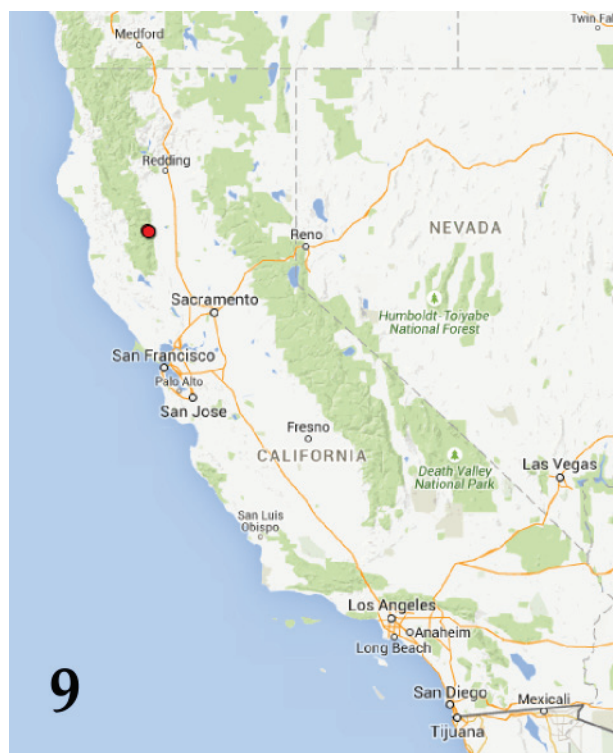
Map 1. County-level distribution of *Sonoma* spp. west of the Mississippi River.



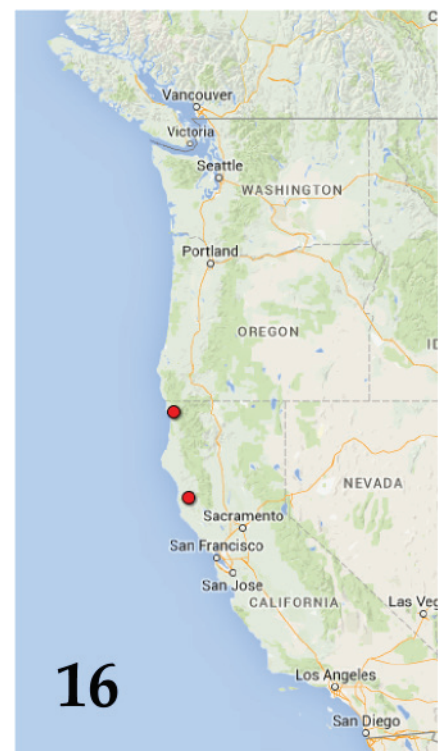
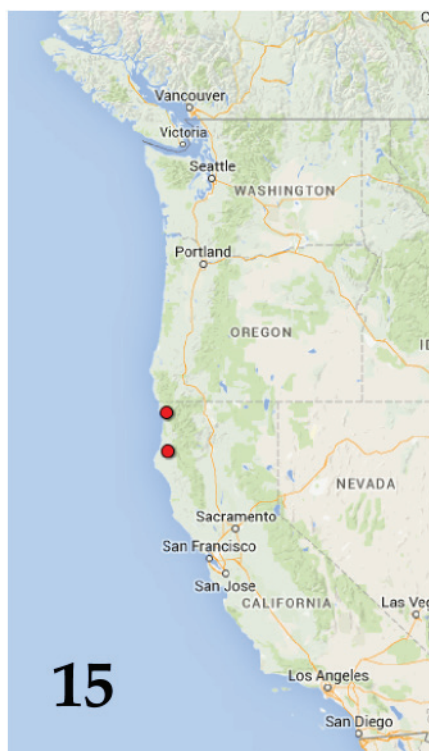
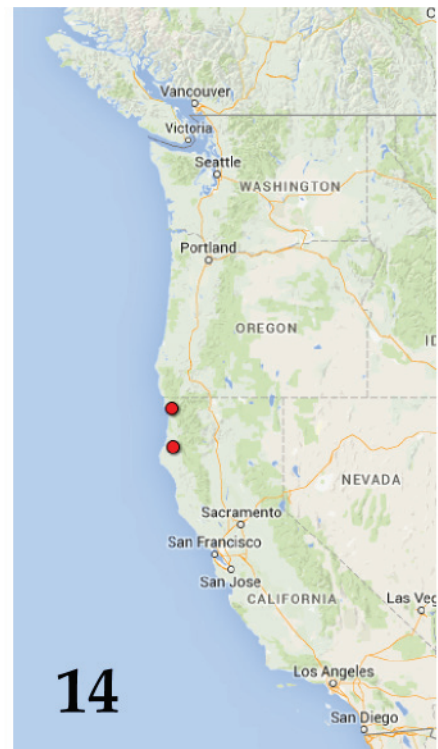
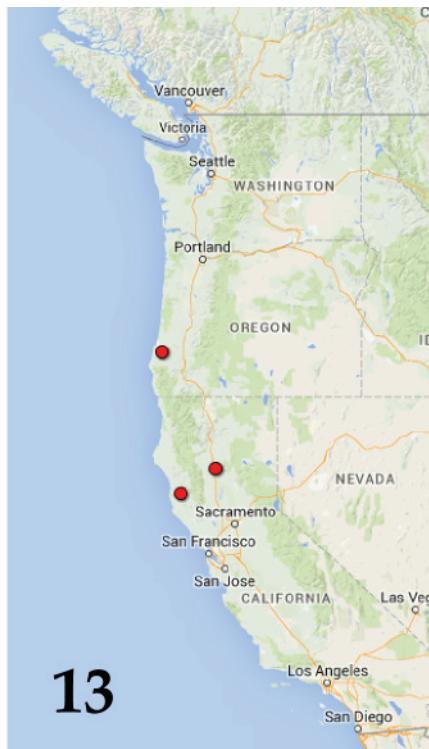
Maps 2–5. County-level distribution of *Sonoma* spp. 2) *S. aginator*. 3) *S. cardiac*. 4) *S. carltoni*. 5) *S. cascadia*.



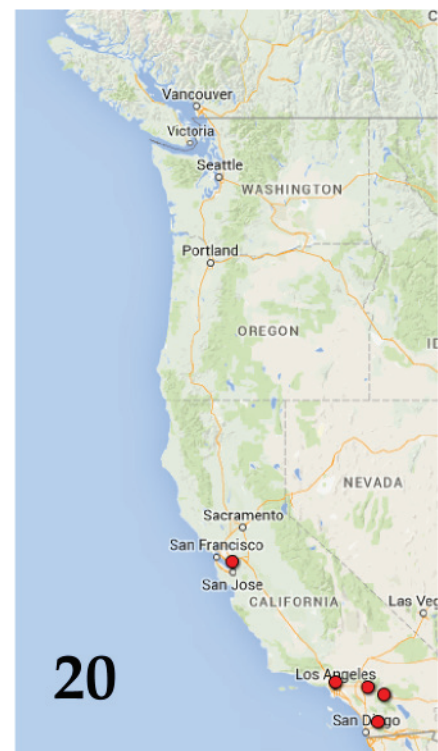
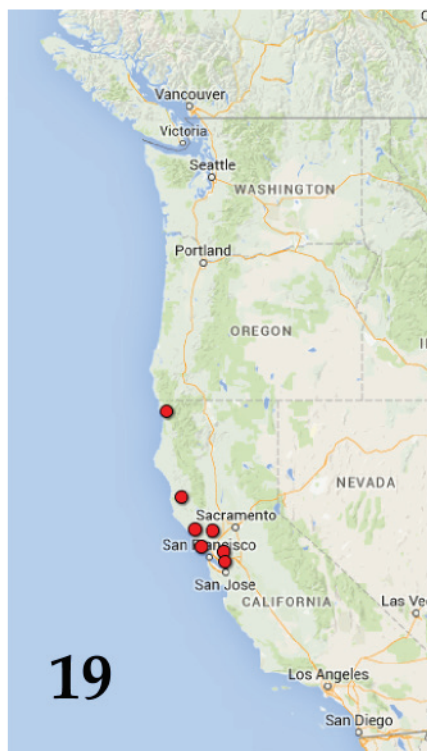
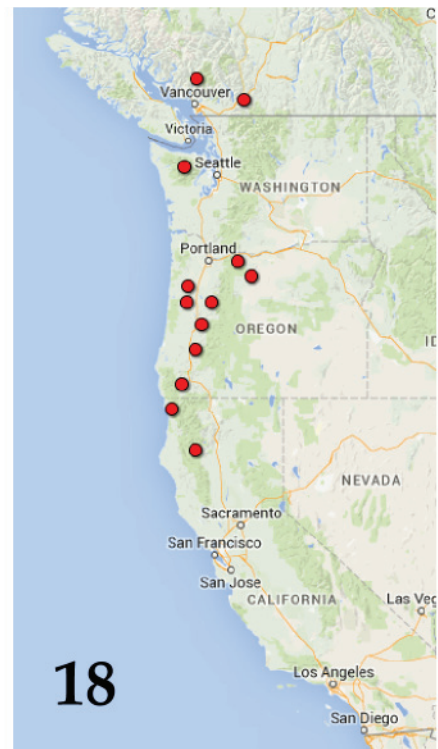
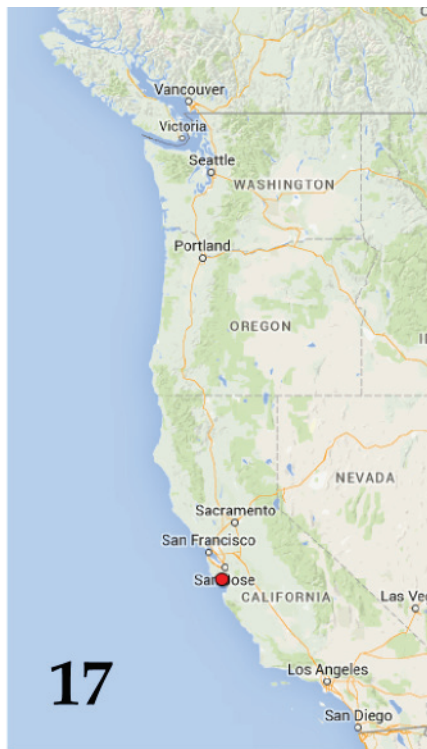
Maps 6–8. County-level distribution of *Sonoma* spp. 6) *S. cataloochee*. 7) *S. caterinoi*. 8) *S. cavifrons*.



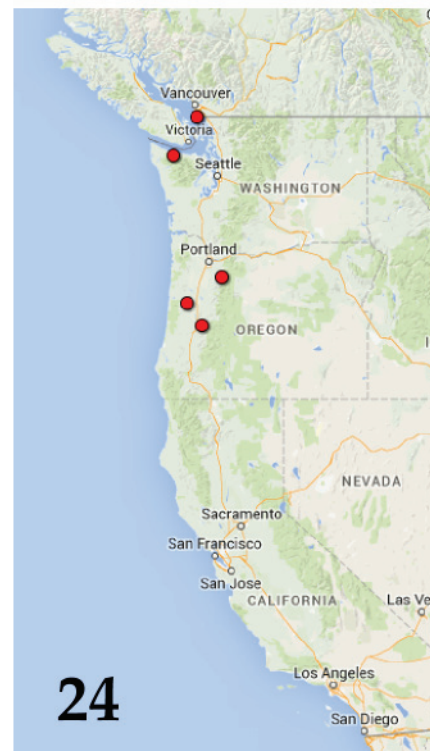
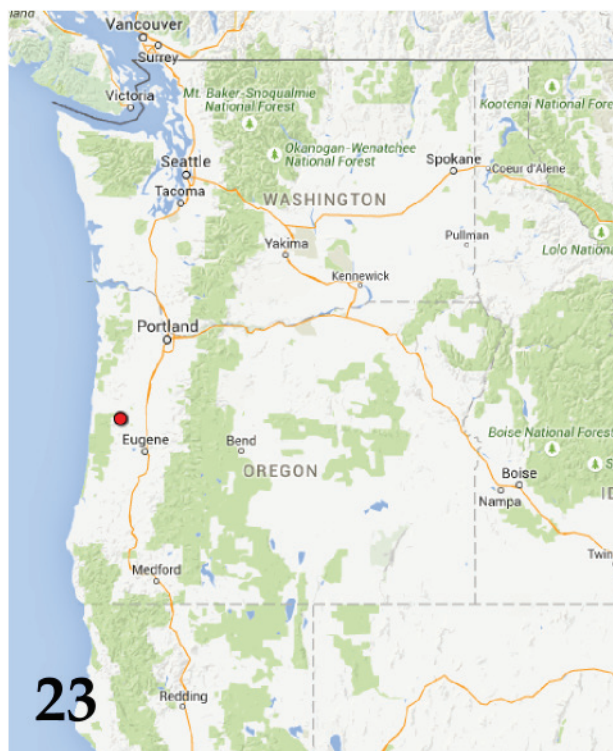
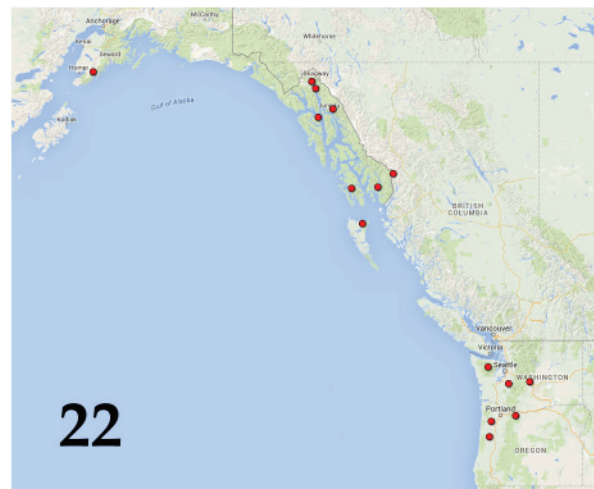
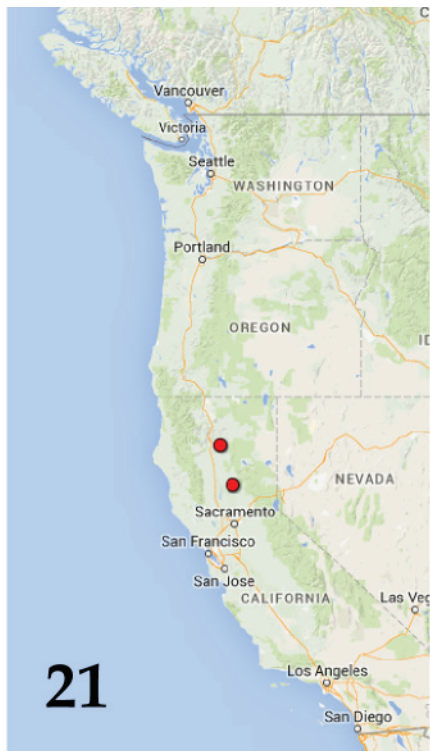
Maps 9–12. County-level distribution of *Sonoma* spp. 9) *S. chandleri*. 10) *S. cobra*. 11) *S. colberti*. 12) *S. conifera*.



