

The Lepturine Longhorn Beetles

(Cerambycidae: Lepturinae)



of the Pacific Northwest

Phil Schapker Mendez

with illustrations by **Robert Pennington**

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August, 2025

Forward to Web Version 2.0 - August, 2025:

Since I last updated *The Lepturines of the PNW* in 2017, a few things have happened (to say the least). First, Yves Bousquet et al. (2017) published a fantastic hardcover book on the Cerambycidae of Canada and Alaska, which included generic-level nomenclatural changes to our PNW fauna. Our erstwhile *Leptura* species are now proud members of the genus *Etorofus* Matsushita, 1933. Other advancements and proposals have also been made in lepturine phylogenetics (Zamoroka, 2022) and nomenclature (Krajčák, 2025), implying more changes are likely to come as we approach a fuller understanding of the lepturines on a global basis.

Here in Oregon, a former UO entomology student and talented artist, Robert Pennington, agreed to help test and illustrate the key to lepturine genera in this book, which is largely based on Linsley & Chemsak's two-part monograph published in 1972 and 1976. This has led to some very helpful clarifications to the generic key. Finally, another nifty addition to this work is the appendix of host plant and flower records, and accompanying analysis found at the end of the book. The raw data for that may be available upon request.

As always, we would greatly appreciate any comments, ideas, corrections, or additions. Email: phil.schapker-mendez@albany.k12.or.us.

No form of artificial intelligence has been used in any aspect of the production of this work, so any errors are those of the author.

Acknowledgements: Special thanks is due to my wife, Danielle, and friends Chris Hedstrom, Ellen Topizhofer, Trevor Hast, and my former advisor, Chris Marshall, for helping me keep my motivation for this project alive. Thanks also to Brady Richards for his extensive proofreading and comments on earlier drafts, my MS committee advisors, David Maddison and Gail Langellotto, and to my friends Adam Chouinard, Kojun Kanda, James Pflugg, Olivia Boyd, Toño Gomez, and John Sproul, all whose helpful comments, advice, and specimens, have contributed greatly to the manuscript since its first inception. I must also thank Larry Bezark, Dan Heffern, Mark Brown, and especially Chris Hedstrom for their contributions of additional photos.

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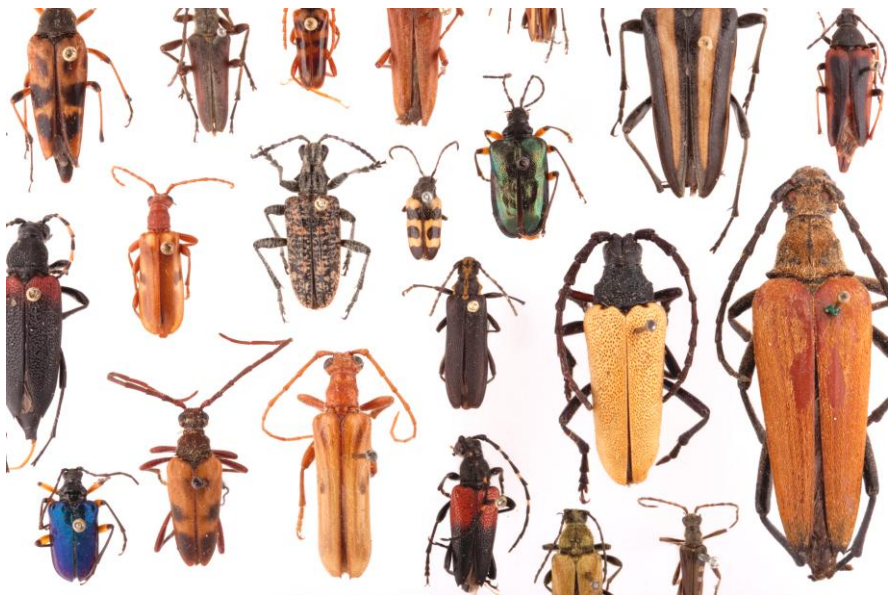
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A Pleasing Assortment of Lepturines in the Oregon State Arthropod Collection
(The large beetle on the right, *Stenelytrana*, does not occur in the Pacific Northwest.)

Some useful terms and features for identifying genera:

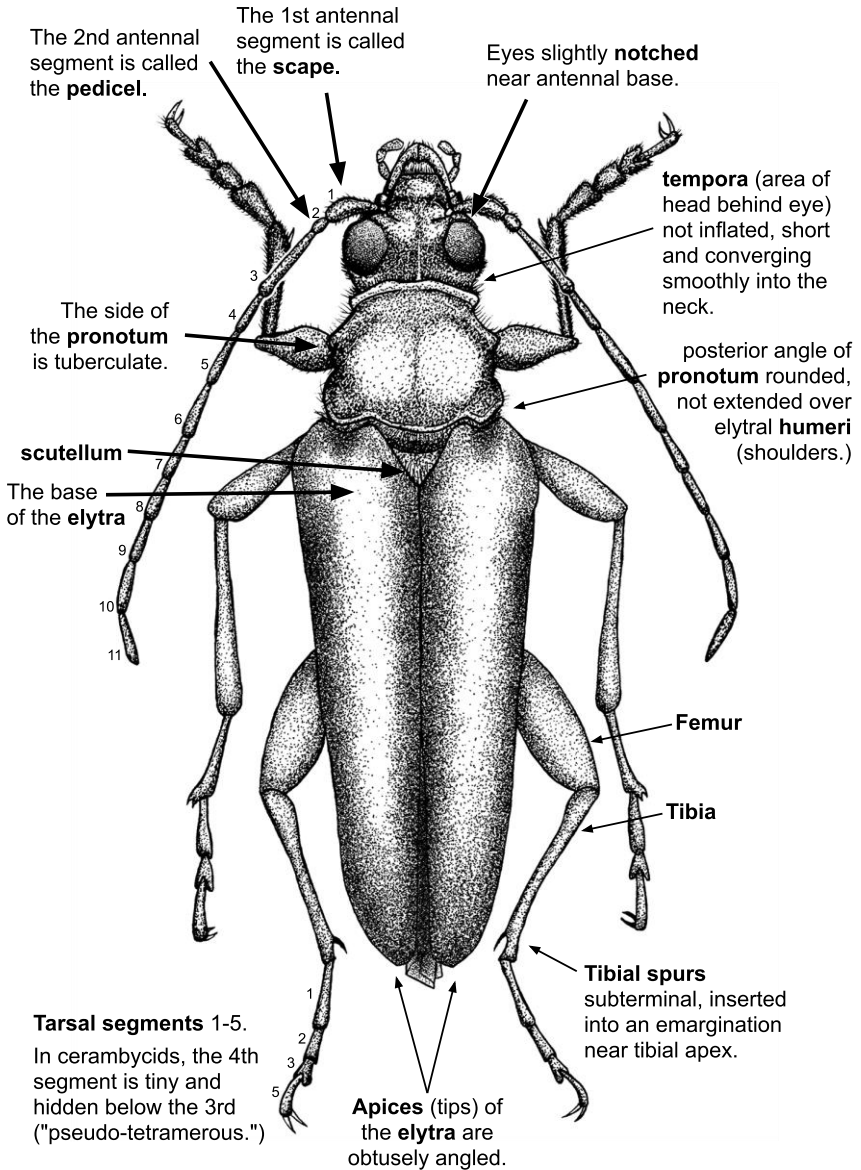


Figure 1. A species from the genus *Stenocorus*, easily identifiable by the subterminal tibial spurs on the hind legs. The tapering elytra are typical of many species in the longhorn beetle subfamily Lepturinae.

KEY TO THE GENERA OF PACIFIC NORTHWEST LEPTURINAE

(Modified from Linsley and Chemsak, 1972; 1976)

- 1. Mandibles slender, acute, with a pubescent (feathery) fringe along inner margin (the latter feature is often less obvious, and less important than other items in the key, but see **Fig. 3** an example where it would be readily apparent). Pronotum with or without humeral (shoulder) angles pointed, surface variable. 2
- 1'. Mandibles short, broad, without an internal pubescent fringe. Pronotum always with posterior humeral (shoulder) angles pointed (**Fig 2b.**), and with dorsal pronotal surface rugose (wrinkly) or deeply punctate. Antenna with basal segments (nearest to head) usually broad, somewhat flattened, and knobby. Typically associated with its obligate host plant, elderberry (*Sambucus*).(p. 99). [Desmocerus](#)

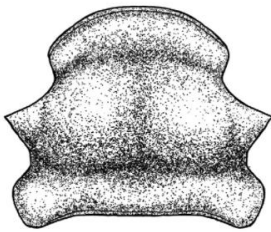
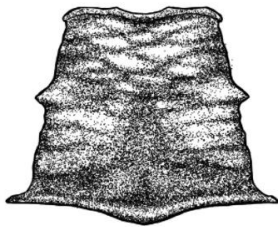
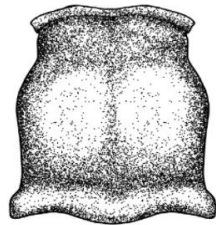


Fig. 2a. [Centrodera](#)



2b. [Desmocerus](#)



2c. [Ortholeptura](#)

- 2(1). Pronotum with acute lateral spines or distinct tubercles and/or eyes entire (without a notch on the side). 3
- 2'. Pronotum with sides sinuate, rounded or at most angulate, without spines or tubercles; eyes notched or emarginate. 18
- 3(2). Eyes coarsely faceted (nocturnal species)..... 4
- 3'. Eyes finely faceted (diurnal species). 5
- 4(3). Body brown or pale-colored; head with tempora absent; eyes deeply notched or emarginated.(p. 97). [Centrodera](#)
- 4'. Body black with white or red markings on elytra, elongate and narrow; head with tempora inflated behind eyes; eyes shallowly emarginate.(p. 95). [Pseudoxylosteus](#)
- 5(3'). Tibial spurs subterminal, inserted into an emargination near tibial apex (**Fig. 1**). 6
- 5'. Tibial spurs terminal, inserted at tibial apices. 7

- 6(5). Antennae with segments slender, elongate, extending well beyond middle of elytra; tempora convergent (**Fig. 1**); eyes notched or emarginated below base of antennae (**Fig. 3**).(p. 79). [*Stenocorus*](#)
- 6'. Antennal segments short, stout, segments 3-11 subequal in length, not extending beyond middle of elytra; tempora subparallel; eyes entire.(p. 85). [*Piodes*](#)

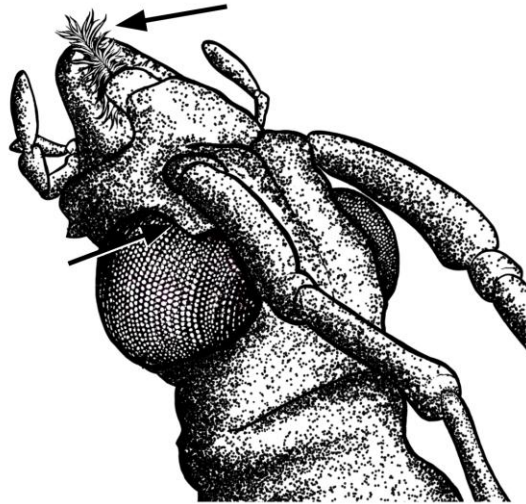


Fig 3: *Stenocorus* head, showing pubescent fringe of the mandibles, and the eye notched below the base of the antennae.

- 7(5'). Eyes deeply emarginated or notched..... 8
- 7'. Eyes entire, not deeply emarginated or notched, at most very shallowly concave along inside margin. 12
- 8(7). Front of head vertical, front and vertex meeting at an angle of nearly 90 degrees; front short, distance from tips of mandibles to forward edge of eyes shorter than width between outside edges of genae. 9
- 8'. Front of head oblique, meeting vertex at an angle of more than 90 degrees; front long, distance from tips of mandibles to forward edges of eyes greater than width across genae. 10
- 9(8). First segment of antennae shorter than third; hind tarsi with second segment much longer than third; intercoxal process of prosternum narrow, straight.(p. 92). [*Encyclops*](#)
- 9'. First segment of antennae longer than third; hind tarsi with second segment subequal to third; intercoxal process of prosternum broad, arcuate (shaped like a bow, curved)(p. 87). [*Enopleres*](#)

- 10(8'). Hind tarsi with third segment cleft to base; basal margins of elytra not elevated around scutellum. 11
- 10'. Hind tarsi with third segment cleft about to middle; basal margins of elytra elevated around scutellum.(p. 77). [*Pachyta*](#)
- 11(10). Pronotum transverse, sides strongly tuberculate or spined; eyes deeply emarginated.(p. 93). [*Neanthophylax*](#)
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- 12'. Prosternum with intercoxal process broad, extending over coxae, abruptly declivous behind; antennae very short; pronotal spines large, acute.(p. 54). [*Rhagium*](#)

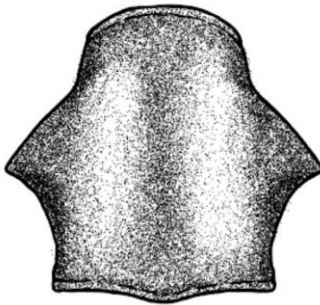
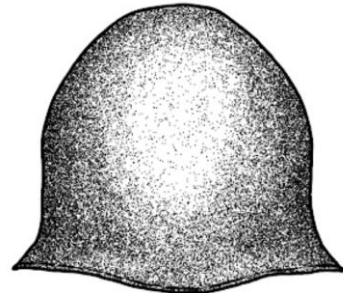


Figure 4a. Pronotum of [*Rhagium*](#)

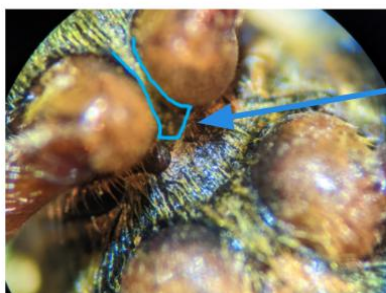


4b. [*Grammoptera*](#)

- 13(12). Pronotum with disk convex, not flattened behind nor elevated on each side into a broad, obtuse tubercle. 14
- 13'. Pronotum with disk flattened behind and elevated on each side into a broad, obtuse tubercle.(p. 70). [*Acmaeops*](#) (part)
- 14(13). Head with tempora inflated, parallel, abruptly constricted at neck. 15
- 14'. Head with tempora not inflated, convergent, not abruptly constricted at neck. 16
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- 16(14'). Elytra with basal margin not elevated around scutellum..... 17
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- 17(16). Head with front longer than broad; antennae with outer segments slender, without poriferous areas.....(p. 70). [Acmaeops](#) (part)
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- 22(21). Head with front short, quadrate, tempora prominent, parallel; antennae stout, usually thickened..... 23
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.....(p. 17). [Judolia](#)
- 23(22). Antennae elongate, longer than body in males, extending to a little behind humeri in females; Elytra about twice as long as broad, form robust, short.(p. 27). [Dorcasina](#)

- Antennae short, subserrate, shorter than body in males, extending to a little behind humeri in females; form more elongate, elytra more than twice as long as broad.(p. 41). [*Pygoleptura*](#)
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 Elytra less than 2 ½ times as long as broad, always with transverse yellow and black bands; antennae with small poriferous areas..... (p. 33). [*Stenostrophia*](#)
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- 28'. Intercoxal process of prosternum expanded at apex (may be quite difficult to spot without a microscope and good lighting, behind the front coxa), coxal cavities closed or nearly closed behind (**Fig. 4**).30



Posterior apex of intercoxal process expanded.