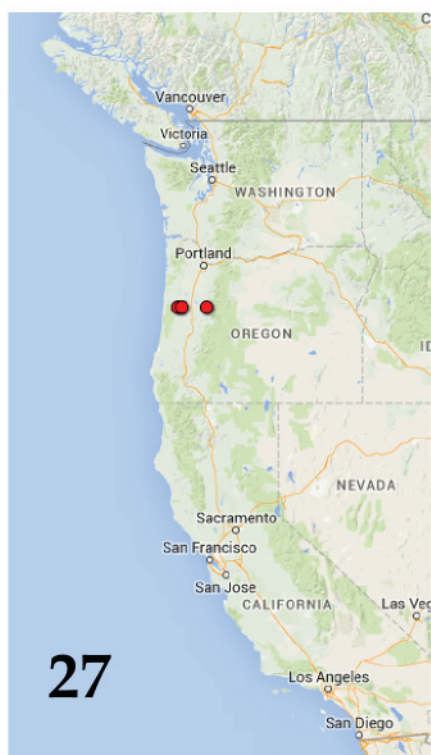
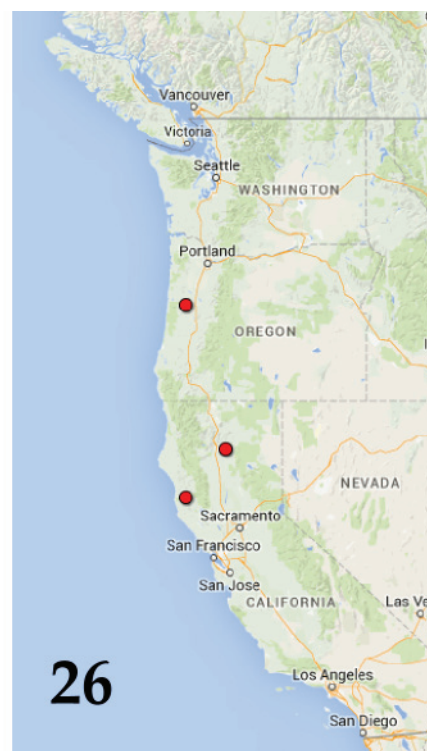
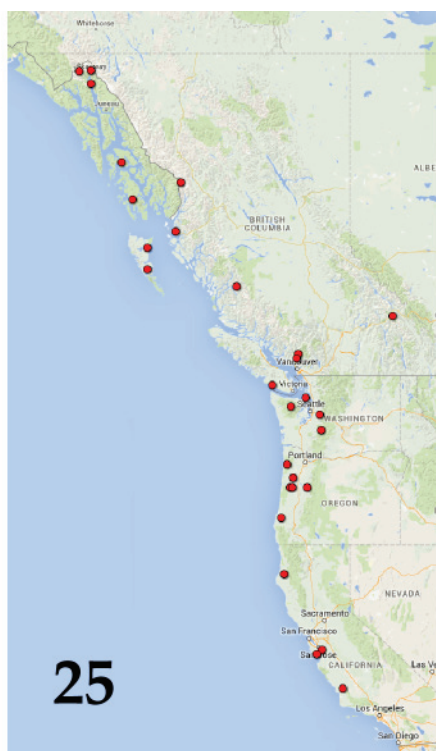
Maps 13–16. County-level distribution of *Sonoma* spp. 13) *S. corticina*. 14) *S. cuneata*. 15) *S. dilopha*. 16) *S. dolabra*.



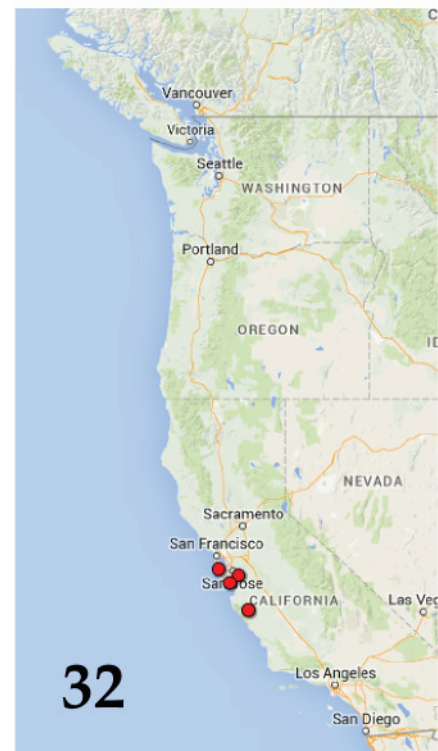
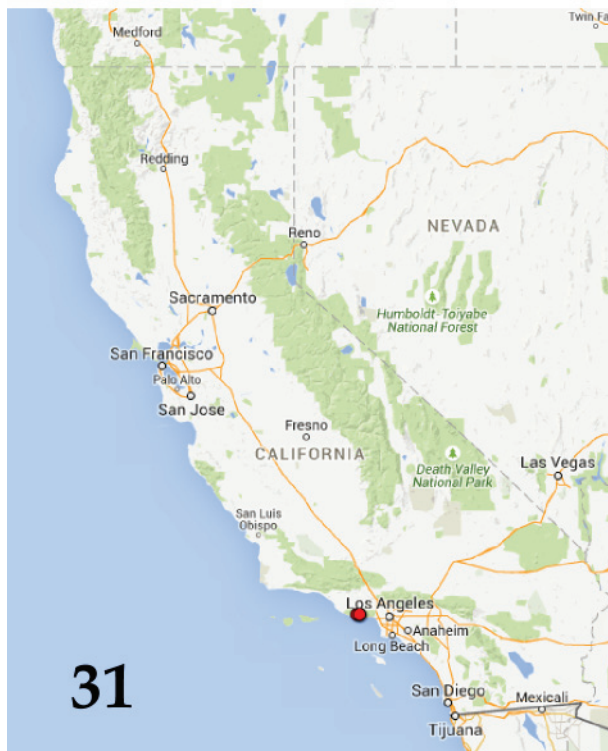
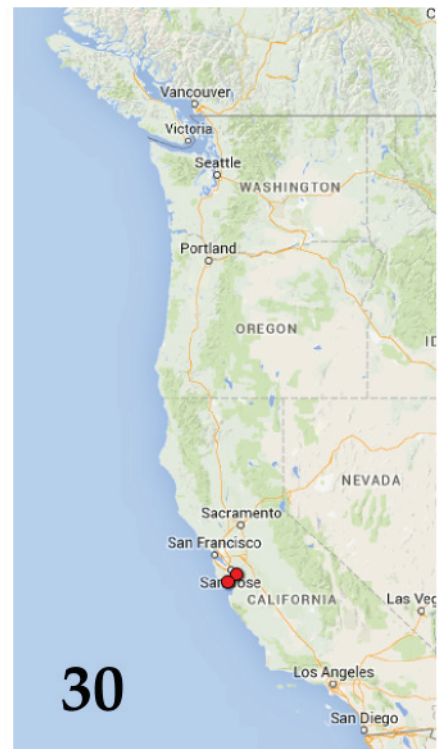
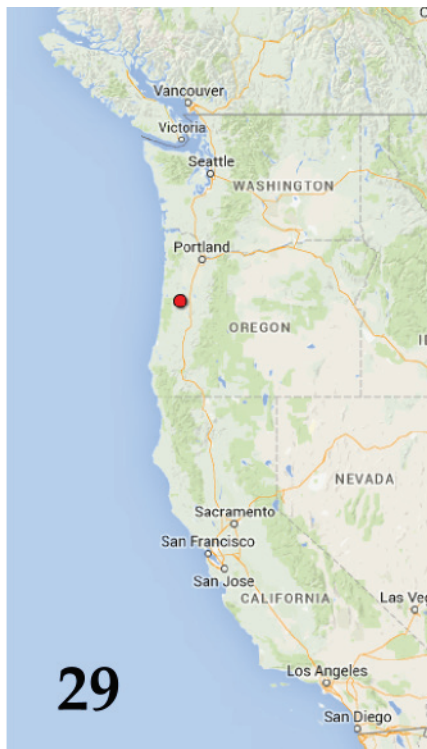
Maps 17–20. County-level distribution of *Sonoma* spp. 17) *S. grandiceps*. 18) *S. hespera*. 19) *S. humilis*. 20) *S. isabellae*.



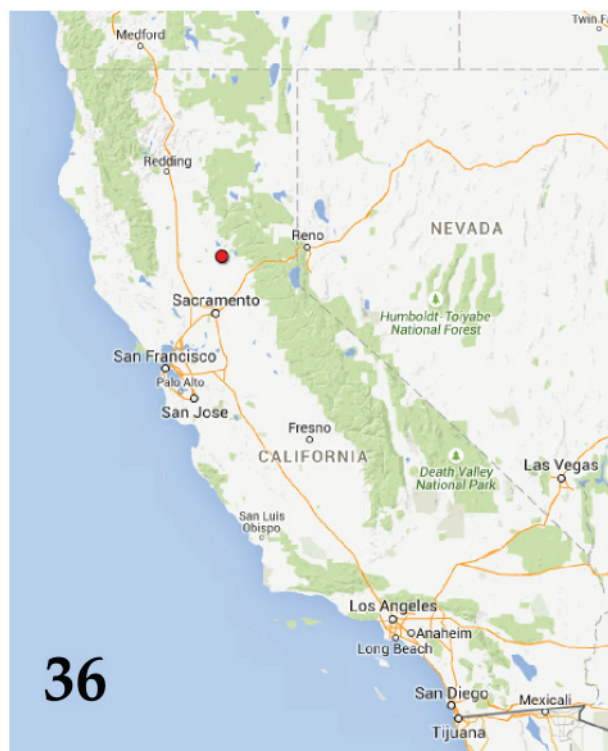
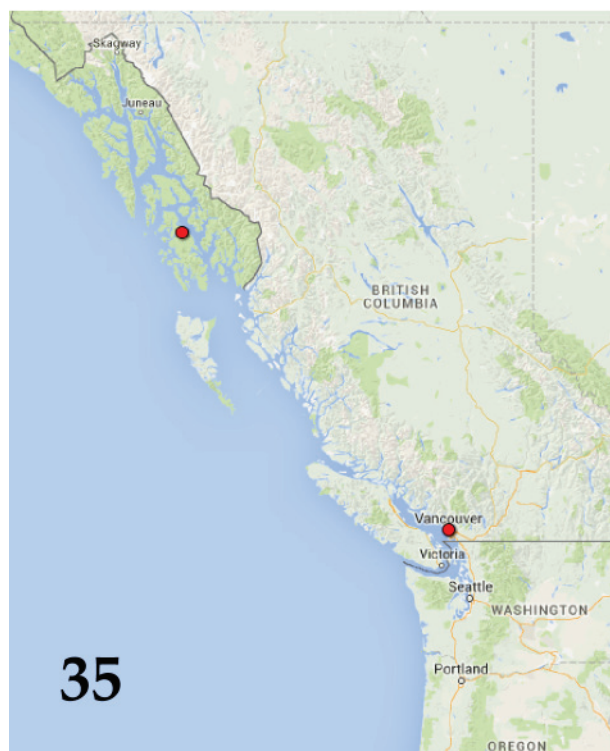
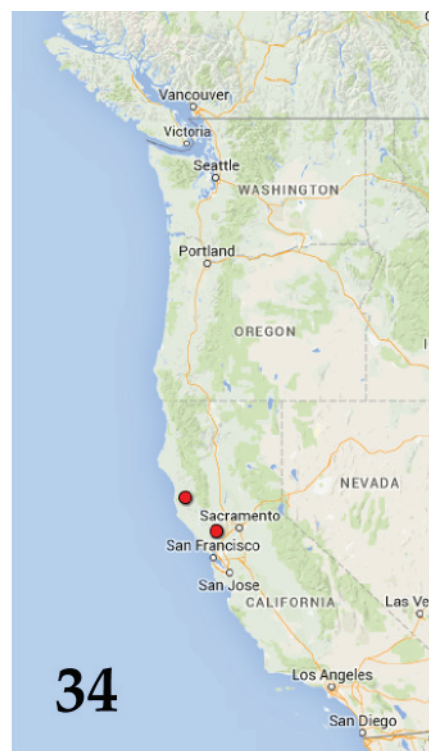
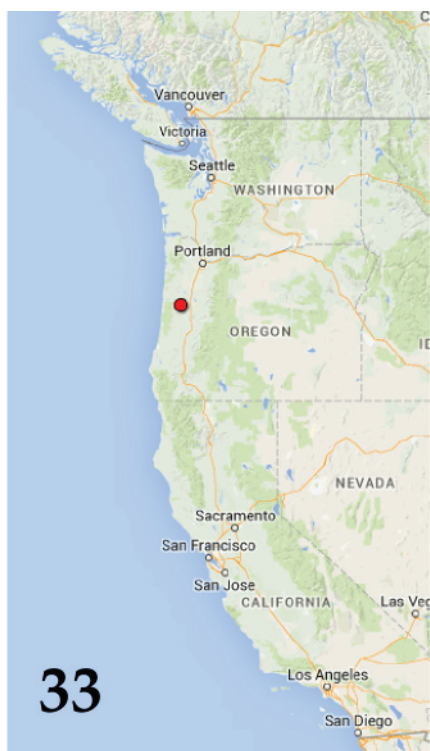
Maps 21–24. County-level distribution of *Sonoma* spp. 21) *S. konkoworum*. 22) *S. margemina*. 23) *S. maryae*. 24) *S. olycalida*.