Figure 4. Prosternum of *Strophiona laeta*, showing outline of the intercoxal process, which is expanded at the posterior apex.

- 29(28). Pronotum barely impressed at apex and base, disk almost plane; palpi with apical segments cylindrical. Antennae with 3rd and 4th segment short, the 4th shorter than 3rd. The only PNW species is fairly common, with a narrow black body.(p. 39). [Trachysida](#)
- 29'. Pronotum deeply impressed at base and apex, disk convex; palpi with apical segments dilated. Elytra are pale yellow or reddish, often with pale brownish spots.(p. 74). [Pidonia](#)
- 30(28'). Eyes finely faceted; form small to moderate sized, not elongate and subparallel. Diurnal species. 31
- 30'. Eyes coarsely faceted; Body elongate and subparallel, color testaceous or pale yellow and brown; Body either large (2-3 cm long), with elytra prominently spined at inner angles at apex, or small (1-2 cm) with elytral apices rounded and unarmed. Nocturnal species.(p. 52). [Ortholeptura](#)
- 31(30). Elytra rounded, truncate, or shallowly emarginated (notched) at apices, angles not strongly produced; antennae never 12-segmented.32
- 31'. Elytra strongly emarginated at apices, angles strongly produced; antennae 12-segmented or eleventh segment very strongly appendiculate, outer segments sub-serrate.(p. 44). [Stictoleptura](#)
- 32(31). Pronotum with disk (dorsal surface) strongly convex, basal and apical transverse impressions deep. 33
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Figure 5. Male (left) and female (right) of *Anastrangalia laetifica* showing shape of pronotum.

- 33(32). Elytra with at least some color patterning, not entirely black. Or if entirely black, then the pronotum is lacking a strong longitudinal dorsal impression.34

33'. PNW species all black. Pronotum deeply impressed longitudinally, impression extending length of disk (**Fig. 6A**). Pronotum with basal margin broadly lobed at middle (**6B**) , elytra often strongly bilobed around scutellum (**6C**).(p. 40). [Lepturopsis](#)



Figure 6. Pronotum of *Lepturopsis dolorosa* showing longitudinal impression in pronotum, and base of elytra strongly bilobed.

- 34(33). Pronotum with basal margin sinuate to straight; elytra not strongly bilobed around scutellum. 35
- 34'. Pronotum with basal margin broadly lobed at middle, elytra often strongly bilobed around scutellum. Elytra waxy in appearance, never densely covered in yellow hairs, patterned with black stripes or splotches, sometimes covering almost full extent of elytra; body usually rather slender, subparallel.(p. 12). [Xestoleptura](#)
- 35(34). Pronotum and elytra often densely covered in golden hairs; elytra usually not strongly dehiscent (spreading apart from one another) at apex, sides not strongly sinuate behind middle; hind tibiae of males normal....36
- 35'. Pronotum and elytra not densely covered with yellow hairs; elytra rather strongly dehiscent at apex, sides strongly sinuate behind middle; hind tibiae of males sometimes strongly attenuated on posterior half (*Toxoleptura vexatrix*)..... 37
- 36(35). Elytral surface always yellow and black banded. Elytra with apices obliquely truncate, outer angles produced.....(p. 31). [Strophiona](#)
- Elytral surface never yellow and black banded. Elytra with outer apical angles not produced(p. 29). [Lepturobosca](#)



Figure 7. *Brachyleptura dehiscens* (left) and *Toxoleptura vexatrix* (right)

37(35'). Elytral apices with inner angles rounded. Antennae with 5 outer segments bicolored, expanded apically, nearly sub-serrate (**Fig. 7**, left).

.....(p. 50). [Brachyleptura](#)

37'. Elytral apices with inner angles acute. Antennae slender, outer segments black, not expanded (**Fig. 7**, right).(p. 51). [Toxoleptura](#)

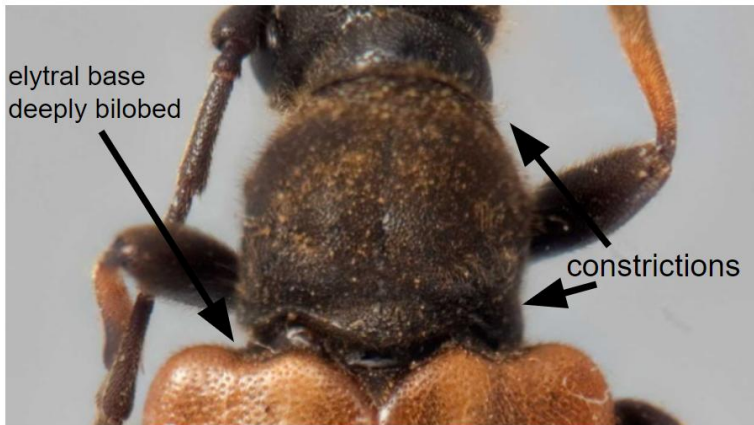
REVIEW OF PNW GENERA

Tribe Lepturini Latreille, 1802

***Xestoleptura* Casey, 1913**

Type species: *Xestoleptura corusca* Casey (by original designation).

Xestoleptura is one of several genera in the tribe Lepturini recognizable for its species' yellow and black-striped elytra. The genus is represented by 9 species worldwide, 6 of which occur in North America. The four Pacific Northwestern species are also found in California. The species *X. octonotata* is broadly distributed in Eastern NA, and *X. cockerelli* occurs on the Colorado Plateau. On the global scale, Miroshnikov (1998, figs. 26-39) has made a convincing case for the generic concept of *Xestoleptura* based on the structure of the male genitalia, which have distinctively notched parameres.



Diagnosis of *Xestoleptura* in the Pacific Northwest.

Xestoleptura can be distinguished from other genera with similar elytral patterns by its distinctive **pronotum**, which is convex and subequal to the width of the head, deeply constricted dorsally at both the anterior and posterior margins, and with the posterior margin strongly sinuate and rounded at the lateral angles. The elytra in *Xestoleptura* are strongly bilobed at the base, especially in *X. crassipes* and *X. crassicornis*.

Key to Pacific Northwest species of *Xestoleptura*

- 1. Femurs either pale or dark; if dark, then elytra only moderately densely punctate at base and suture entirely black (males) or bordered along its entire length by thick black line (females) 2
- 1'. Femurs black. Elytra densely, closely punctate at base (anterior), the inner elytral margin never bordered along its entire length by a thick black line; elytra sub-parallel, not strongly tapering posteriorly. Pronotum with disc weakly convex or flattened, sometimes strongly bi-lobed posteriorly due to a longitudinal posterior impression. Antennal segments are not strongly expanded at apices. Inner hind tibial spurs of males never modified into a plate-like structure. Length, 10-16mm. British Columbia to California, Rocky Mts. and Labrador *X. tibialis*



Figure 8. *Xestoleptura tibialis* (Leconte, 1850). 1 male (left, 4000 ft. at Kelsay Camp in Umpqua N.F., Oregon) and 3 females (middle-left, Woods, Oregon; middle-right, 4200 ft., ½ mi. E. Frog Camp, Hwy. 242, Lane Co., Oregon; and right, Seaside, Oregon). OSAC_0000583019, _0000583016, _0000582969, _0000583018).

- 2(1). Antennae stout, segments usually thickened and expanded at apices. Elytra usually with humeral angles pale, and lacking a thick black stripe that runs the entire length of the interior elytral margin 3
- 2'. Antennae slender, segments not distinctly thickened nor expanded at apices. Elytra usually with humeral angles darkened or black; elytral suture black, in females bordered along entire length with thick black line; elytra with punctures course, irregular, often confluent or sub-confluent latitudinally, punctures at base irregularly, sparsely punctate, becoming denser near interior margin. Abdomen and tibiae are either orange, pale or dark. Pronotum with disc flattened or weakly convex, never strongly bilobed posteriorly. Males strongly tapering posteriorly, never with hind tibial spur modified into a plate. Length, 10-16mm. Western N.A. from British Columbia to California *X. behrensii*



Figure. 9. *Xestoleptura behrensii* (LeConte, 1873). Female (*left*, Ketchikan, Alaska) and male (*right*, HJ Andrews Experimental Forest, Oregon). (OSAC_0000598975, _0000143421)

3(2). Elytra distinctly, irregularly, sometimes sub-confluently punctate, densely pubescent; elytra with anterior black band absent or reduced to two lateral spots in males, in females obliquely angled, sometimes meeting at the inner elytral margin, but often often fading medially to a pale brownish spot. Pronotum is densely pubescent. Antennae black, yellowish or striped, not strongly expanded apically in males. Hind tibiae of males with the inside spur often modified into a plate. Length, 8-15mm. British Columbia to Colorado and California ***X. crassipes***

3'. Elytra very sparsely punctate and pubescent; pronotum moderately pubescent; elytra with anterior black band transverse, meeting horizontally at the inner elytral margin. Antennae are always reddish, those of male strongly expanded at apices. Hind tibiae of males with normal spurs. Length, 10-17 mm. Western North America to southern California.

.....***X. crassicornis***



Figure 10. *Xestoleptura crassipes* (LeConte, 1857). 1 male (left, Mt. Rainier, Longmire, Washington) and 4 females (middle three, Mt. Rainier, Wash.; right, Bremerton, Wash.). (OSAC_0000600330, _0000600336, _0000600361, _0000600332).



Figure. 11. *Xestoleptura crassicornis* (LeConte, 1873). 2 females (far left, Sequoia N.F., Cal., and left, Lassen N.F., Cal) and 2 males (right, both taken at Milk Creek Rd., 12 mi. SE Union Co., Oregon). (OSAC_0000324233, _0000324227, _0000617561, _0000617564).

Remarks on PNW *Xestoleptura* species

Xestoleptura crassicornis, depicted above, is intriguing. The species occurs throughout the west, from Washington and Idaho to southern California, but most of what we know about it is derived from two host plant-, and three flower records. In August of 2013, the author found several populations of *X. crassicornis* scurrying around on the leaves of blue elderberry (*Sambucus nigra*) at high elevation in the Warner Mountains of Northern California. No individuals were observed on the elderberry flowers, but three were observed clustered and apparently drinking from an open wound on the base of a 1 cm green stem. The only other lepturines known to feed on the leaves of *Sambucus* are those in the genus *Desmocerus*, for which *Sambucus* is an obligate host. *Sambucus* is known to contain cyanogenic glucosides, and it has been speculated that the brightly-colored species of *Desmocerus* sequester these as defensive chemicals. Is it possible that *X. crassicornis* are following a similar strategy in the Warner Mountains?

In addition to this observation, Jim Labonte of the Oregon Department of Agriculture informs me that since 1997, the ODA has turned up quite a number of *X. crassicornis* through its invasive species trapping and monitoring efforts across Oregon, indicating (1) that the species is attracted to plant volatiles and (2) that it is probably more common than indicated by the number of museum specimens present.

Who knows if we'll ever figure out *X. behrensii* — the species is incredibly rare, and may not visit flowers at all (no records exist). The most specific label data for this specimen at OSAC was collected in the Cascades of Oregon, at the H. J. Andrews Experimental Forest. It reads “ex *Tsuga mertensiana*”, indicating a previously unrecorded host plant for the species. The locality is “ORE: Lane-Linn Co., HJ Andrews ExpFor, ½ mi N Fissel Pt, T15S R6E Sec 29 SE1/2, Elev. 4850'. VIII-20-[19]80.” Someone should go there and find it again.

***Judolia* Mulsant, 1863**

Type species: *Leptura 6-maculata* Linnaeus (Casey designation, 1913)

Judolia is a diverse genus consisting of 17 species distributed throughout the Northern Hemisphere (see Ödikmen, 2011). Five of these species occur in the Pacific Northwest, including the commonly-encountered *J. instabilis*, one of the most variable lepturines in North America.