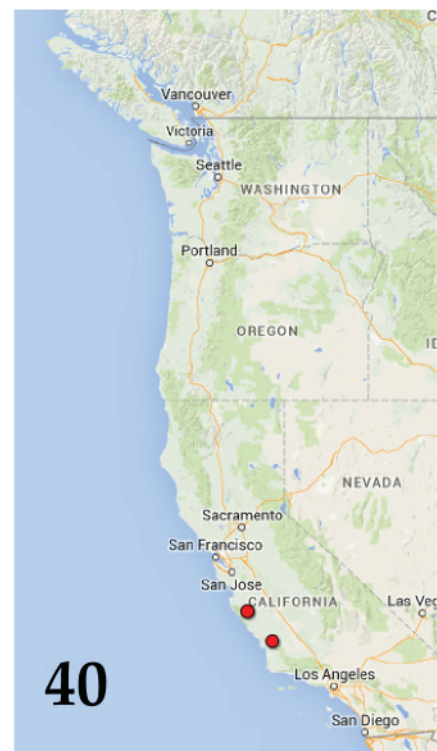
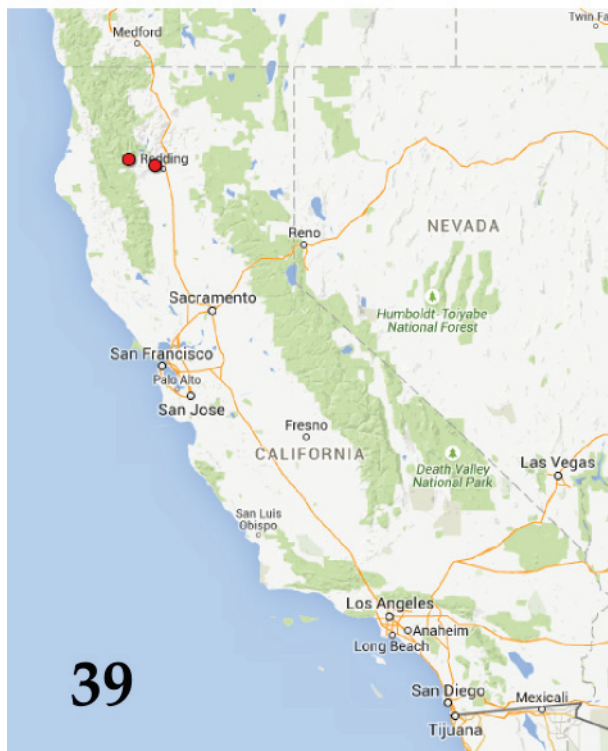
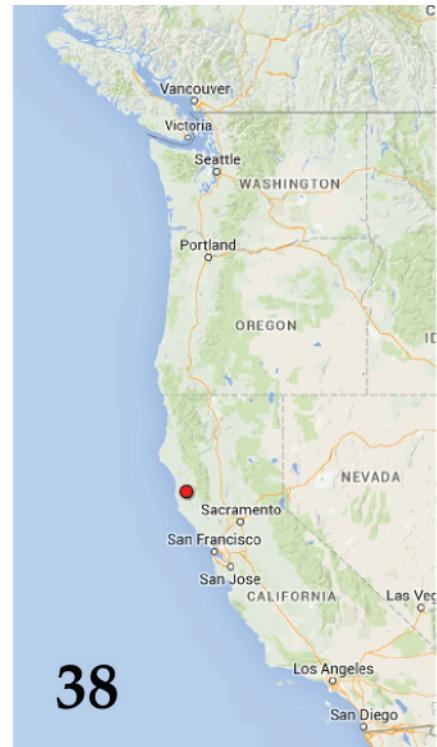
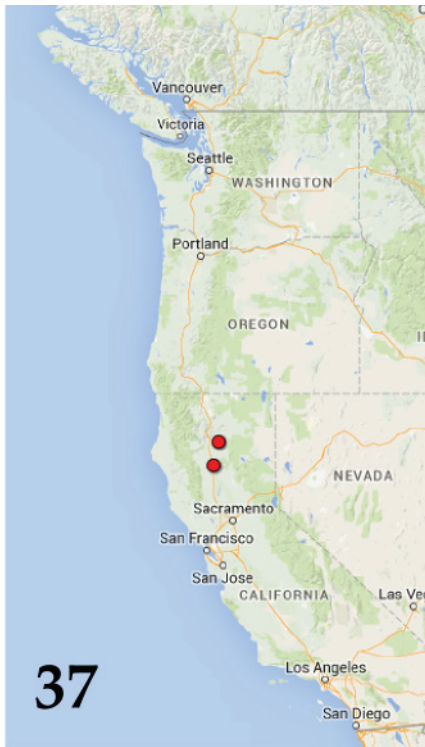
Maps 25–28. County-level distribution of *Sonoma* spp. 25) *S. parviceps*. 26) *S. petersi*. 27) *S. priocera*. 28) *S. quellazaire*.



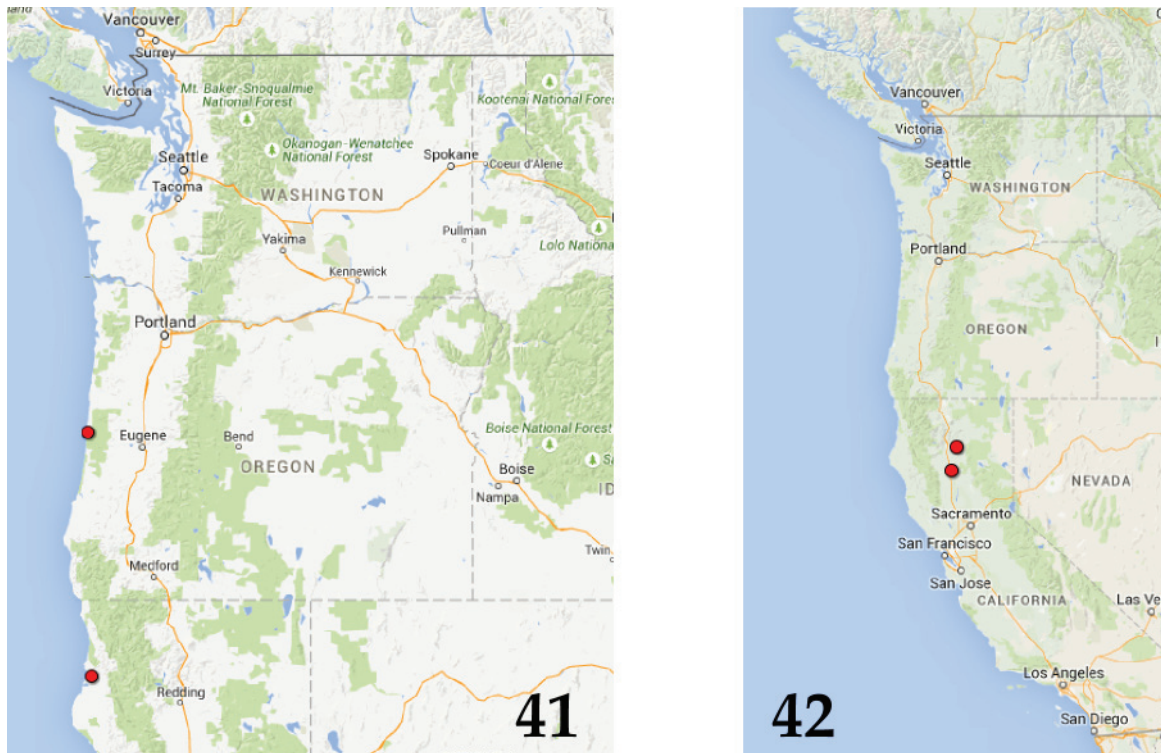
Maps 29–32. County-level distribution of *Sonoma* spp. 29) *S. quercicola*. 30) *S. repanda*. 31) *S. rossellinae*. 32) *S. rubida*.



Maps 33–36. County-level distribution of *Sonoma* spp. **33)** *S. russelli*. **34)** *S. spadica*. **35)** *S. squamishorum*. **36)** *S. stewarti*.



Maps 37–40. County-level distribution of *Sonoma* spp. 37) *S. tehamae*. 38) *S. triloba*. 39) *S. twaini*. 40) *S. vanna*.



Maps 41–42. County-level distribution of *Sonoma* spp. 41) *S. virgo*. 42) *S. wintuorum*.

Appendix 1

Verbatim label data are given for all identifiable specimens examined of previously described species, with specimens separated by an asterisk (“*”), label breaks indicated by a slash (“/”), and the lending institution and number of specimens are indicated, e.g. “(4♂, FMNH)”. Specimens from the University of Alaska Museum have a unique identifier that begins with the prefix “UAM”.

Sonoma baylessae Ferro and Carlton, 2010 – NC, TN

USA: TENNESSEE: Sevier Co.: *USA: TN: Sevier Co. GSMNP Andrews Bald N35.53905° 21 April 2011 W83.49495° CWD5-birch col. M. Ferro [♂, LSAM].

Sonoma cascadia Chandler, 1986 – AK, BC, OR, WA

CANADA: BRITISH COLUMBIA: *Canada: BC 21km SW Campbell R. 49°51'55" N 125°27'51" W 22 V – 6 VI 1996 Balsam CrLT 1-A 18 [♂ CNC]. **USA: ALASKA:** *AK: PoW Is. Luck Lk. 3 Rd.; 55.95347, -132.7708; 13-27JUN2012; Lindgren; J.S., S. M., I. M.; 2♂; UAM:Ento:245168; UAM:Ento:245169. *AK: PoW Is. Luck Point 2B; 55.97939, -132.77216; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; UAM100348526. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 31MAY-14JUN2012; Lindgren; J.S., S. M., I. M.; ♀; UAM100376191. **OREGON: Benton Co.:** *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-011, Berl., leaf & log litter on flat btwn creek and trailhead, A. Newton; ANMT site 1204 FIELD MUSEUM NAT. HIST. [♂ FMNH]. **WASHINGTON: Whatcom Co.:** *WASH. Mt. Baker 4mi.N.Silver Fir Camp 4000', 16.VIII.1975 J.M. & B.A.Campbell / ♂ [♂ CNC].

Sonoma cavifrons Casey, 1887 – CA, OR

USA: CALIFORNIA: Humboldt Co.: *USA: CA: Humboldt Co. Prairie Creek State Park 41 22.02'N 124 0.95'W (WGS84/NAD83) / Prometheus, upper mat Litter bag # 68 9 December 2000 Clint Jones [4♂ LSAM]. **Marin Co.:** *MuirWoods Marin Co VIII-30-08 [1908] / Van Dyke Collection / ♂ / *Sonoma cavi-*

frons / *Sonoma cavifrons* Det. R. O. Schuster [♂, CSCA]. **Santa Cruz Co.:** *Santa Cruz Co. VI.96 CAL. / COLL'D BY F.W. NUNENMACHER / Chicago N.H.Mus. (FWNunenmacher Collection) [♂ FMNH]. ***Incertae sedis:*** *Mexico: Sinaloa 2 mi. E San Blas VII-5-82 F. Andrews Blacklight / locality incorrect only from central CA [hand written] / *Sonoma cavifrons* Casey 92 det. DSChandler [♂, CSCA].

***Sonoma chouljenkoi* Ferro and Carlton, 2010 – AL, GA, KY, NC, OH, TN**

USA: NORTH CAROLINA: Buncombe Co.: *Black Mountain Sept. N.C. / BROOKLYN MUSEUM COLLN. 1929 [3♂, NMNH]. *3576C2 Hopk.U.S. / PisgahRdg NC / W. F. Fiske Collector [♂, NMNH]. *Black Mountain [??]. N.C. [♂, SEMC]. *Black Mt. N. C. [♂, SEMC]. **McDowell Co.:** *NORTH CAROLINA: McDowell Co., Mt. Mitchell at Blue Ridge Parkway, a Aug. 1991 1676-1920 m, J.S. & A.K. Ashe, ex:sifted conifer litter [2♂, SEMC]. **OHIO: Hamilton Co.:** *Cincinnati 1.8.97 [1897] Oh / H.Soltau [♂, NMNH]. **TENNESSEE: Sevier Co.:** *USA: TN: Sevier Co. GSMNP Sugarlands QW N35°39.826' 21 June 2012 W83°31.509' Berlese -M Ferro [♂, LSAM]. *USA: TN: Sevier Co. GSMNP Big White Oak Quiet Walkway 35.681387, -83.550518 21 June 2012 Berlese -M Ferro [2♂, LSAM]. *USA: TN: Sevier Co. GSMNP Porters Creek N35°40.790' 19 April 2011 W83°23.855' Litter col. M. Ferro [♂, LSAM]. *Mt. LeConte Tenn 3000 ft / A. Nicolay IX.18.1941 [♂, NMNH]. *Gatlinburg Tenn. / A. Nicolay IX.14.1941 [♂, NMNH].