Figure 12. *Judolia gaurotoides gaurotoides* (Casey, 1893). Yellowstone N. Park, 7-5-[19]27, Hopk[ins], US; H.E. Burke, Collector. OSAC_0000026660

Diagnosis of *Judolia* in the Pacific Northwest

According to Linsley and Chemsak (1976, p. 47) the genus *Judolia* can be distinguished from other North American lepturines "by the convex disk and acute hind angles of the pronotum, and usually short, stout body form, and by the proportions of the basal antennal segments." In *Judolia*, the scape (1st antennal segment) is "usually longer than, or subequal to the third segment, fourth shorter than the third, and the outer segments sub opaque."

Several other PNW lepturine genera contain species which closely resemble *Judolia* in their overall form and coloration. These include the black and yellow species, *Stenostrophia tribalteata*, *Strophiona laeta*, *Xestoleptura tibialis*, and *Dorcasina matthewsii*, as well as the all- or mostly-black lepturines *Brachysomida atra*, *Brachyleptura vexatrix*, *Cortodera nitidipennis*, and *Lepturopsis dolorosa*.

Key to Species of *Judolia* in the Pacific Northwest

- 1. Pronotum with anterior edge bearing a distinct margin and narrow transverse depression. Elytra either all black, or black and yellow — never brown or red.....2
- 1'. Pronotum lacking anterior margin and transverse depression. Elytra either black with red stripes, or brown with two lateral spots4
- 2(1). Pronotum densely, confluent punctate. Scutellum deeply recessed below base of elytra. Elytral apices truncate to sub-truncate..... ***J. montivigans***
- 2'. Pronotum either separately or densely, but rarely confluent punctate. Scutellum more-or-less even with the base of the elytra. Elytral apices either broadly rounded or narrowly, obliquely rounded, or pointed3



Figure 13. Left. *Judolia instabilis* (Haldeman, 1847). OSAC_0000331475. Elytral patterning is quite variable and easily confused with *J. gaurotoides*. Requires microscope and key to identify. **Right.** *Judolia montivigans montivigans* (Couper, 1864). OSAC_0000331626, showing distinctive elytral patterning.

- 3(2). Pronotum with a depression extending across the entire basal (posterior) edge. Pubescence on pronotum either long and erect or short and depressed. Elytra narrowly rounded or pointed at apex. Elytral pattern varies from all black to mostly yellow with a few transverse black lines or spots. Occasionally anterior, median, and basal spots connected by narrow longitudinal lines *J. instabilis*
- 3' Pronotum with basal depression at sides only, pubescence usually long and erect in both sexes. Elytra broadly rounded at apex. Elytra yellow, with anterior, median and basal black lines or spots which vary in shape and extent, but are never connected by longitudinal lines *J. gaurotoides*
- 4(1). Elytra frequently all black except for a reddish basal band extending back from humeri (shoulders), apices always black. Males with tooth-like projections on metasternum near median suture and before hind coxal cavities. Southern Oregon to north central Arizona *J. scapularis*
- 4'. Elytra pale brown, usually with two large lateral dark spots at the middle. Males lacking tooth-like projections on metasternum. Oregon to central California *J. impura*

NOTE: The couplet for *J. scapularis* and *J. impura* is taken directly from the key provided by Linsley and Chemsak (1976: 49). I have not had the opportunity to view specimens of these species.



Figure 14. *Judolia scapularis* - holotype specimen.
(CAS_3309. Bezark.photo.20457)
Used with permission from Larry Bezark.

Additional Remarks on PNW *Judolia*

Many species in *Judolia* can be collected during the daytime in the spring and summer, often in natural areas where wildflowers are abundant. Based on records from museum specimens, most species in *Judolia* appear to be generalists in their use of flowers. In California and Oregon, *J. instabilis* (Fig. 13, L) is most frequently observed on lupines, and there is some speculation that it might be a host plant (see discussion in Linsley and Chemsak, 1976, p. 54).

Judolia instabilis and *J. montivigans montivigans* (Fig. 13, right), are both common and broadly distributed in the PNW and beyond in NA. But others listed in the key are so far known only from the margins of the Pacific Northwest, or are known from a small number of specimens. *J. scapularis* (Fig. 14) primarily ranges from north central CA to AZ, but a single specimen was found by Westcott et al. (2006) in Jackson Co., Oregon near the California state line on Interstate 5.

Linsley and Chemsak (1976) reported the range of *J. gaurotoides gaurotoides* (Fig. 12) from “Southwestern Utah to Montana and Rocky Mtns. of Oregon” New specimens at OSAC extend the range to Washington. In the same collection there is a flower record of *Spiraea* to add onto previous flower records of *Eriogonum*, *Artemisia*, and *Arenaria*. In addition to that, a nice photo (#320303) posted to BugGuide.net by Mark Brown appears to show *J. gaurotoides gaurotoides* visiting a lupine at Yellowstone National Park.

The subspecies *J. gaurotoides auripilis* was described by Linsley and Chemsak (1976) on the basis of 37 specimens, all from CA and NV. Four additional specimens (OSAC) attributable to this subspecies were taken at 7500 ft. at Mt. Ashland in the Siskiyou of southern OR. The species *J. montivigans barberi*, and the redwood borer, *J. impura* follow a similar Sierra Nevada/Siskiyou distribution pattern. LeConte (1857) described the latter species from Oregon Territory. At the time of writing, no specimens are present at OSAC or Oregon Department of Agriculture.

Typocerus LeConte, 1850

Type species: *Leptura zebra* Fabricius (Thomson designation, 1860)



Figure 15. *Typocerus serraticornis* Linsley & Chemsak, 1976.
Female taken from Little Cottonwood Creek, near Fields, Oregon.
OSAC_0000613179

Notes on *Typocerus*

The only representative of *Typocerus* in western North America, the charismatic *T. serraticornis* Linsley and Chemsak, is found along the shorelines of dry lakes in the Great Basin region, extending into southern Idaho and southeastern Oregon (Penrose, 1979). Larvae of *T. serraticornis* develop in the living stems of Indian ricegrass (*Oryzopsis hymenoides*), and employ a varnish, or silk-like substance in constructing their pupal chambers. This is apparently the only known case of silk production in the Cerambycidae (see Robertson, 1988). *Typocerus serraticornis* and the eastern North American *T. octonotatus* are among a very small handful of Cerambycids known to use grass as a host plant. The hosts for the majority of *Typocerus* remain unknown at present, while the rest utilize either decaying *Pinus* (for *T. zebra*, *T. sparsus*, *T. lunulatus lunulatus*, and *T. lugubris*) or a hardwood (in the case of *T. velutinus velutinus*) for their larval hosts (Linsley and Chemsak, 1976).

Aside from *T. serraticornis*, there are 14 additional *Typocerus* species, all of which are restricted to eastern North America. There is a related genus *Pseudotypocerus* Linsley and Chemsak, 1971 with 8 species in South America.

Diagnosis of *Typocerus* in the Pacific Northwest

Typocerus is set apart from other lepturine genera primarily by the characters of the pronotum and antennae. In *Typocerus* the base of the pronotum is broad and unconstricted, and the outer antennal segments bear sizable depressions, called “poriferous areas.” The antennal segments are usually expanded apically, which is most pronounced in the Pacific Northwestern *T. serraticornis*. The antennal poriferous areas may be used to distinguish *Typocerus* from *Etorofus*, which has a similarly broad-based pronotum. Other genera that superficially resemble *Typocerus*, such as *Xestoleptura*, *Strophiona* and *Stenostrophia*, have a constriction at the base of the pronotum near the elytra, making the pronotum appear almost spherical from above.

***Etorofus* Matsushita, 1933: 204**

Type species: *Etorofus variicornis* Matsushita, 1933: 205.

The small genus *Etorofus* now comprises all the North American species previously attributed to *Leptura*, alongside several palearctic species found in Japan and surrounding areas. Bousquet et al. (2017) formally made the move, after an analysis of external structures among the two disparate groups was in agreement with a similar suggestion by Švácha and Danilevsky (1989) based on larval characteristics. The genus *Etorofus* is closely related to Palearctic genus *Pedostrangalia* Sokolov, and several authors have treated *Etorofus* as a synonym (Villiers, 1978; Bousquet et al, 2013) or a subgenus (Vives, 2000) of *Pedostrangalia*.

Five species occur in the Pacific Northwest, all of them diurnal flower-feeders. They are usually medium-to-large in size, and recognizable for the unique shape of their pronota, with the hind angles acute and extended over the humeral angles of the elytra, as well as other features appearing in the key to genera.

Etorofus propinqua and *Etorofus obliterated obliterated* are both very common throughout the Pacific Northwest. Each species has been recorded from a wide variety of flowers, and their larvae reared from the decaying wood of numerous species of Pinaceae, and other coniferous hosts (see L & C, 1976 for a complete review of habits).

Other, less-typical species in *Etorofus* are known to utilize living plants as hosts. Cope (1984) observed larvae of the Pacific Northwestern species *E. anthracina* in healthy, living white fir (*Abies concolor*), occurring in the decaying tissue of scars high off the ground. The Californian species *E. pacifica* is apparently obligated to use living scrub oak *Quercus john-tuckeri* as a host (Swift, 2008).

Key to Leptura in the Pacific Northwest

- 1. Hairs on pronotum sub-depressed and pointed backwards 2
- 1'. Hairs on pronotum sparse and erect 3

- 2. Elytra black, or black with anterior (basal) portion reddish ... **E. anthracina**
- 2'. Elytra yellowish with black stripes and blotches, sometimes reduced to two medio-lateral dots and an apical band that looks similar to *E. propinqua*. (common species) **E. obliterata**

- 3. Abdomen with golden hairs not obscuring the surface. Elytra yellow-reddish or red with a large discal black spot 4
- 3'. Abdomen densely clothed with golden pubescence. Elytra yellow always with two medio-lateral spots and an apical band **E. propinqua**

- 4. Elytra red with a large discal black spot extending over most of area. Pronotum with short, erect bristles **E. plagifera**
- 4'. Elytra with only very faint splotches on a mostly reddish-yellow or yellow-brown base. Pronotum with hairs long and wavy (rare species) **E. kerniana**



Figure 16. Left: *Etorofus kerniana* Fall, 1907. OSAC_0000300419
Right: *Etorofus plagifera* LeConte, 1873. OSAC_0000583264



Figure 17 Left: *Etorofus propinqua* Bland, 1865. OSAC_0000583337.

Right: *Etorofus anthracina* LeConte, 1875. OSAC_0000261812



Figure 18. *Etorofus obliterata obliterata* (Haldeman, 1847) - 2 common elytral patterns.

Left, OSAC_0000338641. *Right,* OSAC_0000497351.

The subspecies of *L. obliterata*

Etorofus obliterata may be divided into three subspecies. *Etorofus o. obliterata* (**Fig. 18**) occurs from British Columbia and Washington, to Montana and Idaho, and south to the coastal ranges of California. The subspecies *E. o. soror* is restricted to the Sierra Nevada mountain range of California. The eastern subspecies, *E. obliterata deleta* (LeConte, 1850) is apparently extremely rare in collections and its host plant is unknown.

Knowing what to look for..

E. o. obliterata is quite variable in size, and obtains two extreme forms in its elytral coloration which often occur within the same locality. The form with the black markings reduced to just the apical and medial band closely resembles *E. propinqua* (**Fig 17**) as well as the Sierra Nevadan subspecies *E. obliterata soror*. However, the sub-depressed pubescence of the pronotum should separate *E. obliterata* from *E. propinqua*, which has the pronotal hairs sparse and erect. The subspecies *L. o. soror* is indistinguishable from *E. o. obliterata* except for the elytral medial band, which is continuous across the central elytral margins.

Dorcasina Casey, 1913

Type species: *Leptura matthewsii* LeConte (by original designation)



Figure 19. *Dorcasina matthewsii*

OSAC_0000496365

Dorcasina is represented by only two species worldwide, both of which are endemic to North America. One species, *Dorcasina matthewsii* (LeConte) inhabits the Pacific Northwest, ranging from British Columbia to California. Its congener, *D. grossa* (LeConte) is restricted to the Sierra Nevada mountain range of California. *Dorcasina* specimens are relatively sparse in the Arthropod collection at Oregon State.

Diagnosis of *Dorcasina* in the Pacific Northwest

Males of *Dorcasina matthewsi* are easily identified among our northwestern lepturines by their antennae, which are longer than the length of the body. According to Linsley and Chemsak (1976, p. 63), *Dorcasina* is recognized among the North American Lepturinae “by the elongate, opaque male antennae with segments three to five thickened. Also characteristic are the parallel tempora, the short front of the head, and the acute hind angles of the pronotum. Females have much shorter opaque antennae and the body form is very robust and parallel.”

Note on Pacific Northwest species

Dorcasina matthewsii ranges from British Columbia to coastal central California, and reportedly uses a number of host plants, including *Sequoia sempervirens*, *Thuja plicata*, and *Libocedrus*. Garnett (1918, p. 250) reported rearing *D. matthewsii* from the sapwood of the redwood tree, and noted that *D. matthewsii* is “never found on flowers, but resting on leaves,” including *Vaccinium ovatum* (Linsley and Chemsak, 1976). See also: Hardy (1926:30) and Hardy and Preece (1927:198).

I have only seen *D. matthewsii* in the wild once. In the summer of 2018, while camping in the HJ Andrews Experimental Forest, I was delighted to find a fine male specimen floating in a pitfall trap that my friend had baited with Budweiser.

Lepturobosca Reitter, 1913

(*Cosmosalia*, Casey, 1913:267)

Type species: *Leptura virens* Linnaeus, 1758 (monobasic)



Figure 20. *Lepturobosca chrysocoma*
OSAC_0000556501

One of the most commonly-encountered lepturines in the Pacific Northwest is *Lepturobosca chrysocoma*, which is immediately recognizable for the dense golden hairs that cover its entire body. The species is a generalist flower-feeder, and most active when flowers are blooming in June and July. Many of the ample museum specimens are caked in pollen.

L. chrysocoma uses a wide variety of larval host plants across its broad range in North America, including decaying *Achillea*, *Epilobium*, *Picea mariana*, and *Populus* (see Gardiner, 1970, and range map in Linsley & Chemsak, 1972, fig. 49). Gardiner also observed the species being parasitized by the Ichneumonid *Coleocentrus quebecensis* Provancher.

The other North American species of *Lepturobosca*, *L. nigrolineata*, occurs primarily in the southwestern United States in New Mexico and Colorado. Hatch (1971:135) included *L. nigrolineata* in his review of Pacific Northwest Coleoptera, indicating that the species also occurs in southwest Idaho and southeastern Oregon, but I have not been able to verify this based on the Hatch specimens in OSAC.

A new genus for the Old “*Cosmosalia*” *chrysocoma*:

Until fairly recently, most North American websites and field guides referred to *L. chrysocoma* using the old genus name, *Cosmosalia*, which Casey (1913) had established for it. However, the uncanny resemblance of the North American species to the Palearctic [*Lepturobosca virens*](#) Linnaeus had already been pointed out over a decade earlier by the Russian taxonomist Alexander Miroshnikov. Miroshnikov (1998) provided illustrations of the male genitalia of all three species as additional evidence for the group’s relatedness, and grouped them into one genus, *Lepturobosca*, with *Cosmosalia* as a subgenus. (The original description of *Lepturobosca* Reitter, 1913, was published slightly earlier in the year, and has priority over *Cosmosalia* Casey, 1913; see Miroshnikov, 1998.)

Strophiona Casey, 1913

Type species: *Leptura laeta* LeConte (by original designation)

Diagnosis: *Strophiona* is distinguished from *Stenostrophia* by the obtuse posterior-lateral angles of the pronotum.



Figure 21. *Strophiona laeta*. Female. Specimen in Schapker collection. Corvallis, OR. 11th and Van Buren. Evening near campfire. vi.23.16.



Figure 22. *Strophiona laeta*. Male. OSAC_0000598859.
Corvallis, Oregon, June 24, 1898

Strophiona is known only in North America. One species, *S. nitens* inhabits central and eastern N.A., and at least one, *S. laeta* LeConte, 1857, occupies western North America. *Strophiona* bears a resemblance to species in the genus *Strophiona* and *Typocerus*. In those species, the lateral angles of the pronotal apices are produced outward and pointed.

Linsley and Chemsak recognized an additional species on the west coast, *S. tigrina* Casey, 1913, which they argued could be separated based on its size, pronotal punctuation, and the oblique angle of the subbasal black strip (below the pin) on the elytra. Since completing my thesis (Schapker 2014), I have found considerable variation among these characters in a number of series present at OSAC, and have thus decided to follow Hatch (1971) in treating the populations as one species, *S. laeta*, until a more detailed study can be performed.

***Stenostrophia* Casey, 1913**

Type species: *Leptura tribalteata* LeConte (by original designation)

Diagnosis: *Stenostrophia* is distinguished from *Strophiona* by the pointed posterior-lateral angles of the pronotum.

Stenostrophia is represented by three species worldwide, all in western North America. Two species occur in the Pacific Northwest, *S. amabilis* and *S. tribalteata*. The two subspecies of *S. tribalteata* can usually be separated by the color of their antennae, and the median transverse black band on the elytra. In *S. t. serpentina*, the median band is narrow and oblique at the center, while in *S. t. sierrae*, the band is broader, with the posterior edge meeting at the center of the elytra at a roughly 180° angle (below).



Figure 23. Subspecies of *Stenostrophia tribalteata*.

Left: *S. t. serpentina* (OSAC_0000598388).

Right: *S. t. sierrae* (OSAC_0000583780).

Key to *Stenostrophia* species in the Pacific Northwest

1. Pronotum with dense bands of golden pubescence at least on apical and basal margins; pubescence of elytra golden on yellow areas. Length, 7-12 mm. British Columbia to southern California to Wyoming. *S. tribalteata*
- 1'. Pronotum lacking golden pubescent bands; pubescence of elytra all dark Length, 7-11 mm. British Columbia to southern Sierra Nevada..... *S. amabilis*



Figure 24. *Stenostrophia amabilis* (LeConte, 1857).
Merion Forks, N. Santiam Hwy, Oregon. OSAC_0000271206.
Photo by Chris Hedstrom, 2025.

Grammoptera Audinet-Serville, 1835

(*Parallelina* Casey, 1913:247)

Type species: *Leptura praeusta* Fabricius (Westwood designation, 1838).

Grammoptera is a fairly large genus, with 34 species and subspecies presently recognized worldwide (see Adlbauer et al., 2010). Six species occur in North America. Two of the Pacific Northwestern species are generalist flower feeders, while *G. rhodopus* apparently lives in close association with a living host plant Coffeeberry, *Rhamnus californica* (see Cope, 1984; Gardiner, 1970), in addition to *Lithocarpus*. *Grammoptera* is one of several lepturines known from the Oligocene-era fossil beds in Florissant, Colorado. (see Linsley, 1958a, p. 302, table III.)

Only a handful of specimens of *G. rhodopus* are present at OSAC, from the following localities: Corvallis, Oregon (June 3, 1950, V. Roth), Dayton, Oregon (June 3, 1942, K.M. Fender), Cornucopia, Oregon (Aug. 7, 1937, Bolinger/Jewett) and Carkeek Park in Seattle, Washington (May 3, 1959, T.J. Growes).

Diagnosis

Grammoptera has no close look-alike genera in the Pacific Northwest. The following characters of the pronotum make it easily identifiable: Pronotum campanuliform, hind angles tooth-like and produced over elytral humeri; sides sinuate, lacking tubercles; dorsal surface convex, lacking an impressed area. Smaller species, less than 1 cm in length.

Key to Grammoptera species in the Pacific Northwest

1. Head with tempora not inflated, convergent to neck..... 2

1'. Head with tempora inflated, usually subparallel, distinctly constricted at neck. Length, 5-8 mm. Boreal North America..... ***G. subargentata***

2(1). Elytra and integument metallic bluish or greenish; pronotum with disk not inflated, rather finely, shallowly, subconfluently punctate; elytral humeral area densely punctate. Length, 4-7 mm. British Columbia to Idaho and southern California..... ***G. molybdica***

2'. Elytra and integument black; pronotum with disk inflated, moderately coarsely, separately punctate; elytra coarsely punctate. Length, 6-10 mm. Oregon to southern California. ***G. rhodopus***



Figure 25. *Grammoptera subargentata*. OSAC_0000555785

***Neobellamira* Swaine & Hopping, 1928**

Type species: *Strangalia delicata* LeConte (By original designation)

The genus consists of one species, *Neobellamira delicata* (LeConte, 1874), that is easily recognizable among Pacific Northwestern lepturine fauna for its modified elytra, which are strongly constricted at the middle, giving the species a wasp-like appearance. The nominative subspecies, *N. d. delicata* is found from western Oregon to the Sierra Nevada mountains of California. The species occurs on a variety of flowers, and its larvae have been taken from walnut wood (*Juglans*) (see Linsley and Chemsak, 1976:5). The latter authors note that “adults are readily attracted to codling moth baits and a long series was taken in a light trap during April at Linden, San Joaquin County, California.” The subspecies *N. delicata australis* Linsley and Chemsak, 1972, is restricted to southern California.

Diagnosis among PNW Genera

The strongly constricted elytra and bell-shaped pronotum, shallowly impressed at the base, will distinguish *Neobellamira* from other Pacific Northwestern genera.



***Juglans regia*.** Female flower. Photo by Georg Slickers - Self-photographed, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=286265>



Figure 26. *Neobellamira delicata delicata*
OSAC_0000588970

***Trachysida* Casey, 1913**

Type species: *Leptura mutabilis* Newman (by original designation)



Fig. 27. *Trachysida aspera* at Grand Teton NP, Teton County, Wyoming, USA. August 3, 2014. [BugGuide##1053477](#). Used with permission by Mark H. Brown.

Trachysida is represented by one species in the Pacific Northwest. *T. aspera aspera* ranges from Alaska to Oregon and New Mexico, which is fairly common but so far known only to visit flowers of *Heracleum* and *Achillea* (see Gardiner, 1970; Linsley and Chemsak, 1976). There are two additional subspecies, *T. aspera rufescens* L&C, 1976, known from Santa Cruz County, CA and *T. aspera brevifrons* (Howden), which ranges from New Brunswick to Michigan and New York. The only other species in the genus is *T. mutabilis* in Eastern North America.

The shortened 3rd and 4th antennal segments should identify the genus. *Trachysida* possesses a pubescent sole on the first segment of its hind tarsi, a trait that is shared by species in *Ortholeptura* and *Dorcasina*, but is more common in the tribe Rhagiini.

Lepturopsis Linsley & Chemsak, 1976

Type species: *Leptura dolorosa* LeConte (by original designation)



Figure 28. *Lepturopsis dolorosa* (LeConte, 1861). OSAC_0000597099

Diagnosis of *Lepturopsis*

Linsley and Chemsak (1976) separated this genus, which consists of the two North American species *L. biforus* (Newman) and *L. dolorosa* (LeConte), on the basis of the longitudinally impressed pronotum and bilobed base of the elytra. *Lepturopsis dolorosa* is fairly common in the Cascades and Coast range of Washington and Oregon, and may be easily recognized among other Pacific Northwestern lepturines by the shape of its pronotum.

Additional Notes

The original specimen of *L. dolorosa* was collected on the Northwest Boundary Survey (1857-1861), “East of Fort Colville” on the Columbia River, Washington and was described by the famous entomologist John LeConte. LeConte’s (1961) article is available on the [Biodiversity Heritage Library](#), and a photograph of the holotype specimen is viewable at Harvard’s [MCZ Museum of Comparative Zoology](#) website. Hardy and Preece (1926) note that on Vancouver Island “the adults are most frequently taken in flight, but are also found frequenting the flowers of *Spiraea* [= *Holodiscus*] *discolor* Pursh and sunning themselves on large leaves such as those of *Acer macrophyllum* Pursh.

***Pygoleptura* Linsley & Chemsak, 1976**

Type species: *Leptura nigrella* Say (by original designation).

Three species of this genus are known. All are restricted to the North American continent and all can be found in the Pacific Northwest, though they appear to be rarely collected. Relatively little is known about the life histories of *Pygoleptura* species, and flower records are only available for *P. nigrella nigrella*: *Heracleum* and *Thalictrum* (Linsley and Chemsak, 1976, p. 62).

Diagnosis of *Pygoleptura* in the Pacific Northwest

The species of *Pygoleptura* are similar in appearance to other common species in the genera *Stictoleptura*, *Brachyleptura*, and *Lepturopsis*, but may be readily separated by the hind angles of the pronotum, which are flattened and produced outwards along the humeral angles of the elytra. In both *Pygoleptura* and in the genera just mentioned, the area behind the eyes (the temporal region) is prominently produced with a sharp constriction, forming a distinct “neck.” This character separates *Pygoleptura* from the all-black species *L. anthracina*, in which the head narrows gradually behind the eyes.

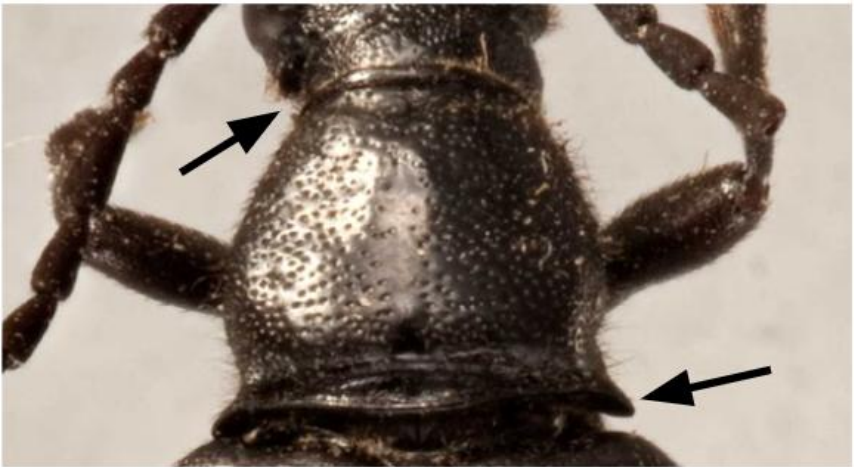


Fig. 29. Pronotum of *Pygoleptura carbonata*– female.
(OSAC_0000597219)



Figure 30. *Pygoleptura brevicornis* male, left, OSAC_0000268671. Female, right, OSAC_0000268673.