***Sonoma conifera* Chandler, 1986 – OR, WA**

USA: OREGON: Benton Co.: *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-011, Berl., leaf & log litter on flat btwn creek and trailhead, A. Newton; ANMT site 1204 FIELD MUSEUM NAT. HIST. [2♂, ♀, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-011, Berl., leaf & log litter on flat btwn creek and trailhead, A. Newton; ANMT site 1204 FIELD MUSEUM NAT. HIST. [4♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 44°30.52'N, 123°33.56'W, 17.ix.2012, old-growth *Abies procera* forest; FMHD#2012-034, berl., log & bark litter around huge stump, M. Thayer; ANMT site 1204 [3♂, 2♀, FMNH]. **USA: OR: Benton Co., Siuslaw N.F., Mary Peak, Meadowedge Tr. (W part), 1050-1070 m, 44°30.52'N, 123°33.56'W, 17.ix.2012, old growth *Abies procera* forest; FMHD#2012-032, berl., log & leaf litter w/in few m of stream, M. Thayer; ANMT site 1204 FIELD MUSEUM NAT. HIST. [2♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Mary Peak, Meadowedge Tr. (W part), 1050-1070 m, 1060m, 44°30.52'N, 123°33.56'W, 8.xi.2011, old-growth *Abies procera* forest; FMHD#2011-001, berl., leaf & log litter, A. Newton & M. Thayer; ANMT site 1204 FIELD MUSEUM NAT. HIST. [2♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N, 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-010, berl., leaf & log litter on N-facing slope above creek, M. Thayer; ANMT site 1204 FIELD MUSEUM NAT. HIST. [2♂, FMNH]. **Clackamas Co.:** *USA: OR: Clackamas Co., Mt. Hood N.F., Still Ck. Cpgd., 1160m, 45°17.6'N, 121°44.28'W, 24.vi.2006, conifer forest; / FMHD#2006-153, berl., leaf & log litter, M. Thayer & A. Newton; site ANMT 1208 FIELD MUS. NAT. HIST. / **EXEMPLAR** additional specimens in 95+ % ethanol for DNA extraction 6 [♂, FMNH]. **Clatsop Co.:** *ORE.Clatsop Co. Saddle Mt. Rd. 5miN, 7miW Els[?]e 13.VII.1973 E. M. Benedict / sitka spruce & red alder duff [♂ CNC]. **Hood River Co.:** *USA: OR: Hood River Co.,Mt. Hood N.F., Pacific Crest Tr. N of Barlow Pass, 1336m, 45°17.23'N, 121°41.06'W, 16.ix.2012, old-growth *Pseudotsuga-Tsuga-Abies procera* forest; FMHD#2012-027, berl., log litter, A Newton & M. Thayer; ANMT site 1209 FIELD MUSEUM NAT. HIST. [♂, FMNH].**

***Sonoma corticina* Casey, 1887 – CA, OR**

USA: CALIFORNIA: Del Norte Co.: *CA:Del Norte Co. Gasquet, 145 m, 03-41 N41 51', W124 0', FIT V-19/VI-22-2003, 145m SBPeck, mixed forest [♂, DCPC]. **Santa Clara Co.:** *Calif. S. Cl. Co. Mt. Madonna Co. Pk., II-10-1980 DSChandler / 800' sift [??] litter along stream [♂, DCPC].

***Sonoma cuneata* Marsh and Schuster, 1962 – CA**

USA: CALIFORNIA: Del Norte Co.: *CA:Del Norte Co. Jediah St Park / Berlese duff *Sequoia*

sempervirens [♂ DCPC]. **Humboldt Co.:** *CALIF:Humboldt Co. Kneeland II-22-1978 T.R.Haig,Coll. / Berlesed from Redwood Duff / Sonoma cuneata '90 det. DSChandler [♂, CSCA].

***Sonoma cygnus* Ferro and Carlton, 2010 – GA, NC**

USA: NORTH CAROLINA: Swain Co.: *USA NC SwainCoGSMNP ForkRidgeTrailHeadnr Clinman's Dome~6000' 11Aug06J&SCornellBerl ExSiftLitUMossyHemlock LogsJFC006-VIII-11-1C [♂, LSAM].

***Sonoma dilopha* Marsh and Schuster, 1962 – CA**

USA: CALIFORNIA: Del Norte Co.: *CALIF.Del Norte Co. Crescent City V.13.1981 T.R.Haig,Coll. / Berlesed from pine duff / Sonoma dilopha '84 det. DSChandler [♂, CSCA].

***Sonoma dolabra* Marsh and Schuster, 1962 – CA**

USA: CALIFORNIA: Mendocino Co.: *CAL: Mendocino Co; Hendy Woods July, 1987 [3♂, FMNH].

***Sonoma gimmeli* Ferro and Carlton, 2010 – NC, OH, TN**

USA: OHIO: Hamilton Co.: *Cincinnati 1.8.97 [1897] Oh / H.Soltau [♂, NMNH]. **TENNESSEE: Cocke Co.:** *USA TN CockeCo GSMNP AlbrightGrove17-0294125E 395640N NAD27 El3393' 8Aug06JCornell&SRanger BerlExSiftLitExHemlock&Buck EyeStumpsJFC-006-VIII-8-5D [♂, LSAM]. *USA TN CockeCo GSMNP AlbrightGrove17-0293739E 3956673N NAD27El2424' 8Aug06JCornell&SRanger BerlExSiftLitterUMossyHemlockLogJFC006-VIII-8-5A [♂, LSAM].

***Sonoma hespera* Park and Wagner, 1962 – BC, CA, OR, WA**

CANADA: BRITISH COLUMBIA: *B.C. ,25 mi.E. Hope,VI.21.1968 Campbell& Smetana / ♂ [♂, CNC]. *B.C. ,25 mi E. Hope,VI21.1968 Campbell& Smetana / ♂ / CNC COLEO DNA 00162686 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162686 BOLD Proc. ID: CNCCJ579-13 [♂, CNC]. *B.C. ,Mt.Garibaldi 14 mi.N.Squamish 4000',V.30.1968 Campbell&Smetana / ♂ / CNC COLEO DNA 00162682 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162682 BOLD Proc. ID: CNCCJ575-13 [♂, CNC]. **USA: CALIFORNIA: Del Norte Co.:** *USA: CA: Del Norte Co., Smith River N.R.A., Hwy 199 mi 10.0, 4.5 mi NNE Hiouchi,93m,41°49.928'N, 124°02.088'W, 9.xi.2011, / redwood forest; FMHD# 2011-003, berl., leaf & log litter, A. Newton & M. Thayer; ANMT site 1236 FIELD MUS. NAT. HIST. [♂, FMNH]. **Trinity Co.:** *USA: CA: Trinity Co., Shasta-Trinity N.F., For. Rd. 1S06, 0.36 mi fr. Hwy 36 (mi 13.88). W of Forest Glen, 950m, 40°22.515'N, 123°22.326'W, 10.xi.2011, / *Pseudotsuga*-harwood-*Pinus* forest; FMHD# 2011-004, berl., leaf & log litter, M. Thayer & A. Newton; ANMT site 1197B FIELD MUS. NAT. HIST. [♂, FMNH]. **OREGON: Benton Co.:** *OREGON: Benton Co. Sulphur Springs 6mi. N Corvallis III-26-1969 E.M. Fisher coll. / Sonoma hespera '90 det. DSChandler [♂, CSCA]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (top part), 1189-1197 m, 44°30.417'N, 123°33.12'W, 17.ix.2012, old-growth *Abies procera* forest, FMHD#2012-030, berl., log & litter, A. Newton & M. Thayer; ANMT site 1245 [6♀, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak (NE side), Chintimini Ck. At For. Rd. 2005, 610m, 44°31.237'N, 123°32.508'W, 16.v.2012, Tsuga heterophylla forest; FMHD#2012-009, berl., leaf & log litter away from creek, A. Newton; ANMT site 1206 FIELD MUSEUM NAT. HIST. [♂, ♀, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W part), 1050-1070 m, 44°30.52'N, 123°33.56'W, 17.ix.2012, old growth *Abies procera* forest; FMHD#2012-033, berl., log & litter, A. Newton; ANMT site 1204 [♀, FMNH]. *OR:Benton Co. Marys Peak 12-VII-1968 J.F. Cornell / J.F. Cornell Collection N.C. State Univ. Raleigh [♂, ♀, EDNC]. *ORE., Marys Pk R7WT12S SW 1/4 SE 1/4 Sec 20 10-VI-66 JF Cornell under Noble Fir logs / J.F. Cornell Collection N.C. State Univ. Raleigh [♂, ♀, EDNC]. *OREGON Benton Co. 1 mi NE Marys Peak 'Funny-Bug-Notch' 15 Feb 1981 G.L.Parsons Coll. / Ex. log and tree moss [3♂, MSUC]. **Hood River Co.:** *USA: OR: Hood River Co.,Mt. Hood N.F., Pacific Crest Tr. N of Barlow Pass, 1336m, 45°17.23'N, 121°41.06'W, 16.ix.2012, old-growth *Pseudotsuga*-*Tsuga*-*Abies procera* forest; FMHD#2012-027, berl., log litter, A Newton & M. Thayer; ANMT site 1209 FIELD MUSEUM NAT. HIST. [♂, 2♀, FMNH]. **Josephine Co.:** *USA: OR. Josephine Co. Grave Creek Boat Land. 5.5 mi W. 0.5 mi E Galice: Rogur River Hiking trail 500' IV-8-1972 Canyon live oak E. M. Benedict / CNC COLEO DNA 00162681 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162681 BOLD Proc. ID: CNCCJ574-13

[♂, CNC]. **Lane Co.:** *ORE. Lane Co. Clark For. Camp 4mi. N. 10mi. E. Lowell, Willa-mette Nat. For. 1100', 4.III.72 / E.M. Benedict EB-462, hemlock moss, and big leaf maple / CNC COLEO DNA 00162680 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162680 BOLD Proc. ID: CNCCJ573-13 [♀, CNC]. *ORE. Lane Co. Clark For. Camp 4mi. N. 10mi. E. Lowell, Willa-mette Nat. For. 1100', 4.III.72 / E.M. Benedict EB-462, hemlock moss, and big leaf maple [2♀ CNC]. *ORE. Lane Co. 22mi. S, 16mi. E Oakridge Willamette Nat. For. Jct. Rds. 211 & 2-65 [or 2465] / 5800', 16.VIII.1973 E. M. Benedict, EB-1428 rotted log. / ♂ [♂, CNC]. **Wasco Co.:** *USA: OR: Wasco Co., Mt. Hood N.F., For. Rd. 2660, W side Blue Box Pass (on US 26), 1221m, 45°12.529'N, 121° 42.048'W, 15.v.2012, Douglas fir-spruce-fir-hemlock forest; FMHD#2012-007, berl., leaf & log litter, M. Thayer & A. Newton; ANMT site 1240 FIELD MUSEUM NAT. HIST. [♂, FMNH]. *Oregon: Wasco County On Hiway 26 to Clear Lk 45° 11.737' N El: 3846' 121° 41.456' W Barrier Pitfall Trap Ron H. McPeak 10/16/2013-5/14/2014 [♂, ♀, RJRC]. **WASHINGTON:** *WASH. Olympic N.P. Olympic Hot Spgs. 2300'. 4.VIII.1973 A & Z & D Semetana / ♀ [♀, CNC].

***Sonoma holmesii* Ferro and Carlton, 2010 – NC, MD, PA, VA, WV**

USA: VIRGINIA: *Va. [red dot over "a"] / Through C. V. Riley / Ullce (♂, NMNH). *Va [red dot over "a"] (♂, NMNH). **WEST VIRGINIA: Greenbrier Co.:** *White Suphur W. Va. / Aug. / [yellow circle] / A. FENYES Collection / A. FENYES Collection [2♂ on dual-headed point, CAS].

***Sonoma humilis* Marsh and Schuster, 1962 – CA**

USA: CALIFORNIA: Contra Costa Co.: *Redwood Peak C. Costa Co. Calif. 1-9-54 / R. O. Schuster G. A. Marsh / ♂ / *Sonoma humilis* Marsh-Schuster [♂, FSCA] [aedeagus figured, MLF 2015]. **Marin Co.:** *CALIF: Marin Co. Samuel P. Taylor St. Pk. III-31-1976 Fred G. Andrews T.D. Eichlin, colls. / Berlesed from Redwood Duff / *Sonoma humilis* '92 det. DSChandler [♂, CSCA]. **Sonoma Co.:** *6 mi SE Cotati Sonoma Co. Calif x.28.1969 A.J. Gilbert / Rotting Mossy Log / *Sonoma humilis* '92 det. DSChandler [♂, CSCA].

***Sonoma isabellae* (LeConte, 1851) – CA**

USA: CALIFORNIA: Los Angeles Co.: *CA: Los Angeles Co. 32.9089°N, 118.4769°W San Clemente Island Horton Cyn., *Prunus* litter iii.31.2010, M.S. Caterino / CA BEETLE PROJ CBP0101867 (SBNHM) (♂). *same data / CA BEETLE PROJ CBP0101868 [♂, SBNHM]. *CA: Los Angeles Co. 33.4540°N, 118.5178°W Santa Catalina Isl. west end, i.30.2010 M.S. Caterino & K.J. Hopp *Lyonothamnus* litter / CA BEETLE PROJ CBP0101517 (SBNHM) (♂). *same data / CA BEETLE PROJ CBP0101525 [♂, SBNHM]. *CA: Los Angeles Co. 33.3185°N, 118.3462°W Santa Catalina Isl., East End Rd., 1.29.2010 M.S. Caterino & K.J. Hopp *Heteromeles* / *Ceanothus* litter / CA BEETLE PROJ CBP0101066 [♂, SBNHM]. *CA: Los Angeles Co. 33.4598°N, 118.5268°W Santa Catalina Isl. Howlands Landing, i.30.2010 M.S. Caterino & K.J. Hopp *Rhus* litter / CA BEETLE PROJ CBP0101555 [♂, SBNHM]. *CA: Los Angeles Co. 32.8720°N, 118.4849°W San Clemente Island Norton Canyon, iii.29.2010 *Prunus* litter, M.S. Caterino / CA BEETLE PROJ CBP0101700 [♂, SBNHM]. *CA: Los Angeles Co. 32.8722°N, 118.4353°W San Clemente Island Upper Eagle Cyn iv.1.2010, M.S. Caterino litter *Quercus tomentella* / CA BEETLE PROJ CBP0102888 [♂, SBNHM]. *CA: Los Angeles Co. 32.9085°N, 118.4768°W San Clemente Island Horton Cyn., *Prunus* litter iii.31.2010, M.S. Caterino / CA BEETLE PROJ CBP0101823 [♂, SBNHM]. *CA: Los Angeles Co. 32.9097°N, 118.4772°W San Clemente Island Horton Cyn., *Prunus* litter iii.31.2010, M.S. Caterino / CA BEETLE PROJ CBP0101637 [♂, SBNHM]. *same data / CA BEETLE PROJ CBP0101640 [♂, SBNHM]. *CA: Los Angeles Co. 33.4178°N, 118.4727°W Santa Catalina Isl, i.30.2010 M.S. Caterino & K.J. Hopp *Quercus* litter / CA BEETLE PROJ CBP0101239 [♂, SBNHM]. *Pasadena March Cal. Dr.A. Fenyes / Ex coll. CARL FUCHS via E.R. Leach coll. 1971 gift to the California Academy of Sciences, Entom. [♂ CAS]. *Pom [Pomona?] Cal Mts 11.21 [1921] / Coll Hubbard & Schwarz (♂, NMNH). *Pom Cal Mts 11.21.91 / H.W. Wenzel Collection / *Sonoma isabellae* '76 (LeConte) det. DSChandler / OSUC 458016 [♀ OSUC]. *Pasadena, 7.5.97 [1897] Cal. Dr.A. Fenyes (♂, UMRM). *Pasadena, Cal. Dr.A. Fenyes / 1954 / Cornell U Lot. 200 Sub. 1954 Crew Coll. / *Sonoma isabellae* (LeC) Det. F.C. Fletcher. [LSAM]. **Riverside Co.:** *CA: Riverside Co. Palm Springs 79 28 Andreas Cn / Berlese # 79 -93 [♂, CSCA]. **San Bernardino Co.:** *CALIF: San Bernardino Co. Mentone 77-18 II-26-1977 K W Cooper / Berlesed from leaf litter flood debris / *Sonoma isabellae* (LeC.) '84 det. DSChandler [♂,

CSCA]. **San Diego Co.:** *Borego San Diego Co., Calif. IV-25-55 / R. Schuster Collector / Palm Cyn. / ♂ / 121 [2♂, CSCA]. ***Incertae sedis:*** *WDRichard-sonColl.1920 (♂, NMNH, on pin with 2♀ *Sonoma* sp.). *S. Cal. [♂, SEMC]. *SO. CALIF. / *Sonoma isabellae* Det. F.C. Fletcher / *Sonoma isabellae* (LeC.) DSChandler [♀, SEMC].

***Sonoma konkoworum* Chandler, 2003 – CA**

USA: CALIFORNIA: Shasta Co.: *USA: CA: Shasta Co. 1 mi. SE Shingletown 3500', III-13-2001 DSChandler, Ponderosa pine log & bark lit. / PARATYPE *Sonoma konkoworum* Chandler [♂, DCPC].

***Sonoma margemina* Park and Wagner, 1962 – AK, BC, OR, WA**

CANADA: BRITISH COLUMBIA: *B.C., Queen Charlotte Is. Ghost Creek Drain-age, Ghost Main Rd. 7.3 km NW Rennell Sound / 21.VIII.1983 83-103, Berlese of moss ex under deciduous shrubs around base of cedar [♂, ♀, CNC]. *B.C., Queen Charlotte Is. Graham Is. Mt. Needham J.M. Campbell / 28.VII.1983 83-44, 2600' Berlese of moss & alder litter [♀, CNC]. *B.C. Queen Charlotte Is., Graham I., 5mi E Rennell Sound, 1.VII 1984, R.S. Anderson // Sitka spruce/ hemlock/ cedar forest litter // CNC COLEO DNA 00162684 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162684 BOLD Proc. ID: CNCCJ577-13 [♀, CNC]. *B.C., Queen Charlotte Is. Graham Is. Mt. Needham J.M. Campbell / 28.VII.1983 83-44, 2600' Berlese of moss & alder litter / CNC COLEO DNA 00162683 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162683 BOLD Proc. ID: CNCCJ576-13 [♀, CNC]. *Masset Qu. Ch. Isl B.C. / Rev. Keene Collector [3♂, NMNH]. *Masset Qu. Ch. Isl B.C. / Rev. Keene Collector / Genitalia on slide # 1. Remtd. 9-25-1954 [♂, NMNH]. *CANADA: Brit. Col. Queen Charlotte Islands, Massett Rev. Keene Collr. [6♂, NMNH]. *Qu Ch II B.C. / H.W. Wenzel Collection / OSUC 458012 [♂, OSUC]. *Qu Ch II B.C. / H.W. Wenzel Collection / *Sonoma margemina* '76 Park & Wagner det. DSChandler / OSUC 458013 [♂, OSUC]. *Qu Ch II B.C. / H.W. Wenzel Collection / *S. parviceps* Make / OSUC 458014 [♂, OSUC]. *Qu Ch II B.C. / H.W. Wenzel Collection / OSUC 458015 [♀, OSUC]. *CANADA: B. C. Queen Charlotte Isds. Graham Island, Sleeping Beauty Mt., 19 July 1988 J. Ashe #47, nr snowbank [♂, ♀ SEMC]. *CAN; BC; Queen Charlotte Islands, Laskeek Bay, West Limestone I. ; 26 MAY – 15 JUN 2000; 52°54'36"N 131°37'24"W Allombert, Sylvian # : IO-3FNN-1 / Royal British Columbia Museum ENT001-009343 [♀, RBCM]. *Same data / ENT001-009349 [♀, RBCM]. *Same data; # : IO-3FSW-1 / ENT001-008495 [♀, RBCM]. *CAN; BC; Queen Charlotte Islands, Laskeek Bay, West Limestone I. ; 26 MAY – 15 JUN 2000; 52°54'38"N 131°37'19"W Allombert, Sylvian # : IO-1FNW-1 / ENT001-009330 [♀, RBCM]. *CAN; BC; Queen Charlotte Islands, Laskeek Bay, West Limestone I. *CAN; BC; Queen Charlotte Islands, Laskeek Bay, West Limestone I. ; 15 JUN – 07 JUL 2000; 52°54'36"N 131°37'24"W Allombert, Sylvian # : IO-3FNN-2 / Royal British Columbia Museum ENT001-008197 [♀, RBCM]. **USA: ALASKA:** *AK: Chichagof Is. pl.08; 57.9845, -135.20499; 14-15 Jul 2013; pitfall; S. Ridling; ♀; UAM100350366. *AK: Dall Isl. pl.01; 54.99768, -133.01714; 7/13/2011; pitfall; D. Sikes; UAM100330522. *AK: Dall Isl. pl.04; 54.99927, -133.02022; 7/13/2011; pitfall; D. Sikes; UAM100329892. *AK: Dall Isl. pl.13; 54.99403, -133.01569; 7/12/2010; pitfall; D. Sikes; UAM100330494. *AK: Dall Isl. pl.13; 54.99403, -133.01569; 7/13/2011; pitfall; D. Sikes; UAM100329904. *AK: Dall Isl. pl.13; 54.99403, -133.01569; 7/14/2012; pitfall; D. Sikes; UAM100329966. *AK: Dall Isl. pl.17; 54.99555, -133.01039; 7/13/2011; pitfall; D. Sikes; UAM100330531. *AK: Dall Isl. pl.17; 54.99555, -133.01039; 7/14/2012; pitfall; D. Sikes; UAM100329993. *AK: Dall Isl. pl.18; 54.99617, -133.00932; 7/13/2011; pitfall; D. Sikes; UAM100329917. *AK: Dall Isl. pl.19; 54.9967, -133.00807; 7/12/2010; pitfall; D. Sikes; 3 specimens; UAM100330526; UAM100330527; UAM100330528. *AK: Dall Isl. pl.19; 54.9967, -133.00807; 7/13/2011; pitfall; D. Sikes; UAM100329895. *AK: Hawthorne Peak pl.12; 58.24507, -134.25221; 20-21 Jul 2013; pitfall; S. Ridling; ♀; UAM100354157. *AK: Mahoney Mt. pl.18; 55.40448, -131.57642; 6-7 Jul 2013; pitfall; S. Ridling; ♀; UAM100348275. *AK: PoW Is. Coffman Cv; 55.98053, -132.8607; 13-26 MAY 2013; Berlese; J. A. Slowik, A. Hutton; ♂; UAM100366600. *AK: PoW Is. Coffman Cv; 55.98053, -132.8607; 13-26 MAY 2013; pitfall; J. A. Slowik, A. Hutton; ♂; UAM100366738. *AK: PoW Is. Coffman Cv; 55.98053, -132.8607; 25 JUN-9 JUL 2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:245165. *AK: PoW Is. Hatchery Ck.1; 55.92444, -132.93938; 13-27 MAY 2013; pitfall; J. A. Slowik, A. Hutton; 2♀, 1♂; UAM100366580; UAM100366631; UAM100366524. *AK: PoW Is. Hatchery Ck.2; 55.89356, -132.9437; 12-27 MAY 2013; pitfall; J. A. Slowik, A. Hutton; ♂; UAM100362038. *AK: PoW Is. Hatchery Ck.2; 55.89356, -132.9437; 18 May-2 June 2010; Lindgren; J. Stockbridge, C. Bickford; ♀; UAM:Ento:130493. *AK: PoW Is.

Hatchery Ck.4; 55.88285, -132.89795; 11-25JUN2012; pitfall; J.S., S. M., I. M.; ♀; UAM:Ento:240640. *AK: PoW Is. Hatchery Ck.4; 55.88285, -132.89795; 25JUN-9JUL2012; pitfall; J.S., S. M., I. M.; ♀; UAM:Ento:245163. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 11-25JUN2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:240637. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 15-28MAY2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:240625. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 25JUN-9JUL2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:245164. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 28MAY-11JUN2012; pitfall; J.S., S. M., I. M.; 2♂; UAM:Ento:240632; UAM:Ento:240633. *AK: PoW Is. Hatchery Ck.4; 55.88602, -132.8607; 28MAY-11JUN2012; Lindgren; J.S., S. M., I. M.; ♀; UAM:Ento:240638. *AK: PoW Is. Luck Point; 55.98261, -132.77986; 18 May-2 June 2010; Lindgren; J. Stockbridge, C. Bickford; ♂; UAM:Ento:130494. *AK: PoW Is. Stanley Ck. 1A; 55.87134, -133.06755; 14-28MAY2012; pitfall; J.S., S. M., I. M.; ♀; UAM:Ento:240631. *AK: PoW Is. Stanley Ck. 1A; 55.87134, -133.06755; 24JUL-6AUG2012; pitfall; J.S., S. M., I. M.; 1♀, 1♂; UAM100362155; UAM100362007. *AK: PoW Is. Stanley Ck; 55.79723, -133.13467; 12-26MAY2013; pitfall; J. A. Slowik, A. Hutton; ♂; UAM100362039. *AK: PoW Is. Stanley Ck; 55.79723, -133.13467; 24JUL-6AUG2012; pitfall; J.S., S. M., I. M.; ♂; UAM100362042. *AK: PoW Is. Stanley Ck; 55.79723, -133.13467; 25JUN-9JUL2012; pitfall; J.S., S. M., I. M.; 3♂; UAM:Ento:245336; UAM:Ento:245337; UAM:Ento:245339. *AK: PoW Is. Stanley Creek; 55.79726, -133.1363; 16-17 May 2013; forceps; D. S. Sikes, J. Stockbridge, J. Slowik; 2 specimens; UAM100335982; UAM100335984. *AK: PoW Is. Stanley Ck.; 55.79726, -133.1363; 25JUN-9JUL2012; pitfall; J.S., S. M., I. M.; ♀; UAM:Ento:245162. *AK: PoW Isl. nr Black Lk pl.04; 55.58842, -132.89409; 7/5/2003; pitfall; C. Bickford; 3 specimens; UAM100326922; UAM100327328; UAM100328266. *AK: PoW Isl. nr Black Lk pl.04; 55.58842, -132.89409; 7/8/2006; pitfall; C. Bickford; UAM100328747. *AK: PoW Isl. nr Black Lk pl.05; 55.58765, -132.8931; 7/8/2006; pitfall; C. Bickford; UAM100329692. *AK: PoW Isl. nr Black Lk pl.09; 55.58724, -132.89107; 7/8/2006; pitfall; C. Bickford; UAM100329666. *AK: PoW Isl. nr Black Lk pl.11; 55.59118, -132.89264; 7/7/2005; pitfall; C. Bickford; UAM100329835. *AK: PoW Isl. nr Black Lk pl.11; 55.59118, -132.89264; 7/8/2006; pitfall; C. Bickford; UAM100329676. *AK: PoW Isl. nr Black Lk; 55.59184, -132.89449; 7-10 JUL 2011; pitfall; C. Bickford; UAM100329198. *AK:ChilkatSt. Pk. 7miS Haines 31.VIII.88, 20m S&JPeck, forest moss & mushrooms [2♂, ♀, CNC]. *AK:Hyder, 10m near Stewart, BC 8.VIII.88 S&JPeck, forest fungi and moss [♂, CNC]. *AK:ChilkootLake 11miNNW Haines 31.VII.88, 20m S&JPeck, forest moss&slime molds [♀, CNC]. *ALAS,Kenai Mts. Ptarmigan Ck. Cpgd. 500-600' 26.V.78 Smetana & Becker [♂, CNC]. **OREGON: Benton Co.:** *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N, 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-010, berl., leaf & log litter on N-facing slope above creek, M. Thayer; ANMT site 1204 FIELD MUSEUM NAT. HIST. [♀, FMNH]. **Clackamas / Hood River Co.:** *Ore.Mt.Hood, Timber-line lodge Rd., 4500-5000', 28.VI.74 A. & D. Smetana / ♂ [♂, CNC]. **WASHINGTON: Pierce Co.:** *WASH. ,Mt.Rainier Nat.Pk.,Misqually R. ,4000',V.16.1968 Campbell&Smetana [♂, CNC]. *WASH.Mt.Rainier N.P. Nisqually River, 3900' 8.VIII.1973 A & Z & D Smetana / ♂ [♂, CNC]. *WASH.Mt.Rainier N.P. N. Puyallup River, 3700' 10.VIII.1973 A & Z & D Smetana [♀, CNC]. **Incertae sedis Co.:** *WASH.Olympic N.P. 4.0-6.0 mi SE Soleduck cmpg.2500-3100', 15.VIII.1979 JM & BA Campbell [1 specimen on card, CNC].