31. *Pygoleptura nigrella nigrella* male, left, OSAC_0000268671. Female, right, OSAC_0000268673. **Figure**

Key to Species of *Pygoleputra* in the Pacific Northwest

1. Pronotum densely, closely punctate at middle; elytra with apices obliquely truncate..... 2
- 1'. Pronotum sparsely punctate at middle; elytra with apices transversely truncate. Length 14-20 mm. BC to Idaho and Calif. *P. carbonata*
2. Elytra with apices obliquely emarginate, outer angles dentate. Elytra coarsely punctate at base, punctures large. Female antennae with segments 8-10 as broad as long; male antennae with segments 5-10 strongly produced apically, often backwards-pointing. Color always black; Length, 11-21 mm. Sierra Nevada to southern California and central Oregon. *P. brevicornis*
- 2'. Elytra with apices narrow, shallowly, obliquely truncate. Elytra finely, densely punctate at base, color often reddish testaceous with apical dark margins; female antennae with outer segments elongate; male antennae with segments 5-10 sub-serrate. 3
3. Elytra usually brownish to reddish with dark lateral bands at apices. Pronotum moderately coarsely, densely, confluent punctate, basal glabrous area small. Elytra finely separately punctate at base, punctures smaller than those of pronotum. Length, 11-23 mm. Alaska to Newfoundland, south to Oregon and northern United States.
..... *P. nigrella* subsp. *nigrella*
- 3'. Elytra black in both sexes. Pronotum rather coarsely, separately punctate on disk, punctures fairly sparse at middle. Elytra moderately coarsely, contiguously punctate at base, punctures about as large as those on pronotum. Length, 13-23 mm. Crater Lake and Cascades of Oregon.
..... *P. nigrella* subsp. *oregonensis*

Notes on identifying *Pygoleputra* species

The key is modified from Linsley and Chemsak (1976), who indicated that the basal elytral punctures in *P. brevicornis* are always larger than those of the pronotum. This works for females, however the male specimens at OSAC have a tendency for very large pronotal punctures, sometimes complicating that pattern. The strongly produced and dentate elytral apices nevertheless confirm those specimens' identity as *P. brevicornis*.

P. n. oregonensis and *P. brevicornis* are found along the same range in the central Oregon cascades. Females of the two species are easily separated on sight—the outer antennal segments of *P. brevicornis* females are as broad as they are long, and the antennae barely extend past the pronotum, while the antennae of *P. n. oregonensis* females extend well past the pronotum, and the outer segments are longer. The males of the two species, however, may be difficult to distinguish definitely on their own without a series of both species for comparison. In the small amount of material available at OSAC, the posterior apices of the elytra are the most reliable character for separating the two species, and are given first in the key. The relative size and density of the elytral punctuation, the antennal length, and the degree to which the male antennal segments are serrate, or sub-serrate will be more difficult to judge when only a single specimen is available.

***Stictoleptura* Casey, 1924:280**

Type species: *Leptura cribripennis* LeConte (by original designation)



Figure 32. *Stictoleptura canadensis cribripennis*. (OSAC_0000558294)

Twenty-eight *Stictoleptura* species are currently recognized worldwide, which are Holarctic in distribution. Only one species, *S. canadensis* (Olivier, 1795), occurs in North America. One of its three subspecies, *S. canadensis cribripennis* (LeConte, 1859), is found in the Pacific Northwest, ranging from British Columbia, south to California and the Rocky Mountains to New Mexico. The nominative subspecies, *S. c. canadensis*, occurs in northeastern United States and Canada, and the subspecies *S. canadensis arizonensis* Linsley and Chemsak, 1976 is restricted to central and southeastern Arizona. Özdikmen and Turgut (2008) recently described a new species *Stictoleptura gevneensis* from Gevne Valley, Turkey, and commented on the taxonomic status of the genus. Cope (1984) reported that throughout Colorado and New Mexico, larvae of *S. canadensis cribripennis* utilize dead standing *Populus tremuloides* Michx.

Diagnosis of *Stictoleptura* in the Pacific Northwest

The color of the elytra, combined with the usually black-and-red striped antennae will readily distinguish *S. canadensis cribripennis* from the rest of the PNW lepturine fauna. The black forms are superficially similar to the species of *Pygoleptura* and *Leptura anthacina*, all of which have the posterior pronotal angles expanded apically. According to Linsley and Chemsak (1976), *Stictoleptura* is distinguished among other North American genera by the rounded posterior pronotal angles, the apically and basally impressed disk of the pronotum, the sub-serrate antennae, and the dentate elytral apices.

Nealosterna Podany, 1961

Type species: *Leptura capitata* Newman (monobasic).



Figure 33. *Nealosterna rubida*. (OSAC_0000597160)

One PNW species ranging from BC to central CA that has only been taken on *Ceanothus* and lupine flowers, with hosts *Abies* and *Tsuga*. Linsley and Chemsak (1976:86) remarked: “Although Podany (1961) considered *Nealosterna* as a subgenus of *Alosterna*, we consider the species of the former as being sufficiently distinct from the type species of *Alosterna*, *Leptura tabacicolor* (Degeer), to warrant generic status.” They also included the eastern North American *capitata* Newman in this genus.

***Anastrangalia* Casey, 1924**

Type species: *Leptura sanguinea* LeConte (by original designation).

There are 17 species and subspecies of *Anastrangalia* worldwide, with two in the PNW, *A. sanguinea* and *A. laetifica*. Both Pacific Northwestern species are fairly common on flowers in the spring and summer, and both use decaying Pinaceae spp. as larval hosts. Linsley and Chemsak provide a range map for *A. sanguinea* (1976, p.147, fig. 38) but not for *A. laetifica*.

Diagnosis

Anastrangalia is characterized by its pronotum. Note the contrast between the shape of the *Anastrangalia* pronotum and that of *Neolosterna*, which is bell-shaped and has the posterior angles produced over the humeral angles of the elytra.



Figure 34. *Anastrangalia laetifica* – *Left: male, Right: female.*
(Specimens: OSAC_0000332288 and OSAC_0000273261)

Key to *Anastranglia* species in the Pacific Northwest

1. Males with basal punctures of the elytra equal in size to those of the pronotum. Female elytra usually red with black spots..... ***A. laetifica***
- 1'. Males with basal punctures of the elytra larger than those of the pronotum. Female elytra usually brownish red..... ***A. sanguinea***



Figure 35. *Anastrangalia sanguinea*. Left: male, Right: female.
(OSAC_0000593939 and OSAC_0000593965).

Notes on *Anastrangalia sanguinea*

Found on a wide variety of flowers from May to August throughout the west coast and in a few scattered localities in the southwestern and northwestern United States. The basal punctures of the elytra are larger than those of the pronotum.

Notes on *Anastrangalia laetifica*

Female *A. laetifica* are easily recognized in the field by their distinctive red elytra marked with black spots. The males are sometimes marked with a brown pattern on their black elytra, and Linsley and Chemsak found that the proportion of males with these markings in local populations varied along a geographical gradient.

Tyson (1966) reared adults from *Pinus sabiniana* from Jamestown, Tuolumne Co., Cal., and from *Pinus attenuata* from Santa Cruz Co., Cal. "In both hosts the larvae mined in the rotten heartwood of stumps and limbs that had been dead for about 3 years. The adults emerged in early June" (p. 202).

Schoening and Tilden (1959) cut an abundance of adults, pupae and larvae from stumps of *Pinus attenuata* that had been killed in a fire 3 years prior. The specimens were found within 2 feet of the ground, and the authors noted "the larval tunnels are concentrated in the deeper parts of the wood, at a depth of more than one or two inches, and seem to run generally in a longitudinal pattern to the tree." For other references to habits, see Gardiner (1970) and Gosling (1954). New distribution records are reported in MacRae and Rice (2007).

***Brachyleptura* Casey, 1913**

Type species: *Leptura vagans* Olivier (By original designation)

Five species of *Brachyleptura* are now recognized, 4 in eastern North America and 1 in the west, *B. dehiscens*, which ranges from British Columbia to the northern Sierra Nevadas of California. *B. dehiscens* is brown- to reddish brown with the males being smaller and more lightly colored than the females. The species visits a variety of flowers in the summer and uses *Pseudotsuga* as a larval host (Cope, 1984).



Figure 36: *Brachyleptura dehiscens* (LeConte, 1859).
Female, OSAC_0000593111.

Diagnosis

Brachyleptura might easily be confused with species in the genus *Acmaeops* (Tribe Rhaggini), which are also stout with brownish elytra, but can be distinguished by the antennae, the outer segments of which are slightly expanded at the apices and bicolored.

Toxoleptura Miroshnikov, 1998: 411
(*Brachyleptura*, Linsley & Chemsak, 1976:171)

Type species: *Pachyta vexatrix*, Mannerheim (by original designation)

Toxoleptura contains two species formerly grouped under *Brachyleptura* (see Miroshnikov, 1998, p. 411 and Figs. 137-145). *T. vexatrix* is fairly common in the Pacific Northwest, ranging from Alaska to central California and found on a wide variety of flowers. No host plant is known (Bousquet et al., 2017). *T. pernigra* is found in southern CA.



Figure 37. *Toxoleptura vexatrix* (Mannerheim, 1853).
Male, OSAC_0000143835.

According to Linsley and Chemsak (1976, p. 172), elytral coloration in *T. vexatrix* varies geographically, with populations north of the Siskiyou tending to be almost entirely black with occasional yellow spots. From Northern CA southward into the Sierra Nevadas the elytra become more prominently yellow with black spots.

***Ortholeptura* Casey, 1913**

Type species: *Ortholeptura ocullea* Casey (by original designation)

Three species in *Ortholeptura* are known, two of which occur in the Pacific Northwest. All three species are nocturnal and apparently do not visit flowers. *Ortholeptura valida* (Fig. 38a) is common and widespread, while *O. obscura* (Fig. 38b) is very rare, known from only a handful of specimens taken from the Wallowa Mountains of Northeastern Oregon and Southeastern Washington (see Penrose, 1979). The third species, *O. insignis*, occurs along the coast of California.

Annie Ray et al. (2011) discovered and synthesized a unique long-range sex pheromone produced by females of *Ortholeptura valida*, which is likely also used by other members of the genus (see Ray et al., 2006). Around 2013, the author tried and failed to rediscover a population of *O. obscura* around the Aneroid Lake in Northeastern Oregon, which is a beautiful, rugged area. However he was alone, woefully ill-equipped for the journey, and spooked by the ample fresh bear and cougar scat he discovered there. If someday a brave soul is able to find *Ortholeptura* in those mountains, please get ahold of Dr. Ray to test the pheromone.

Diagnosis of *Ortholeptura* among Pacific Northwestern genera

The distinctive pale color and elongate body shape will serve to separate *Ortholeptura* from most Pacific Northwestern genera. The pronotum lacks the lateral tubercles or protrusions found in other similar-looking genera, such as *Centrodera*, and the abrupt constriction of the head behind the eyes will easily distinguish *Ortholeptura obscura* from *Stenocorus obtusus*.

Key to *Ortholeptura* species in the Pacific Northwest

1. Elytra with apices spinose at suture, each with two or three sets of dark spots on disk, color testaceous. Larger species. Length, 12-28 mm. Common. Oregon to southern C along the Sierra Nevada. (Fig. 38a) *O. valida*
- 1'. Elytra with apices without spines, yellow at base and sides, oblique dark spots sometimes reduced to a single median pair. Rare. Smaller species. Length, 12-17 mm. Rocky Mts. of Oregon, Wash., and Idaho. (Fig. 38b) *O. obscura*



Figure 38a. Left: *Ortholeptura valida* (LeConte, 1857). OSAC_0000583774. Adults are common at higher elevations. Tyson (1966) found larvae of *O. valida* in a rotten stump of *Abies concolor* (white fir) collected in April at Pinecrest, Tuolumne County, California. Larvae “pupated in chambers near the surface, and emerged as adults in late July.”

Figure 38b. Right: *Ortholeptura obscura* (Swaine & Hopping, 1928). OSAC_0000556500. I once asked the great Jim LaBonte of ODA, whose encyclopedic beetle knowledge is renowned, if he had ever heard of *Ortholeptura obscura*. He simply laughed and said, “too obscure for me!” and walked away.

Tribe Rhagiini Kirby, 1837:178

***Rhagium* Fabricius, 1775**

(*Stenocorus* Geoffroy, 1762:221; *Stencorus*; Lamarck, 1817:312; *Hargium* Samouelle, 1819:210; *Harpium*; Reitter, 1912:6; *Allorhagium* Kolbe, 1884:270)

Type species: *Cerambyx inquisitor* Linnaeus (Curtis designation, 1839)



Fig. 39. *Rhagium inquisitor* (Linnaeus, 1758).

OSAC_0000621569.

Rhagium, with its dense short hairs, mottled coloration, and distinctly pronounced elytral costae, is one of the most impressive and recognizable lepturine genera. While at least 23 species are currently recognized in three subgenera worldwide, North America is home to just one of these,

the Holarctic *Rhagium inquisitor inquisitor* Linnaeus. Adults of that species are found from late spring through mid summer, but are not known to visit flowers. The larvae bore into a variety of hosts, including *Abies*, *Pinus* and *Picea*, and construct a recognizable broad oval pupal chamber on the wood surface that is stuffed with fiber. Gardiner (1957) notes that adults are readily attracted to turpentine bait. The basic life history of *R. inquisitor* has been described by Gardiner (1970) and Hardy and Preece (1926) (under the junior synonym *Rhagium lineatum* Oliv.).