***Sonoma mayori* Ferro and Carlton, 2010 – TN**

USA: TENNESSEE: Sevier Co.: *USA: TN: Sevier Co. GSMNP Clingmans Dome N35.56324° 21 April 2011 W83.49931° CWD5 col. M. Ferro [♂, LSAM]. *Clingmans Dome:Tenn. / A. Nicolay IX.16.1941 [♂, NMNH].

***Sonoma olycalida* Park and Wagner, 1962 – BC, OR, WA**

CANADA: BRITISH COLUMBIA: *B.C., Tsawwassen V.19.1968 Campbell&Smetana / ♂ [♂, CNC]. **USA: OREGON: Benton Co.:** *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-011, Berl., leaf & log litter on flat btwn creek and trailhead, A. Newton; ANMT site 1204 FIELD MUSEUM NAT. HIST. [♀, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 44°30.52'N, 123°33.56'W, 17.ix.2012, old-growth *Abies procera* forest; FMHD#2012-034, berl., log & bark litter around huge stump, M. Thayer; ANMT site 1204 [2♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Mary Peak, Meadowedge Tr. (W part), 1050-1070 m,

1060m, 44°30.52'N, 123°33.56'W, 8.xi.2011, old-growth *Abies procera* forest; FMHD#2011-001, berl., leaf & log litter, A. Newton & M. Thayer; ANMT site 1204 FIELD MUSEUM NAT. HIST. [♀, FMNH]. **Clackamas Co.:** *USA: OR: Clackamas Co., Mt. Hood N.F., Hwy. 173, former Alpine Cpgd., 1654m, 45°19.296'N, 121°42.357'W, 24.vi.2006, *Abies-Tsuga* forest, ca. 1/4 / snow covered; FMHD# 2006-151, berl., leaf and log litter, M. Thayer & A. Newton; site ANMT 1207 FIELD MUS. NAT. HIST. / **EX-EMPLAR** additional specimens in 95+ % ethanol for DNA extraction [♂, FMNH]. **Lane Co.:** *ORE. Lane Co., I.2 mi.W West Lava Cpgd. McKenzie Pass Hwy.242 4900', 16.X.1971 / E. M. Benedict, EB-34, coniferous duff, soil, rotted wood. / ♀ [♀, CNC]. *ORE. Lane Co., I.2 mi.W West Lava Cpgd. McKenzie Pass Hwy.242 4900', 16.X.1971 / E. M. Benedict, EB-34, coniferous duff, soil, rotted wood. / ♀ / CNC COLEO DNA 00162687 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162687 BOLD Proc. ID: CNCCJ580-13 / [♀, CNC]. **WASHINGTON: Clallam Co.:** *Washington: Clallam Co. Olympic National Park Hurricane Ridge Elev. 4444' Barrier Pitfall Trap V/3/2014 – V/11/2014 leg. Ron H. McPeak [2♀, RJRC].

***Sonoma parviceps* (Mäklin, 1852) – AK, BC, CA, OR, WA**

CANADA: BRITISH COLUMBIA: *CANADA, British Columbia, Queen Charlotte Islands, Graham Island, 0.2 km E of Kiusta village site, 8 m, 17 Aug. 1983, Stop #83-109 D.H. & M.D. Kavanaugh colls. / D. H. Kavanaugh Collection / QUEEN CHARLOTTE ISLANDS EXPEDITION – 1983 *** D. H. & M. D. Kavanaugh Calif. Acad. Sciences [3♂, CAS]. *CANADA, British Columbia, Queen Charlotte Islands, Lyell Island, at mouth of Gate Creek 3-10 m 10 Aug. 1983, Stop #83-89B D.H. & M.D. Kavanaugh / D. H. Kavanaugh Collection / QUEEN CHARLOTTE ISLANDS EXPEDITION – 1983 *** D. H. & M. D. Kavanaugh Calif. Acad. Sciences [♀, CAS]. *BC: Bella Coola 14.VII.88, 3m S&JPeck, forest litteratseacoast [♀, CNC]. *Diamond Head Trail, Garibaldi Pk. VIII-8-53 nr. Squamish, B.C. / 3200 ft. S.D.Hicks / ♀ [♀, CNC]. *B.C., Pr. Rupert Mt. Hays, 1-2000' VI.29.1968 Campbell&Smetana / ♀ [2♀, CNC]. *BC: 10kmE Prince Rupert, Grassy Bay 22.VII-18.VIII.88, 20m S&JPeck, mossy wet forest malaise-FIT [2♂, ♀, CNC]. *B.C. Queen Charlotte Is. .Graham I. ,4miS Fort Clements, 8.VII 1984, R.S.Anderson / Sitka spruce/ hemlock/ cedar forest litter / CNC COLEO DNA 00162689 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162689 BOLD Proc. ID: CNCCJ582-13 [♂, CNC]. *B.C. Queen Charlotte Is. .Graham I. ,4miS Fort Clements, 8.VII 1984, R.S.Anderson // Sitka spruce/ hemlock/ cedar forest litter [♀, CNC]. *B.C., Mt. Garibaldi 14 mi.N. Squamish 4000', V.30.1968 Campbell&Smetana / ♀ [♀, CNC]. *B.C. Prince Rupert Park Ave. Cpgd., 10m 10.VIII.1988 S.&J. Peck. moss & litter, rainforest / CNC COLEO DNA 00162690 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162690 BOLD Proc. ID: CNCCJ583-13 [♂, CNC]. *B.C. Prince Rupert Park Ave. Cpgd., 10m 10.VIII.1988 S.&J. Peck. moss & litter, rainforest [♂, CNC]. *B.C. Prince Rupert Park Ave. Campgd. 10.VIII.88, 10m S&JPeck, rain forest moss&litter [♂, ♀, CNC]. *B.C. Prince Rupert Park Ave. Cpdg. forest 22.VII.88, 10m tree base litter mossy forest [♂, ♀, CNC]. *B.C. Queen Charlotte Is. ,Graham I. ,4miS Port Clements, 8.VII 1984, R.S.Anderson // Sitka spruce / hemlock/ cedar forest litter [♀, CNC]. *B.C. Queen Charlotte Is. ,Graham I. ,1miNW Tlell, 27.VI-8.VII. 1984, R.S.Anderson // Sitka spruce hemlock forest [♂, CNC]. *Upper Carmanah Valley British Columbia, Canada UTM: 10U CJ 802998 30 IX - 16 X 1991 N. Winchester FF.MT1 [♀, CNC]. *Upper Carmanah Valley British Columbia, Canada UTM: 10U CK 803005 31 VII - 11 VIII 1991 N. Winchester CC.PT2 [♀, CNC]. *Upper Carmanah Valley British Columbia, Canada UTM: 10U CK 803005 28 VIII - 9 IX 1991 N. Winchester CC.PT3 / CNC COLEO DNA 00162691 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162691 BOLD Proc. ID: CNCCJ584-13 [♂, CNC]. *CANADA: BC: 10 km E Prince Rupert, 20m Grassy Bay, VII 22-1988, S&JPeck, moss and rotten wood [2♀, CNC]. *B.C. , Shames R. 21 km.W. Terrace 2km.N. Hwy. 16 24.VIII.1983 J.M.Campbell / 83-112 , sifting alder and decid. shrub litter [♂, ♀, CNC]. *B.C., Pr. Rupert Mt. Hays, 1-2000' VI.29.1968 Campbell&Smetana / ♀ [♀, CNC]. *B.C. , 25 mi.E. Hope, VI.21.1968 Campbell& Smetana / ♀ [♀, CNC]. *CANADA, British Columbia, Queen Charlotte Islands, Lyell Island, at mouth of Gate Creek, 3-10 m 10 Aug. 1983, Stop #83-89B D.H. & M.D. Kavanaugh / D. H. Kavanaugh Collection / QUEEN CHARLOTTE ISLANDS EXPEDITION – 1983 **** D. H. & M. D. Kavanaugh Calif. Acad. Sciences [♂, CNC]. *B.C. Glacier N.P. 5.6miE E. Boulder on Hwy.1, 11.V-15.VI.1984 / R.S.Anderson flight intercept trap. [♂, CNC]. *B.C. , Queen Charlotte Is. 7.3 km NW Rennell Sound Rd, Ghost Main Rd, 800 ft. 83-23, 800' 18.VII.1983 J.M.Campbell sifting moss [♂, CNC]. *B.C. , Queen Charlotte Is. Lyall Is, Gate Cr. J.M.Campbell / 10.VIII.1983 83-71, sifting alder litter [♂, CNC]. *B.C. , Port Edward, VI.28.1968 Camp-

bell& Smetana / ♂ [♂, CNC]. *B.C., Queen Charlotte Is. Kiusta, Graham Is., J.M.Campbell / 18.VIII.1983 83-97, Berlese of litter at base of trees [♀, CNC]. *B.C., Queen Charlotte Is. Graham Is. Mt. Needham J.M.Campbell / 28.VII.1983 83-44, 2600' Berlese of moss & alder litter [♀, CNC]. *B.C. Queen Charlotte Is., 7.9 km. NW. Q.C. City / 29.VII-4.VIII. 1983, J.M.Campbell flight intercept [♀, CNC]. *B.C. Courtney Forbidden Plateau nr. Courtney Lookout 25.VII.1979 I.M.Smith / damp moss on upper slopes [♀, CNC]. *BC: 10kmE Prince Rupert, Grassy Bay 22.VII.88, 20m S&JPeck, mossy logs&stump litter [♀, CNC]. *B.C., 12 mi E. Hope, VI.2.1968 Campbell& Smetana / ex river debris / ♂ [♂, CNC]. *QCI [Queen Charlotte Islands, presumably] 168. / ♂ / CNC / HFW [♂, CNC]. *Metlakatla. Brit. Columbia. J.H.Keen. 1915—355. / 1 [♀, NMNH]. *Masset QCharIs B.C. JHKeen [♀, NMNH]. *Masset Qu.Ch.Isl B.C. / Rev. Keene Collector [3♂, ♀, NMNH]. *CAN; BC; Queen Charlotte Islands, Graham Island, Spirit Lake; 02 AUG 2001; 53°16'25"N 132°00'20"W Allombert, Sylvian #: GG-01-019 / Royal British Columbia Museum ENT001-009164 (♀ RBCM). *Upper Carmanah Valley British Columbia, Canada UTM: 10U CJ 802998 10 IX – 29 IX 1991 N. Winchester FF.PT2 (♂, RBCM). *CAN; BC; Queen Charlotte Islands, Laskeek Bay, West Limestone I.; 26 MAY – 15 JUN 2000; 52°54'38"N 131°37'19"W Allombert, Sylvain #: IO-1FNW-1 / ENT001-009307 (♀, RBCM). **USA: ALASKA:** *AK: PoW Is. Stanley Ck; 55.79723, -133.13467; 25-May-09; Berlese; J. A. Slowik, A. Hutton; 2♂; UAM100362040; UAM100362041. *AK: PoW Is. Stanley Ck; 55.79723, -133.13467; 23-Jul-08; Berlese; J.S., S. M., I. M.; 2♂; UAM:Ento:245353; UAM:Ento:245354. *AK: PoW Is. Stanley Ck.; 55.79726, -133.1363; 27 APR-15 May 2010; pitfall; J. Stockbridge; 1♀, 1♂; UAM:Ento:121841; UAM:Ento:121842. *AK: PoW Is. Stanley Ck.; 55.79726, -133.1363; 25JUN-9JUL2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:245159. *AK: PoW Is. Stanley Ck.; 55.79726, -133.1363; 9-24JUL2012; Lindgren; J.S., S. M., I. M.; ♀; UAM:Ento:248502. *AK: PoW Is. Stanley Ck.; 55.79726, -133.1363; 23-Jul-08; Berlese; J.S., S. M., I. M.; ♀; UAM:Ento:248503. *AK: PoW Is. Stanley Ck.; 55.79726, -133.1363; 9-24JUL2012; pitfall; J.S., S. M., I. M.; 1♂, 1♀; UAM:Ento:248504; UAM:Ento:248505. *AK: PoW Is. Stanley Ck.; 55.79901, -133.11782; 12-26MAY2013; pitfall; J. A. Slowik, A. Hutton; ♀; UAM100362031. *AK: PoW Is. Stanley Ck.; 55.79901, -133.11782; 10-May-06; Berlese; J. Stockbridge; ♂; UAM:Ento:121846. *AK: PoW Is. Stanley Ck.; 55.79901, -133.11782; 25JUN-9JUL2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:245160. *AK: PoW Is. Stanley Ck.; 55.87126, -133.06697; 11 May-22 May 2010; Lindgren; J. Stockbridge; 1♀, 1♂; UAM:Ento:121848; UAM:Ento:121849. *AK: PoW Is. Stanley Ck. 1A; 55.87134, -133.06755; 24JUL-6AUG2012; pitfall; J.S., S. M., I. M.; ♂; UAM100362008. *AK: PoW Is. Stanley Ck. 1A; 55.87134, -133.06755; 14-28MAY2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:240623. *AK: PoW Is. Stanley Ck. 1B; 55.872, -133.06523; 12-26MAY2013; Lindgren; J. A. Slowik, A. Hutton; ♂; UAM100362032. *AK: PoW Is. Hatchery Ck.4; 55.88285, -132.89795; 26-May-09; Berlese; J. A. Slowik, A. Hutton; ♂; UAM100366555. *AK: PoW Is. Hatchery Ck.4; 55.88285, -132.89795; 13-27MAY2013; pitfall; J. A. Slowik, A. Hutton; ♀; UAM100370464. *AK: PoW Is. Hatchery Ck.4; 55.88285, -132.89795; 27 APR-15 May 2010; pitfall; J. Stockbridge; ♀; UAM:Ento:121843. *AK: PoW Is. Hatchery Ck.4; 55.88285, -132.89795; 18-May-06; Berlese; J. Stockbridge; 2♂; UAM:Ento:121844; UAM:Ento:121845. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 13-27MAY2013; Lindgren; J. A. Slowik, A. Hutton; ♀; UAM100370465. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 11-25JUN2012; Lindgren; J.S., S. M., I. M.; ♂; UAM:Ento:240612. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 9-24JUL2012; pitfall; J.S., S. M., I. M.; UAM100348503. *AK: PoW Is. Hatchery Ck.4; 55.88433, -132.89734; 17-Jul-08; Berlese; J.S., S. M., I. M.; UAM100348504. *AK: PoW Is. Hatchery Ck.4; 55.88602, -132.8607; 2-Aug-08; Berlese; J.S., S. M., I. M.; 2♂; UAM100362009; UAM100362010. *AK: PoW Is. Hatchery Ck.4; 55.88602, -132.8607; 24JUL-6AUG2012; Lindgren; J.S., S. M., I. M.; ♀; UAM100362036. *AK: PoW Is. Hatchery Ck.4; 55.88602, -132.8607; 13-27MAY2013; pitfall; J. A. Slowik, A. Hutton; ♀; UAM100370462. *AK: PoW Is. Hatchery Ck.4; 55.88602, -132.8607; 13-27MAY2013; Lindgren; J. A. Slowik, A. Hutton; ♀; UAM100370463. *AK: PoW Is. Hatchery Ck.4; 55.88602, -132.8607; 5-May-06; Berlese; J. Stockbridge; ♀; UAM:Ento:121847. *AK: PoW Is. Hatchery Ck.4; 55.88602, -132.8607; 5-Jul-08; Berlese; J.S., S. M., I. M.; ♂; UAM:Ento:245338. *AK: PoW Is. Hatchery Ck.2; 55.89356, -132.9437; 26-May-09; Berlese; J. A. Slowik, A. Hutton; ♂; UAM100362033. *AK: PoW Is. Hatchery Ck.2; 55.89356, -132.9437; 24JUL-6AUG2012; Lindgren; J.S., S. M., I. M.; ♂; UAM100362156. *AK: PoW Is. Hatchery Ck.2; 55.89356, -132.9437; 18 May-2 June 2010; Lindgren; J. Stockbridge, C. Bickford; 2♀; UAM:Ento:130496; UAM:Ento:130497. *AK: PoW Is. Hatchery Ck.2; 55.89356, -132.9437; 23-May-08; Berlese; J.S., S. M., I. M.; ♂; UAM:Ento:240624. *AK: PoW Is. Hatchery Ck.2; 55.89356, -132.9437; 5-Jul-08; Berlese; J.S., S. M., I. M.; ♂; UAM:Ento:245334. *AK: PoW Is. Hatchery Ck.1;