There has been a fair amount of physiological research using species of *Rhagium*. In Siberia and Norway, *R. inquisitor*, and several congeners are able to overwinter under bark in areas that reach well below 0 °C, raising the question of how they are able to keep from freezing. In a laboratory setting, Zachariassen et al. (2008) found that *R. inquisitor* is able to supercool to -25°C. This feat is attributable to a protein in the *Rhagium* hemolymph, aptly named *RiATP*, or *Rhagium inquisitor* Antifreeze Protein, which is now thought to be the most potent antifreeze protein known (Kristiansen et al., 1999, 2011, 2012; Hakim et al., 2012, 2013). Hakim et al. (2012) determined the crystal structure of *RiATP* and used it to elucidate the molecular basis for ice binding in antifreeze proteins, which had been poorly understood. *Rhagium* larvae have also been of interest to research into digestive enzymes (see Zverlov et al., 2003, and Chipoulet and Chararas, 1984).

Although Linnaeus is credited with naming *R. inquisitor*, the species was already known to earlier entomologists and illustrators, such as Johann Leonhard Frisch (1730, plate on pg. 646. See openlibrary.org).

Rhagium was reviewed by Casey (1913) and Cenek Podany (1964), both of whom recognized several distinct species within our current concept of *R. inquisitor*. Linsley and Chemsak (1972, p. 88) placed Casey's and Podany's names into synonymy and considered our species the same as the European form.

***Pseudogaurotina* Plaviltstshikov, 1958**

Type species: *Gaurotes splendens* Jakowleff (by original designation)



Figure 40. *Pseudogaurotina cressoni cressoni* (Bland, 1864). OSAC_0000259953. Female, with relatively coarse, subcontiguous punctures at the base (anterior third) of the elytra.

Both subspecies can be either blue, green, or purple.

Our region's only representative of the genus *Pseudogaurotina* is the bright metallic blue/green *Pseudogaurotina cressoni* (Bland, 1864). Its two subspecies are distinguished from one another by their elytral setae and punctuation, and their geographic ranges. Some populations contain individuals that are intermediate in their characteristics and may be difficult or impossible to identify without a series of specimens.

The nominative subspecies, *P. cressoni cressoni* can be found at higher elevations (4,500 – 9000 ft) during the daytime on flowers of *Heracleum*, *Xerophyllum*, *Rosa*, and *Ranunculus*. The subspecies *P. cressoni lecontei* (Casey, 1913) has been reported on honeysuckle (*Lonicera*), which is the host plant of its European and Asian congeners, as well as Mountain Ash

bloom (*Sorbus*), at 7000' at Crater Lake in late July (OSAC_0000621497). On July 22, 2024, the author traveled to Crater Lake with honeybee aficionado Ellen Topitzhofer, and didn't find a *single lepturine* aside from a few *Desmocerus* at Castle Crest Meadow. It was on this trip that we resolved to use iNaturalist records instead for future ventures, which now far exceed museum specimen records – a helpful development since the time this project was initiated!

To the best knowledge of the author, no detailed account of the biology of *P. cressoni* exists. The host plant records, *Pseudotsuga* and *Abies*, given for both subspecies, appear to have been introduced by Linsley and Chemsak (1972), presumably from specimen label data, but no indication is given as to their source. A review of the taxonomy and generic status of *Pseudogaurotina* is given in Schapker (2014).

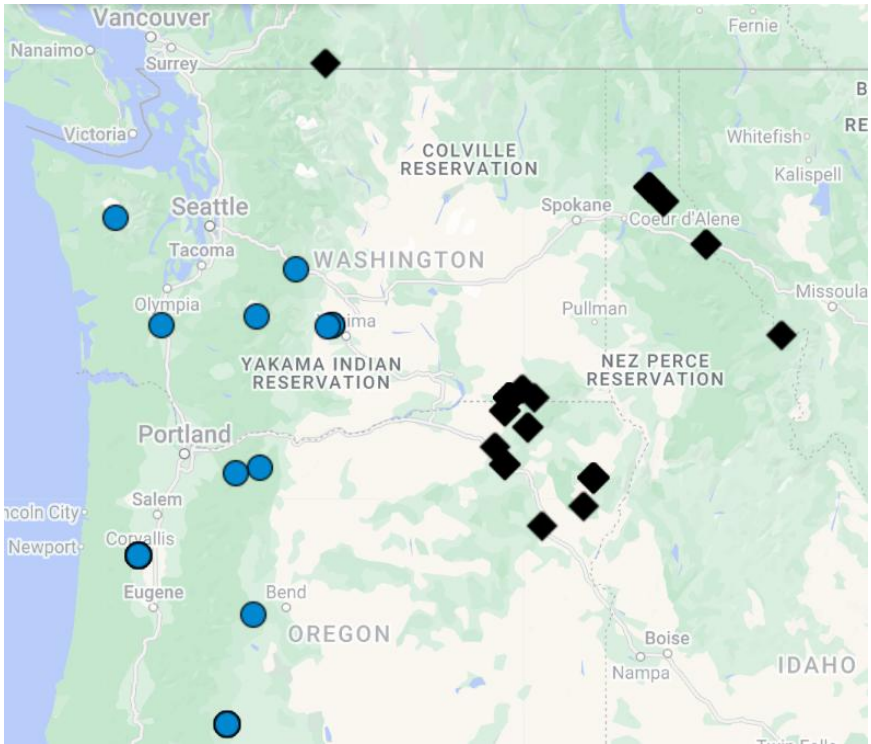


Fig. 40.5. *Pseudogaurotina* specimens at OSAC .

Blue circles: *P. cressoni lecontei*. Black diamonds: *P. cressoni cressoni*

Key to *Pseudogaurotina cressoni* subspecies in the PNW

- 1. Elytra w/ basal punctures moderately coarse, dense, subcontiguous; pronotum with disk usually distinctly punctate; pubescence usually evident on head and elytra. Length, 9-16mm. Rocky Mountains from Colorado to British Columbia, & NE Oregon ***P. cressoni* subsp. *cressoni***
- 1'. Elytra with basal punctures usually very fine, sparse, greatly separated; pronotum with disk often impunctate; pubescence obsolete on elytra, very sparse on head. Length, 9-15 mm. N. Wash. Cascades, Mt. Olympus, to S. Calif. and Sierra Nevadas ***P. cressoni* subsp. *lecontei***



Figure 41. *Pseudogaurotina cressoni lecontei* (Casey, 1913), from Sparks Lake, Oregon. August 9, 2025 on twinberry honeysuckle, *Lonicera involucrata*. The plant was post-flowering, on rocks on the edge of water, surrounded by fir trees, *Abies lasiocarpa*. 2+ hour subsequent search yielded no additional. A mink was also present skulking about, and millions of gerrids. 44.0085, -121.7435. Ellen Topitzofer & Phil Schapker Mendez, collectors. Photo by Chris Hedstrom.

***Brachysomida* Casey, 1913**

Type species: *Acmaeops tumida* LeConte (by original designation)



Figure 42. *Brachysomida atra* (LeConte), female. Sanders Co., Montana.
5 mi. S. hot springs. 2900 ft., el. June 23, 1967. L. Russell.
OSAC_00000602611.

There are five species of *Brachysomida* in North America and two in the Pacific Northwest. One of these, *B. californica*, is extremely variable throughout its range and presents a challenging taxonomic puzzle that is presently open for further study (see extensive remarks by Linsley and Chemsak, 1972). Swift (2008) reported that *Bracysomida californica* utilizes the living roots of *Lomatium lucidum* (Torrey and A. Gray) and made further notes on the habits of that species, and its Californian congener, *B. vittigera*.

Diagnosis

In treating this genus, Linsley and Chemsak (1972:127) remarked “the species presently assigned to this genus appear to represent a heterogenous group. They are placed together for convenience and because they are similar in form and do not fit into the definitions of other genera. The resultant genus may be recognized by the short, stout form, convergent tempora, short, thickened antennae, and transverse pronotum.”

Key to *Brachysomida* species in the Pacific Northwest

1. Body sub-glabrous, usually all-black; pronotum non-pubescent, obtusely tuberculate at sides. Length, 7-13 mm. Northwestern United States to Colorado and Alberta. ***B. atra***
- 1'. Body distinctly pubescent, coloration variable; pronotum distinctly pubescent, sides sub-angulate; integument often with a metallic luster, shining; Length, 7-16 mm. Washington to California
..... ***B. californica***



Figure 43. *Brachysomida californica* (LeConte). Collected at Monroe, Oregon. June 18, 1930. M. H. Hatch. OSAC_0000602638

***Cortodera* Mulsant, 1863**

(*Acmaeops* LeConte, 1850:321 (part); *Leptacmaeops* Casey, 1913:219;
Leptacmaeops (*Acmaeopsilla*) Casey, 1913:240)

Type species: *Grammoptera spinulosa* Mulsant
(=*Leptura humeralis* Schaller) (Gressitt designation, 1951)

Cortodera is a large and taxonomically difficult genus distributed throughout the Northern Hemisphere, the species of which are diurnal, generalist flower feeders. The larvae of several species in both Europe and North America appear to be associated with the roots of *Ranunculus*, although detailed biological information for most of the genus is lacking. The PNW is currently considered to have 8 species.



Figure 44. *Cortodera impunctata*, showing characteristic shape of pronotum in the genus *Cortodera*. Specimen: OSAC_0000605700.

Diagnosis of the Genus

Unlike some of the charismatic Pacific Northwest lepturines that are readily identified on sight, *Cortodera* falls into a set of bean-sized, black and brownish genera that can be difficult to distinguish without a microscope. *Cortodera* can be distinguished by the following characters:

Eyes entire, finely faceted (diurnal species); **antennae** filiform, slender; **pronotum** laterally with slight, obtuse tubercles, the dorsal pronotal surface (disk) convex (not flattened behind nor elevated on each side dorsally into a broad obtuse tubercle, as in *Acmaeops proteus*); **head** with front short (elongate in *Gnathacmaeops pratensis*), tempora inflated, parallel, abruptly constricted at neck; **tibial spurs** terminal, inserted at apices of tibiae (subterminal in *Stenocorus* and *Piodes*); **prosternum** with intercoxal process narrow, not extending beyond coxae (as in *Leptalia*); **mesosternum** with intercoxal process laying well below margins of coxae.

The Pacific Northwestern *Cortodera*

Most likely, a specimen caught in the Pacific Northwest and identified to *Cortodera* will turn out to be one of the three common and widespread species in our region, *C. subpilosa*, *C. militaris militaris*, or *C. longicornis*. For the most part, these three species are easily separated using the characters given in the key below. *Cortodera subpilosa* is usually covered in long, thick, golden pubescence, giving the elytra a velvety appearance. Many of our museum specimens of this species are caked in pollen. The relative amount of pubescence varies substantially throughout its range however, sometimes making the species difficult to separate from the more densely pubescent forms of *C. militaris*.

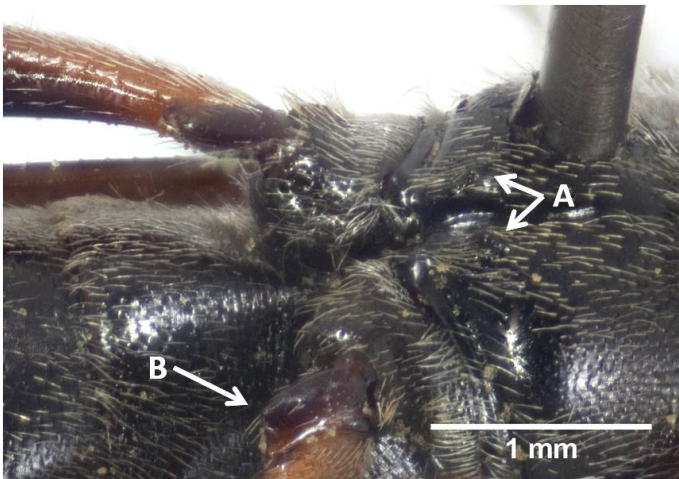


Figure 45. *Cortodera longicornis*, male. (A) metasternal tubercles, (B) distinctly angulate trochanters.

The most reliable character to separate *C. militaris* from *C. subpilosa* is the presence of metasternal tubercles (**Fig. 45 A**) in males, which are lacking in *C. subpilosa*. In addition, both *C. militaris* and *C. longicornis* “usually” possess distinctly angulated trochanters on their hind legs, which often form a 90-120 degree angle as they extend out from the coxae to join the femur (**Fig. 45 B**). In *C. subpilosa* the trochanters are typically more elongated and smoothly rounded on the distal margin. However, in some of the series examined in both *C. militaris* and *C. longicornis* the trochanter angle varied between 90 and 150 degrees, making the distinction between “angled” and “rounded” difficult to judge. In such cases only male specimens provide a definitive identification with reference to the metasternal tubercles.

Cortodera longicornis is the most variable in form and coloration throughout its range (**Fig. 46**). The species is most easily identified by the unique characteristics of its pronotum, which is strongly convex and only moderately punctate, usually with a median longitudinal glabrous area on the pronotal disk. Several discrete elytral patterns occur in *C. longicornis*, from tan with a median black stripe, to vittate, or all-black, or (more infrequently) black with humeral angles red.

Of the rest of the 8 Pacific Northwestern species, several appear to be quite rare or otherwise restricted in their range. *C. robusta* is known from only 3 female specimens of the type series, from Vantage, Washington, and *C. spuria* is also known from just a small handful of specimens (see Linsley and Chemsak, 1972). The subspecies *C. militaris* ssp. *constans* is restricted to SE Oregon and Modoc Co., CA. The species *C. impunctata* and *C. coniferae* are only represented in OSAC by a few specimens each, though the latter has a wide geographic range, from British Columbia to NE Oregon and Colorado. Only 30 specimens of *C. impunctata* were available to Hopping (1947), and 29 to Linsley and Chemsak (1972). Three specimens in the OSAC from Kittitas Co., WA, were taken on “sunflowers.” The species *C. subpilosa*, *C. longicornis* and *C. nitidipennis* are found on *Balsamorhiza* in the sunflower family.