55.92444, -132.93938; 15-28MAY2012; pitfall; J.S., S. M., I. M.; 1♂, 1♀; UAM:Ento:240613; UAM:Ento:240627. *AK: PoW Is: Hatchery Ck.1; 55.92524, -132.95054; 24JUL-7AUG2012; pitfall; J.S., S. M., I. M.; ♀; UAM100362014. *AK: PoW Is: Hatchery Ck.1; 55.92524, -132.95054; 13-27MAY2013; pitfall; J. A. Slowik, A. Hutton; ♀; UAM100367199. *AK: PoW Is: Hatchery Ck.1; 55.92524, -132.95054; 11-25JUL2012; Lindgren; J.S., S. M., I. M.; ♂; UAM:Ento:240614. *AK: PoW Is: Hatchery Ck.1; 55.92524, -132.95054; 15-28MAY2012; Lindgren; J.S., S. M., I. M.; ♀; UAM:Ento:240626. *AK: PoW Is: Hatchery Ck.1; 55.92654, -132.95645; 29-Jul-08; Berlese; J.S., S. M., I. M.; 2♂, 1♀; UAM100362011; UAM100362012; UAM100362013. *AK: PoW Is: Hatchery Ck.1; 55.92654, -132.95645; 18 May-4 June 2010; Lindgren; J. Stockbridge, C. Bickford; ♂; UAM:Ento:130491. *AK: PoW Is: Hatchery Ck.1; 55.92654, -132.95645; 3-Jun-06; Berlese; J. Stockbridge, C. Bickford; ♂; UAM:Ento:130492. *AK: PoW Is: Hatchery Ck.1; 55.92654, -132.95645; 17-Jun-08; Berlese; J.S., S. M., I. M.; ♂; UAM:Ento:240615. *AK: PoW Is. Luck Lk. 3 Rd.; 55.95347, -132.7708; 26JUL-9AUG2012; Lindgren; J.S., S. M., I. M.; 2♀; UAM100362025; UAM100362026. *AK: PoW Is. Luck Lk. 3 Rd.; 55.95347, -132.7708; 29-Jul-08; Berlese; J.S., S. M., I. M.; ♂; UAM100362027. *AK: PoW Is. Luck Lk. 3 Rd.; 55.95347, -132.7708; 27-May-06; Berlese; J. Stockbridge, C. Bickford; ♂; UAM:Ento:130498. *AK: PoW Is. Luck Lk. 3 Rd.; 55.95347, -132.7708; 13-27JUN2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:245156. *AK: PoW Is. Luck Lk. 3 Rd.; 55.95347, -132.7708; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; 2 specimens; UAM100348520; UAM100348521. *AK: PoW Is. Luck Lk. 3 Rd.; 55.95347, -132.7708; 11-26JUL2012; pitfall; J.S., S. M., I. M.; UAM100348522. *AK: PoW Is. Luck Lk. 2 Rd.; 55.96855, -132.75615; 13-27JUN2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:245157. *AK: PoW Is. Luck Lk. 2 Rd.; 55.96855, -132.75615; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; UAM100348523. *AK: PoW Is. Luck Lk. 1 Rd.; 55.97805, -132.75456; 17-Jun-08; Berlese; J.S., S. M., I. M.; ♂; UAM:Ento:245158. *AK: PoW Is. Luck Lk. 1 Rd.; 55.97805, -132.75456; 15-Jul-08; Berlese; J.S., S. M., I. M.; UAM100348547. *AK: PoW Is. Luck Point 2B; 55.97939, -132.77216; 26JUL-9AUG2012; pitfall; J.S., S. M., I. M.; ♂; UAM100362030. *AK: PoW Is. Luck Point 2B; 55.97939, -132.77216; 14-27JUN2012; Lindgren; J.S., S. M., I. M.; ♀; UAM:Ento:240628. *AK: PoW Is. Coffman Cv; 55.9795, -132.86256; 24JUL-7AUG2012; Lindgren; J.S., S. M., I. M.; ♀; UAM100362015. *AK: PoW Is. Coffman Cv; 55.9795, -132.86256; 24JUL-7AUG2012; pitfall; J.S., S. M., I. M.; ♂; UAM100362157. *AK: PoW Is. Coffman Cv; 55.9795, -132.86256; 11-25JUN2012; pitfall; J.S., S. M., I. M.; ♂; UAM:Ento:240611. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 26JUL-9AUG2012; Lindgren; J.S., S. M., I. M.; 4♂; UAM100362016; UAM100362017; UAM100362018; UAM100362019. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 14-26MAY2013; pitfall; J. A. Slowik, A. Hutton; 1♀, 1♂; UAM100367201; UAM100367202. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 27JUN-11JUL2012; pitfall; J.S., S. M., I. M.; ♀; UAM:Ento:245161. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 10-Jul-08; Berlese; J.S., S. M., I. M.; ♂; UAM:Ento:245166. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 27JUN-11JUL2012; Lindgren; J.S., S. M., I. M.; ♀; UAM:Ento:245167. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; UAM100348505. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 25-Jul-08; Berlese; J.S., S. M., I. M.; UAM100348506. *AK: PoW Is. Luck Point 2A; 55.97953, -132.77156; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; UAM100348525. *AK: PoW Is. Coffman Cv; 55.98053, -132.8607; 13-26MAY2013; pitfall; J. A. Slowik, A. Hutton; ♂; UAM100367200. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 26JUL-9AUG2012; Lindgren; J.S., S. M., I. M.; ♀; UAM100362020. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 14-26MAY2013; pitfall; J. A. Slowik, A. Hutton; ♀; UAM100367203. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 25-May-09; Berlese; J. A. Slowik, A. Hutton; ♂; UAM100367204. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 18 May-2 June 2010; pitfall; J. Stockbridge, C. Bickford; 1♀, 1♂; UAM:Ento:130489; UAM:Ento:130490. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 9 July-1 Aug 2010; Lindgren; J. Stockbridge, C. Bickford; 1♀, 1♂; UAM:Ento:155816; UAM:Ento:155817. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 10-Jul-08; Berlese; J.S., S. M., I. M.; ♀; UAM:Ento:245335. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; UAM100348507. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 25-Jul-08; Berlese; J.S., S. M., I. M.; 2 specimens; UAM100348508; UAM100348509. *AK: PoW Is. Luck Pt.; 55.98256, -132.77943; 11-26JUL2012; pitfall; J.S., S. M., I. M.; UAM100348527. *AK: PoW Is. Luck Point; 55.98261, -132.77986; 26JUL-9AUG2012; Lindgren; J.S., S. M., I. M.; ♀; UAM100362021. *AK: PoW Is. Luck Point; 55.98261, -132.77986; 26JUL-9AUG2012; pitfall; J.S., S. M., I. M.; ♂; UAM100362022. *AK: PoW Is. Luck Point; 55.98261, -132.77986; 14-26MAY2013; pitfall; J. A. Slowik, A. Hutton; ♀; UAM100366791. *AK: PoW Is. Luck Point; 55.98261,