Figure 46. *Cortodera longicornis* – showing diversity of elytral coloration within a single species.

Key to Species of *Cortodera* in the Pacific Northwest

1. Pronotum moderately, to densely pubescent, punctuation either regularly distributed over pronotum, or bisected by a longitudinal glabrous^[1] area. 2
- 1'. Pronotum glabrous, shining, punctuation, if present, very sparse and irregularly distributed. Color black, shining, elytra often with two broad, testaceous, longitudinal vittae. ***C. impunctata***
- 2(1). Pronotum moderately- to densely covered with long, erect pubescence. Elytra never vittate. 3
- 2'. Pronotum covered with short, appressed pubescence. 4
- 3(2). Hind trochanters distinctly angulate on distal margin (often forming a 90° angle with respect to the femur, but as much as 150° in some specimens) (**Fig. 45**); males with metasternal tubercles (**Fig. 45**); Elytra moderately densely pubescent and punctate throughout; punctures fine, dense, contiguous; elytra black or with reddish humeri or tan with suture narrowly black.
C. militaris (2 subsp.)
- 3'. Hind trochanters typically evenly rounded on distal margin (angle with respect to the femur usually more than 150°) males without metasternal tubercles; elytra densely, irregularly punctate, usually densely covered with long, flowing pubescence, in males sometimes completely reduced on the disk with only the sides and suture pubescent and elytra glabrous, shining. Elytra either black or tan/testaceous. ***C. subpilosa* or *C. nitidipennis*^[2]**
4. Hind trochanters usually distinctly angulate on distal margin (**Fig. 45**), sometimes rounded. Body elongate. Pronotum shining, punctures only moderately dense, disk strongly convex. Elytra with punctures at base separate, irregularly spaced. Males with metasternal tubercles. Elytra color usually one several patterns: all-black or dark brown, tan with black and brown vittae, or tan with black suture, or occasionally black with humeral angles red. ***C. longicornis***
- 4'(2'). Hind trochanters are always evenly rounded to apex; otherwise not as in above. 5

5(4). Elytra with punctures behind base rather fine, separate, often contiguous but not transversely confluent. 6

5'. Elytra with punctures behind base coarse, transversely confluent; elytra all-black or vittate. 7

6(5). Elytra testaceous with suture narrowly black, basal punctures as large as those on pronotum, separated, becoming obsolete towards apex; pubescence short, sub-depressed, and suberect; apices sub-truncate. ***C. barri***

6'. Elytra testaceous, punctures at base slightly larger and denser near basal 1/3 then much finer and sparser toward apex; pubescence rather sparse, fairly long, sub-depressed, erect hairs absent; apices rounded. ***C. spuria***

8(6). Elytra with hairs short, half the length of the second antennal segment (extremely rare species)..... ***C. robusta***

8'. Elytra with hairs long, at least the length of the second antennal segment. Punctures at base of elytra larger than those of the pronotum, separated, becoming denser behind scutellum and transversely rugose, punctures becoming finer and shallower toward apex. ***C. coniferae***

[1] *glabrous* – “smooth, hairless and without punctures or structures” (Torre-Bueno, 1937: *A glossary of entomology*)

[2] *C. subpilosa* is an older and preferred name when ID is ambiguous. See discussion in the Species Notes section.



Figure 47. (A) *Cortodera barri* (OSAC_0000335219); (B) *C. coniferae* (OSAC_0000556499); (C) *Cortodera nitidipennis* (OSAC_0000615387); (D) *Cortodera spuria* (CAS specimen).

Notes on species of *Cortodera*

***Cortodera barri* - (Fig. 47 A)** - In their original description, Linsley and Chemsak mentioned specimens from Harper, OR and Keerin's Ranch, Izee, OR. A third Oregon locality may be added from 1 female specimen, Sucker Creek Canyon, Malheur Co., Oregon, June 15-18, 1951 (Borys Malkin).

***Cortodera conferrae* - (Fig. 47 B)** - Linsley and Chemsak (p. 120) note "this species differs from *C. spuria* primarily by the color of the elytra." The two specimens at OSAC assignable to this species were taken at Mt. Rainier, Washington, VII-30-41, on frying-pan glacier (R.L. Furniss) and Flathead L., MSU Biol. Station, Montana, VII-31-1965 (Mary Richardson).

***Cortodera impunctata* - (Fig. 44)** - New flower record: "Sunflowers," from three OSAC specimens with label data: W[ashingto]n, Kittitas Co., Taneum Cr. Cutoff, 16 May, 1970. (Norma Berona).

***Cortodera longicornis* - (Figs. 45, 46)** - Considerable taxonomic confusion has resulted from the wide variation in size and coloration of this species, which led to the description of ten species now recognized as variants of *C. longicornis*. An additional point of confusion arises from the shape of the hind trochanter, which was described as distinctly angled by Linsley and Chemsak (1972). However, several series are present at OSAC in which individuals have trochanters ranging from very distinctly angled to more or less rounded (particularly demonstrated in a series of 4 specimens from Bozeman, MT).

Individual populations of *C. longicornis* may be dominated by just one or two of the several possible phenotypes for elytral coloration. There is a marked tendency for vittate individuals near The Dalles, Oregon, and a series of 30 specimens from Creston, BC has only tan individuals. Of the 450 specimens available for study, only one series, from Durkee, Oregon (Wallowa Mtns.) has several individuals with elytral red humeral angles. The rest from that locality are either black or tan with a sutural black stripe.

A unique phenotype from Pipestone Pass, Montana, was identified by Loren Russell (1968) as *C. robusta*, which has contributed to that species being incorrectly reported from Montana by Hart et al. (2013).

OSAC is in possession of 1 paratype specimen of *C. oregonensis* Hopping & Hopping, 1947, and 1 paratype specimen of *C. harneyensis* Hopping & Hopping, 1947.

Cortodera militaris militaris - Individuals have elytra either all-black, light brown with a narrow black sutural vittae, or black elytra with red humeri. According to Penrose (1979), "an interesting phenomenon is found in the distribution of local populations with red and black individuals within the range of the nominate subspecies. All bicolored specimens seen are from Washington (Tacoma, Olympia and Chehalis), and Linsley and Chemsak's statement that black *C. militaris* tend to have reddish humeri would seem to be valid only as regards specimens from the northern portions of the subspecies range."

Cortodera militaris constans - When Linsley and Chemsak described this subspecies from northeast California, the authors noted that the population was "remarkably constant" in its coloration ("color black, moderately shining, humeri always reddish...") Shortly after this description, Rick Penrose discovered several new populations from Lake Co. in SE Oregon which were anatomically similar to *constans*, but included specimens which deviated from the typical coloration.

According to Penrose (1979):

"In the Lake County material ... 60 specimens (86%) are typical *constans*, 9 (13%) have elytra brown/vittate and 1 (1%) is wholly black. Inclusion of Oregon populations would therefore require a redefinition of *constans* to encompass predominantly black populations in which the red humeral condition is *usually* expressed. It should also be noted that four of the six specimens from Quartz Mt., in marked contrast to other Lake County specimens, have the reddish mark vaguely defined and restricted to the humeral angle. This reduction in maculation size, combined with the occurrence of a wholly black individual could indicate that transitional populations between *constans* and typical *militaris* remain to be discovered in the Klamath Basin."

Cortodera nitidipennis - (Fig. 47 C) - Both Hopping and Hopping (1947) and Hatch (1971) expressed reservations regarding the specific delimitation of *C. nitidipennis*. Linsley and Chemsak (1972), whose characterization was based on just 42 specimens stated “the irregularly punctate basal half of the elytra and very short discal pubescence will readily separate *C. nitidipennis* and *C. subpilosa*.” OSAC is in possession of 15 specimens studied by those latter authors, taken at three localities in the vicinity of The Dalles, Oregon. The specimens, which are all male, generally agree with the above description, as well as the original description by Casey.

However, in sorting through the unidentified *Cortodera* in OSAC, some difficulty arose in trying to segregate certain populations into the species *C. nitidipennis* and *C. subpilosa*. Several series with glabrous, *C. -nitidipennis*-like males were accompanied by densely pubescent females, indistinguishable from the typical *subpilosa* (as described in Linsley and Chemsak, 1972). This may suggest that the females of *C. nitidipennis* have been historically mischaracterized[1]. Furthermore, the hind trochanters of *C. nitidipennis* specimens identified by Hopping, Hatch, and Chemsak are indistinguishable from those of *C. subpilosa*, and not distinctly angled as stated in Linsley and Chemsak’s description and key. Although I have not had the opportunity to inspect the type specimens of either species, the material in OSAC determined as *C. nitidipennis* by J. Chemsak is clearly unique in elytral punctuation and pubescence compared to those he determined as *C. subpilosa*, so I have retained both species as valid.

In my MS thesis (Schapker, 2014) I have provided further detailed notes on the populations that appear to represent transitions between *C. nitidipennis* and *C. subpilosa* that may be of interest to taxonomists interested in performing a more detailed analysis of the genus.

Cortodera robusta - At the time of Linsley and Chemsak’s (1972) revision, *C. robusta* was known only from the type series consisting of three females from Vantage, Washington. Recently Hart, Cope and Ivie (2013) reported the species occurring in three localities in western Montana. One record is based on a male specimen at MTEC identified as *C. robusta* by those authors, and two records are from an M.S. thesis by Russell (1968), who surveyed the Coleoptera of Montana. Russell’s specimen from “Pipestone Pass: Silver Bow Co.: eWn: 6000’ el.”, now at OSAC, is a relatively rare morph of *C. longicornis* with reddish humeral angles. The MTEC specimen, an all-black male with prominent metasternal tubercles and glabrous pronotal vitta, also appears to be a misidentified *C. longicornis* based on photos sent to me by Charles Hart. The second Russell specimen, from “Sanders Co: Hot Springs – National Bison Refuge,” may have been lost, since a large portion of that collection was destroyed by dermestids before being transferred to OSAC (Loren Russell, personal communication).

Cortodera spuria - (Fig. 47 D) - No specimens are present at OSAC. The author has only viewed one specimen from California Academy of Sci.

Cortodera subpilosa - Linsley and Chemsak (1972) note a population at Yellowstone National Park in which the elytral pubescence is reduced. This also occurs in a large series from the Moiese National Bison Range in Montana. See additional comments on *C. nitidipennis*.

[1] Casey described the female elytra as “nearly as in the [male], but with the rather coarse punctures very widely spaced, being separated by nearly three to five times their own diameters, becoming but slightly smaller apically but notably smaller and closer on the basal swelling near the scutellum.”

***Acmaeops* LeConte, 1850**

(*Gnathacmaeops*, Linsley and Chemsak, 1972:137)

Type species: *Leptura proteus* Kirby (Casey designation, 1913)



Figure 48. *Acmaeops pratensis* (Laicharting, 1784).

OSAC_0000609018

Acmaeops consists of 10 species worldwide. Linsley and Chemsak (1972) considered one of the two northwestern species, *A. pratensis*, to be distinct enough to erect a new monotypic genus, which they called *Gnathacmaeops*. However, following Sama (2002), *Gnathacmaeops* is normally treated as a junior synonym of *Acmaeops* (see Bezark, 2021). At the time of writing, *Gnathacmaeops* is still occasionally used by North American authors, as well as on BugGuide.net (accessed Aug. 8, 2022).

Key to the species of *Acmaeops* in the Pacific Northwest

- 1. Pronotum with disk convex, not flattened behind nor elevated on each side into a broad, obtuse tubercle; Head with front longer than broad.
(Fig. 48) *A. pratensis*
Pronotum with disk flattened behind and elevated on each side into a broad, obtuse tubercle; head with front short, not longer than broad.
(Fig. 49) *A. proteus*



Figure 49. *Acmaeops proteus proteus* (Kirby in Richardson, 1837). Note each side of the posterior dorsal surface of the pronotum is expanded into a large tubercle. OSAC_0000266588

***Evodinus* LeConte, 1850**

(*Brachyta* Fairmaire in Jacquelin du Val, 1864:185)

Type species: *Leptura monticola* Randall (monobasic)



Fig. 50. *Evodinus monticola vancouveri*. Male. This is one of several specimens collected by Danielle Schapker Mendez and the author from Stevens Pass Summit, Wash., on June 19, 2016. Around 15 individuals were running about and mating on leaves of red elderberry, *Sambucus racemosa*, growing next to some cabins near the highway. An energetic, aggressive species. They put up a good fight.

Notes on *Evodinus*

Six species in *Evodinus* are recognized worldwide, with two species in North America, *E. lanhami* Lewis and *E. monticola* (Randall). *Evodinus monticola* is further divided into two subspecies. The nominative subspecies, *E. monticola monticola* is distributed throughout the eastern half of the continent, while *E. monticola vancouveri* occurs west of the Rocky Mountains. Authors prior to Linsley and Chemsak (1972) treated *E. m. vancouveri* as a distinct species, *E. vancouveri*.

Craighead (1923, p. 141) first described the larvae and pupae of *E. monticola* (which he classified under the genus *Pachyta*) after finding prepupal larvae in chambers about 6 inches underground below a Hemlock log (*Tsuga canadensis*) "felled 19 months previously."