-132.77986; 18 May-2 June 2010; pitfall; J. Stockbridge, C. Bickford; ♀; UAM:Ento:130495. *AK: PoW Is. Luck Point; 55.98261, -132.77986; 26-Jun-08; Berlese; J.S., S. M., I. M.; ♀; UAM:Ento:240630. *AK: PoW Is. Luck Point; 55.98261, -132.77986; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; 2 specimens; UAM100348510; UAM100348511. *AK: PoW Is. Luck Point 1A; 55.98452, -132.78786; 26JUL-9AUG2012; Lindgren; J.S., S. M., I. M.; 2♂; UAM100362028; UAM100362029. *AK: PoW Is. Luck Point 1A; 55.98452, -132.78786; 18 May-2 June 2010; Lindgren; J. Stockbridge, C. Bickford; ♂; UAM:Ento:130499. *AK: PoW Is. Luck Point 1A; 55.98452, -132.78786; 26-Jun-08; Berlese; J.S., S. M., I. M.; 2♂; UAM:Ento:240608; UAM:Ento:240609. *AK: PoW Is. Luck Point 1A; 55.98452, -132.78786; 14-27JUN2012; Lindgren; J.S., S. M., I. M.; ♂; UAM:Ento:240610. *AK: PoW Is. Luck Point 1A; 55.98452, -132.78786; 11-26JUL2012; pitfall; J.S., S. M., I. M.; UAM100348512. *AK: PoW Is. Luck Point 1A; 55.98452, -132.78786; 25-Jul-08; Berlese; J.S., S. M., I. M.; 2 specimens; UAM100348513; UAM100348514. *AK: PoW Is. Luck Point 1A; 55.98452, -132.78786; 11-26JUL2012; pitfall; J.S., S. M., I. M.; UAM100348528. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 26JUL-9AUG2012; Lindgren; J.S., S. M., I. M.; ♀; UAM100362023. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 26JUL-9AUG2012; pitfall; J.S., S. M., I. M.; ♂; UAM100362024. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 14-26MAY2013; Berlese; J. A. Slowik, A. Hutton; ♀; UAM100366548. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 14-26MAY2013; Lindgren; J. A. Slowik, A. Hutton; ♀; UAM100366596. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 18 May-2 June 2010; Lindgren; J. Stockbridge, C. Bickford; ♀; UAM:Ento:130500. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 14-27JUN2012; Lindgren; J.S., S. M., I. M.; ♀; UAM:Ento:240629. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 11-26JUL2012; pitfall; J.S., S. M., I. M.; UAM100348515. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 25-Jul-08; Berlese; J.S., S. M., I. M.; 3 specimens; UAM100348516; UAM100348517; UAM100348518. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 20 June-5 July 2011; Lindgren; J. Stockbridge, B. Wong; ♀; UAM100376192. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 31-Jul-06; Berlese; J. Stockbridge, C. Bickford; ♂; UAM100376193. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 11-26JUL2012; Lindgren; J.S., S. M., I. M.; 2♂; UAM100376187; UAM100376188. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 13-Jun-08; Berlese; J.S., S. M., I. M.; ♂; UAM100376190. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 2-27 June 2010; pitfall; J. Stockbridge, C. Bickford; ♂; UAM100376194. *AK: PoW Is. Luck Point 1B; 55.98497, -132.787; 13-Jun-08; Berlese; J.S., S. M., I. M.; ♂; UAM100376189. *AK: Wrangell, For. Serv. Office; 56.4749, -132.375; 8-23 April 2009; pitfall; S. Wise-Eagle; ♀; UAM100328140. *AK:ChilkatSt.Pk. 7miS Haines 31.VIII.88, 20m S&JPeck, forest moss & mushrooms [♂, CNC]. *AK:Hyder, 10m near Stewart, BC 8.VIII.88 S&JPeck, forest fungi and moss [♂, CNC]. *AK: 9miN Skagway Dyea, S&JPeck 28.VII.88, 10m foresttreebase mossandlitter [2♀, CNC]. *AK:MosquitoLake 29miNW Haines 1.VIII.88, S&JPeck 40m, coniferforest moss on logs&fungi [2♀, CNC]. **CALIFORNIA: Humboldt Co.:** *Fieldbrook [?].5.03 Cal / HSBarber Collector [♀, NMNH]. **San Luis Obispo Co.:** *CA: San Luis Obispo Co. 35.5392°N, 121.0813°W UC Rancho Marino Res. v.7-28.2009 FIT M.S. Caterino / CA BEETLE PROJ CBP0093544 [♂, SBNHM]. **Santa Clara Co.:** *LosGatos Cal / CollHubbard &Schwarz [♀, NMNH]. **Incertae sedis Co.:** *StaCruz Mts Cal / A Koebele Collector [♀, NMNH]. **OREGON: Benton Co.:** *OREGON: Benton Co. Sulphur Springs 6mi. N Corvallis III-26-1969 E.M. Fisher coll. / Sonoma parviceps '90 det. DSChandler [♂, CSCA]. *ORE. Mary's Peak 8 mi.W.Philomath 4000', V.9.1968 Campbell&Smetana [♀, CNC]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (top part), 1189-1197 m, 44°30.417'N, 123°33.12'W, 17.ix.2012, old-growth *Abies procera* forest, FMHD#2012-030, berl., log & litter, A. Newton & M. Thayer; ANMT site 1245 [♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-011, Berl., leaf & log litter on flat btwn creek and trailhead, A. Newton; ANMT site 1204 FIELD MUSEUM NAT. HIST. [♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W part), 1050-1070 m, 44°30.52'N, 123°33.56'W, 17.ix.2012, old growth *Abies procera* forest; FMHD#2012-033, berl., log & litter, A. Newton; ANMT site 1204 [♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Mary Peak, Meadowedge Tr. (W part), 1050-1070 m, 1060m, 44°30.52'N, 123°33.56'W, 8.xi.2011, old-growth *Abies procera* forest; FMHD#2011-001, berl., leaf & log litter, A. Newton & M. Thayer; ANMT site 1204 FIELD MUSEUM NAT. HIST. [♂, FMNH]. USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W pt), 1050-1070 m, 1060m, 44°30.52'N 123°33.56'W, 16.v.2012, old-growth *Abies procera* forest; FMHD#2012-011, Berl., leaf & log litter on flat btwn creek and trailhead, A. Newton; ANMT site 1204 FIELD MUSEUM NAT. HIST. [♀, FMNH]. *ORE., Marys Pk T12SR7W SW 1/4 SE1/4 Sec 20 4-VI-66

JF Cornell & DL Mays under Noble Fir logs / J.F. Cornell Collection N.C. State Univ. Raleigh [♂, EDNC]. *ORE., Marys Pk R7WT12S SW 1/4 SE 1/4 Sec 20 10-VI-66 JF Cornell under Noble Fir logs / J.F. Cornell Collection N.C. State Univ. Raleigh [♂, EDNC]. *Oregon, Benton Co. 14 mi. S. Corvallis on Bellfountain Rd. T13S R6WSec19SE¼SE¼ 27June 1966 J. F. & S.J. Cornell *Neotoma fuscipes* nest / J.F. Cornell Collection N.C. State Univ. Raleigh [♂, EDNC]. **Coos Co.:** *USA: OR. Coos Co. Myrtle Grove Pk. Millicoma Riv. 2 mi N, 12 mi E North Bend 200' VIII-25-1973 red alder tree hollow E.M. Benedict [♂, CNC]. **Linn Co.:** *USA: Ore., Linn Co., Willamette Nat. For., Lost Prairie Cpgd., Hwy. 20, 31-VIII-1986 FMHD #86-478, ex. Fomitopsis pinicola, J.S. Ashe 1986-104 [♂, FMNH]. **Polk Co.:** *RileyPeak Polk Co. Oregon XII.1976 [2♀, NMNH]. **Tillamook Co.:** *ORE. Tillamook Co. Cape Falcon Cove app.0.5miN Man-zanita, 13.VII.73 / E.M. Benedict EB-1237, 200' moss & duff. / ♂ [♂, CNC]. **WASHINGTON: Clallam Co.:** *LaPush Wash Aug 10 1929 C. R. Ciosby [or LaPush, Ciosby]. [LSAM]. **Island Co.:** *Wash: Lopez Is. Island Co. IV/2-4/1977 J. Heath / Sonoma parviceps (Maklin) '88 det. DSChandler [♀, WSU]. **King Co.:** *Cedar-Fir Pseudocrotch Seward St.Pk. Seattle, King Co; WASHINGTON 16. viii.1961 W.Suter leg. [♂, FMNH]. **Pierce Co.:** *WASH: Mt.Rainer N.P. Carbon River, 2-3000' 3.X.1954 B.Malkin & Alan Bryan / C.N.H.M. 1960 Borys Malkin Coleoptera Colln. [♀, FMNH]. **Incertae sedis Co.:** *WASH.Olymp.N.P.01. Hot Spgs.Boulder.Crk. 2200-2500'.29.VII. 1973.A&Z&D Smetana / ♂ / CNC COLEO DNA 00162688 / Barcode of Life DNA voucher specimen SmpleD CNC COLEO 00162688 BOLD Proc. ID: CNCCJ581-13 [♂, CNC]. *WASH.Olympic N.P. Soleduck Cmpg., 1640' 13.VIII.1979, JM & BA Campbell [4♀, CNC].

***Sonoma petersi* Chandler, 1986 – CA, OR**

USA: CALIFORNIA: Mendocino Co.: *Little River Mendo. Co. Calif VIII.18.54 / J. R. Helfer Colr. / ♂ / Sonoma corticina Casey / Sonoma cortina Csy Det. R. O. Schuster [♂, CSCA]. **Shasta Co.:** *CALIF: Shasta Co. Buckhorn Summit II-15-1983 T.R. Haig, Coll. / Berlesed from Oak Duff / Sonoma petersi 90 det. DSChandler [♂, CSCA]. **Incertae sedis Co.:** *Cal [red line under "C"] / CollHubbard & Schwarz (♂, NMNH).

***Sonoma priocera* Marsh and Schuster, 1962 – OR**

USA: OREGON: Benton Co.: *ORE., Mary's Peak 8mi.W.Philomath 4000',V.9.1968 Campbell&Smetana [♂, CNC]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (W part), 1050-1070 m, 44°30.52'N, 123°33.56'W, 17.ix.2012, old growth *Abies procera* forest; FMHD#2012-033, berl., log & litter, A. Newton; ANMT site 1204 [♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Mary's Peak, Meadowedge Tr. (W part), 1050-1070 m, 44°30.52'N, 123°33.56'W, 21.vi.2006, old growth *Abies procera*; / FMHD#2006-144, berl., leaf & log litter, site AMNT 1204 FIELD MUS. NAT. HIST. / **EXEMPLAR** additional specimens in 95+ % ethanol for DNA extraction 2 [♂, FMNH]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak, Meadowedge Tr. (top part), 1180-1197 m, 1193m, 44°30.417'N, 123°33.12'W, 17.ix.2012, / old-growth *Abies procera* forest; FMHD#2012-030, berl., log & leaf litter A. Newton & M. Thayer ANMT site 1245 FIELD MUS. NAT. HIST. / ***VOUCHER*** Associated with larva(e) 1? / **EXEMPLAR** additional specimens in 95+ % ethanol for DNA extraction 2 [♂, FMNH].

***Sonoma repanda* Marsh and Schuster, 1962 – CA**

USA: CALIFORNIA: Santa Clara Co.: *3.5mi SE Saratoga Gap SantaClaraCo.Calif. IV-19-1976 / Berlesed from Douglas Fir Oak Duff / Fred G Andrews Collector / Sonoma repanda 90 det. DSChandler [♂, CSCA].

***Sonoma rubida* Casey, 1894 – CA**

USA: CALIFORNIA: Monterey Co.: *USA: CA: Monterey Co., Los Padres NF, Nacimiento Fergusson Rd. at pass (7mi from CA Hwy. 1), 840m, 36°00.7'N, 121°27.1'W, 18.III.1995, *Quercus-Arbutus menziesii-Pinus coulteri* woodland; FMHD #95-47, berl., forest leaf & log litter, A. Newton & M. Thayer 953 FIELD MUSEUM NAT. HIST. [♂, FMNH]. **Santa Clara Co.:** *CALIF: Santa Clara Co., 9 mi. W. Saratoga V-18-1976 S. C. Kuba, collr. / Berlesed from Redwood Duff / Sonoma rubida '92 det. DSChandler [♂, CSCA]. *LosGatos Cal / CollHubbard & Schwarz (2♂, NMNH). *LosGatos Cal / H.W.Wenzel Collection / S. corticina Coy / OSUC 458021 [♀, OSUC]. **Santa Cruz Co.:** *Santa Cruz Co. VI.96 CAL. / COLL D BY F.W. NUNENMACHER / J. E. Blum Coll-ection, gift of W. H. Nutting. Calif.Acad. Sci.

Accession 1968 [♂, CAS]. *StaCruz Mts.Cal / H.W.Wenzel Collection / Sonoma rubida '76 Casey det DSChandler / OSUC 458022 [♂, OSUC]. *StaCruz Mts.Cal / H.W.Wenzel Collection / OSUC 458023 [♂, OSUC]. *StaCruz Mts.Cal / H.W.Wenzel Collection / OSUC 458024 [♀, OSUC]. *StaCruz Mts.Cal / H.W.Wenzel Collection / OSUC 458025 [♀, OSUC].

***Sonoma russelli* Chandler, 1986 – OR**

USA: OREGON: Benton Co.: *Oregon:Bent. Co., Mary's Peak, 1800' II-1-1976 / LRussell hemlock litter / PARATYPE *Sonoma russelli* Chandler [♂, DCPC]. *USA: OR: Benton Co., Siuslaw N.F., Marys Peak (NE side), Chintimini Ck. At For. Rd. 2005, 610m, 44°31.237'N, 123°32.508'W, 16.v.2012, Tsuga heterophylla forest; FMHD#2012-009, berl., leaf & log litter away from creek, A. Newton; ANMT site 1206 FIELD MUSEUM NAT. HIST. [♂, FMNH].

***Sonoma spadica* Marsh and Schuster, 1962 – CA**

USA: CALIFORNIA: Mendocino Co.: *CA:Mendocino Co., L.P.Demonstration Forest, 10 mi. SW Legget II-17-1989 S.O'Keefe, coll. / Ex. leaf litter berlesate [♂, DCPC].

***Sonoma squamishorum* Chandler and Klimaszewski, 2009 – AK, BC**

USA: ALASKA: *AK: PoW Is: Hatchery Ck.1; 55.92524, -132.95054; 11-25JUN2012; Lindgren; J.S., S. M., I. M.; ♂; UAM100338834.

***Sonoma tishechkini* Ferro and Carlton, 2010 – GA, NC, SC**

USA: NORTH CAROLINA: Avery Co.: *N.C.Avery Co ,Linville Falls ,3500' ,Blue Ridge Pkwy. mi317 ,16.VIII.81 S.Peck ,for. intercept [2♂, CNC]. **Orange Co.:** *USA: NC: Orange Co. Chapel Hill South of UNC campus NC Botanical Garden / along nature trail 8-9Aug2002 Berlese in oak/hickory/ beech/maple forest C.E. Carlton / LSAM 0076993 [♂, LSAM]. **McDowell Co.:** *RndKnob 24.6 [1906] NC / CollHubbard &Schwarz (3♂, NMNH). **Watauga Co.:** *Boone, N.C. [???]-12-72 J.S. Ashe rotten log [♂, SEMC].

***Sonoma tolulae* (LeConte, 1849) – GA, NC, TN**

USA: NORTH CAROLINA: Swain Co.: *USA NC SwainCoGSMNP ForkRidgeTrailHeadnr Clin-man's Dome~6000' 11Aug06J&SCornellBerl ExSiftLitUMossyHemlock LogsJFC006-VIII-11-1C [4♂, LSAM]. *NORTH CAROLINA: Swain Co., Clingman's Dome, 31 July 1991 J.S. & A.K. Ashe ex:sifted spruce fir litter [2♂, SEMC]. **TENNESSEE: Sevier Co.:** *Gatlinburg Tennessee / 14-IX-1941 Quirsfeld [♂, CNC]. *NC/TN: Clingman's Dome Gr.Smoky Mtn.Nat.Park 18.viii.81 sift.decaying wood Q.wheeler #81343 (J. Pakaluk coll.) [♂, SEMC].

***Sonoma vanna* Marsh and Schuster, 1962 – CA**

USA: CALIFORNIA: San Luis Obispo Co.: *CA: San Luis Obispo Co. 35.5249°N, 121.0719°W UC Rancho Marino Res. ii.26.2009, *Salix* litter M.S. Caterino / CA BEETLE PROJ CBP0087150 (SBNHM) (♂). *same data / CA BEETLE PROJ CBP0087164 (SBNHM) (♂). *same data / CA BEETLE PROJ CBP0087168 [♂, SBNHM].