Gardiner (1970) summarized the habits of the eastern subspecies, *E. monticola monticola* as follows:

"Adults fly in late May and throughout June in Ontario and Quebec, visiting flowers of *Trilium*, *Cornus*, *Viburnum*, *Ledum*, etc. Eggs are laid under bark scales of dead *Pinus*, *Picea*, and *Tsuga*. The larvae feed in the phloem for 12 to 14 months, then drop to the soil in which they pupate at the onset of cold weather. It is not known if they pass the second winter as adults or pupae. Occasionally this species is infected with *Isaria farinose* in the soil. It is also parasitized by the ichneumonid *Rhyssa persuasoria* (L.)."

***Pidonia* Mulsant, 1863**

(*Grammoptera*; Thomson, 1864:141 (not Audinet-Serville, 1835);
Pseudopidonia Pic, 1900:81; *Hapalosalia* Casey, 1913:200; *Pidnota*; Bayer
& Shenefelt, 1969:5)

Type species: Of *Pidonia*, *Leptura lurida* Fabricius (Swaine and Hopping designation, 1928)
(Pic designation?); of subgenus *Ceratopidonia* Linsley & Chemsak, 1976:119, *Pidonia*
quadrata Swaine and Hopping (by orig. des.); of subgenus *Thesalia* Casey, 1891:36,
Acmaeops lisa Leng (by orig. des.).



Fig. 51. *Pidonia scripta* pair copulating on blossom of Nootka Rose (*Rosa nootkana*) in Corvallis, Oregon. May 30, 2014. Photo by Schapker.

According to Mikio Kuboki (1981), who revised the genus on a global basis, “the genus *Pidonia* Mulsant is one of the most interesting genera of cerambycid beetles in the world.” Linsley and Chemsak (1976) recognized three subgenera in *Pidonia* and remarked that “most of the species which we have assigned to *Pidonia* s. str. are related to Asiatic forms and would fall in *Pseudopidonia* Pic as defined by Plavilstshikov (1936).” *Pidonia scripta* is the most commonly encountered lepturine in parks and along walking paths in Corvallis. The author has yet to find the other two PNW species in the wild.

Key to the PNW subgenera and species of *Pidonia*

*The following key is only slightly modified from Linsley and Chemsak (1976), and contains their original description (in quotations) of the subgenus *Ceratopidonia*.

1. Antennae with third antennal segment shorter than the scape..... 2

1'. Antennae long and filiform in both sexes, outer segments at most feebly enlarged toward their apices, third segments distinctly longer than scape (*Pidonia s. str.*).

1 PNW species: Elytra pale, irregularly or obsoletely maculate, not vittate. Length, 6-9 mm. Pacific Coast from southern Alaska to Central California.

..... *P. scripta*

2(1). Pronotum feebly constricted at base and apex, distinctly longer than broad in the male, less so in the female, surface coarsely, deeply punctate, including constricted areas; antennae thickened, with third and fourth segments subequal, those of male attaining apical one-fifth or one-sixth of elytra, outer segments not flattened and without poriferous areas, those of female heavier, attaining middle of elytra (**subgenus *Thesalia***).

1 PNW species: Elytra rufotestaceous with a small spot on each side of the elytra fuscous or blackish. Length, 7-9 mm. Western Washington and Oregon to Central Coastal California and the southern Sierra Nevada.

..... *P. gnathoides*

2'. "Pronotum strongly constricted at base and apex, wider than long in both sexes, finely, shallowly punctate; antennae short in both sexes, barely surpassing middle of elytra in male, scarcely attaining middle in female, those of male with segments six to ten flattened, expanded, bearing shallow elongate poriferous areas, those of female with outer segments thickened but not flattened nor bearing poriferous areas," (**subgenus *Ceratopidonia***).

1 PNW species: Form moderately slender; integument pale testaceous, elytra with a faint brownish spot on each side near middle. Length, 6-7 mm. Coastal Pacific Northwest from Southern British Columbia to northwestern California.

..... *P. quadrata*

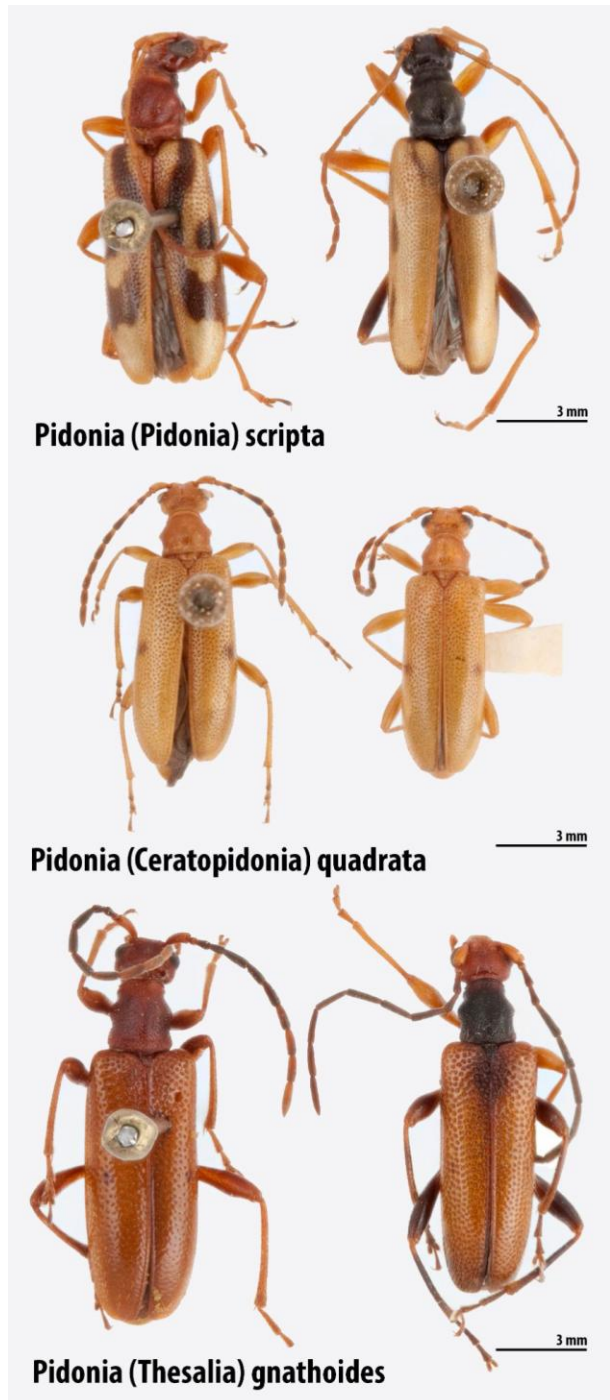


Figure 52.
Pidonia species of
the PNW.
Females on left.
Males on right.

***Pachyta* Dejean, 1821**

(*Argaleus* LeConte, 1850:319; *Acmaeops*; Thomson, 1866:55 (not LeConte, 1850);

Anthophylax Blessig, 1873:232 (not LeConte, 1850);

Neopachyta Bedel, 1906:93; *Pachyta* (*Linsleyana*) Podany, 1964:43)

Type species: *Leptura 8-maculata* Fabricius (=4-maculata Linnaeus)
(Westwood designation, 1838:41)



Figure 53. *Pachyta armata*. OSAC_000262965.

Photo by Chris Hedstrom, 2025.

Ten species are presently assigned to *Pachyta* worldwide, most of them in Europe and Asia. Both of the North American species, *P. armata* and *P. lamed liturata*, occur in the Pacific Northwest and are easily recognized among our regional lepturine fauna. *P. lamed* is rare in Europe, but its habits were recently described by Krajčák, 2025.

Diagnosis of *Pachyta* in the Pacific Northwest

Pachyta is recognized by its robust form, broad, strongly tuberculate pronotum, elytra prominently raised around the scutellum, and eyes notched behind the antennae.

2025 update potentially affecting genus name:

Milan Krajčák of the Czech Republic has recently published a series of articles evaluating the taxonomic history of Linneaus' *Cerambyx lamed*, in which he argues that Westwood's type designation for *Pachyta* (see [Westwood 1938, p.41](#) and plate 353 ref'd in [Donovan, 1801](#)), has been misinterpreted and actually applies to *Judolia cerambyciformis* Schrank. (see Krajčák 2025b, and *References for Original Descriptions of Taxa*, for description of the new genus, *Prorhagium* Krajčák, 2025). A full evaluation of Krajčák's arguments are outside the scope of the present update. However, I am told that further detail on the fascinatingly complex history of this genus name is upcoming, and I will watch out for the adoption of Krajčák's *Prorhagium* in forthcoming catalogues by Bezark and Monné & Nearns, and update accordingly.

Key to *Pachyta* species in the Pacific Northwest

1. Elytra brownish to infuscated, about twice as long as broad, tapering apically. Length, 10-17 mm. Alaska to Labrador and mountains of western North America. ***P. lamed liturata***
- 1'. Elytra yellow except for narrow or broad black lateral stripes at apical half; Elytra less than 1 ½ times as long as broad, strongly tapering posteriorly. Length, 13-17 mm. Pacific Coast to California.
..... ***P. armata***

***Stenocorus* Geoffroy, 1762**

Type species: *Leptura meridiana* Linnaeus (Plavilstshikov designation, 1936).



Figure 54. Hind leg of *Stenocorus nubifer*, showing sub-terminal tibial spurs characteristic of the genus. OSAC_0000621677



Figure 55. *Stenocorus obtusus* (LeConte, 1873), female. OSAC_000602700

Four *Stenocorus* species occur in the Pacific Northwest. All the species can be quite variable in size, form, and coloration, but are reliably separated by the characters given in the key below. There are presently thought to be 30 species in the genus worldwide, 12 of which occur in North America.

Key to Species of *Stenocorus* in the Pacific Northwest

- 1. Pronotum with basal margin slightly sinuate, not broadly lobed at middle, disk densely punctate and pubescent. 2
- 1'. Pronotum with basal margin strongly sinuate, broadly lobed at middle, disk sparsely punctate, shining; elytra with longitudinal yellow vittae or concolorous black. 17-27 mm. British Columbia to California..... ***S. flavolineatus***
- 2(1). Elytra with apices rounded, occasionally feebly transversely truncate. 3
- 2'. Elytra with apices obliquely truncate, very finely, densely punctate, often with larger punctures superimposed over minute ones; color variable. 9-21 mm. British Columbia to Montana, Southeast Oregon, Utah, and southern California. ***S. nubifer***
- 3(2). Elytra densely clothed with appressed pubescence, concolorous or margined with black, not longitudinally vittate; abdomen with last tergite notched at apex in females. 9-12 mm. British Columbia to southern California and Utah. ***S. vestitus***
- 3'. Elytra sparsely pubescent, pubescence short and suberect or very short and depressed; males black or with pale longitudinal vittae, females usually pale reddish testaceous. 10-17 mm. Rocky Mountains from Colorado to British Columbia, and Nevada. ***S. obtusus***



Figure 56. *Stenocorus flavolineatus* (LeConte, 1854). OSAC_0000143933. At last update (July, 2025) this species has only been recorded on *Spiraea*. 51 observations on iNaturalist provide only a handful of (possibly incidental) plant interactions that I am not able to identify.



Figure 57. *Stenocorus nubifer* (LeConte, 1859): one of many phenotypic variants. OSAC_0000621677. (See also Fig. 58.)

This large and handsome *Stenocorus* is usually quite easy to recognize on sight due to its size and striped elytral pattern. Some specimens however may lack the typical elytral stripes, or “vittae,” and occasionally small and narrow specimens appear similar to *S. vittiger*. According to Linsley and Chemsak (1972), *S. flavolineatus* can be distinguished from *S. vittiger* “by the minutely punctate, shining pronotal disk, strongly lobed basal margin of the pronotum, and narrower head.”



Figure 58. Two more phenotypic variants of *Stenocorus nubifer*.
 OSAC_0000621647, OSAC_0000621675)

Taxonomic History of *Stenocorus*

“Antennae a vasi ad apicem decrescentes, ante oculos positae. Elytra apice angustiora,” - (Geoffroy, 1762)

Geoffroy's original (1762) concept of *Stenocorus* was fairly different from our modern one. His twelve species, which had antennae '*smaller from the base towards the tip, and positioned before the eyes*' included not only the familiar *Rhagium inquisitor* (Linnaeus, 1758) but also Linnaeus' *Leptura aquatica*, which today we recognize as *Donacia aquatica* in the family Chrysomelidae. Geoffroy's 3rd species, described as new (p. 223), appears to be the same as Linnaeus' *Leptura meridiana* (see reference in Latreille, 1758 p. 310). Fabricius (1775), who was the first to characterize *Stenocorus* in the standard Latin binomial format, included *L. meridiana* as his first species, but made no reference to Geoffroy.

Geoffroy used polynomial, rather than binomial taxonomic terms, and for this reason was placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature. The type for *Stenocorus* was later designated by Plavilstchikov (1936) as *Leptura meridiana* Linnaeus, 1758. The International Commission on Zoological Nomenclature (ICZN, 1994: Opinion 1754) later upheld this type designation, when it decided that 24 of Geoffroy's genus names, and *only* his genus names, could be considered available to taxonomy.

Etymology

Stenos (narrowed) + *coros* (particularly), after the particularly narrowed elytra in some species.

***Piodes* LeConte, 1850**

Type species: *Piodes coriacea* LeConte (monobasic)

Piodes consists of a single species worldwide, *Piodes coriacea*, that is associated with sagebrush (*Artemisia*) in the Pacific Northwest. The species is not commonly collected and little is known about its biology and life history. No specimens of this species are present in OSAC.

Westcott et al. (2006) recorded a specimen of *P. coriacea* from Malheur Co., Adrian, 23-V-72; Wasco Co., Warm Springs Indian Res., 29-VI-76, both KJG. They remark that “apparently the few published references to this species occurring in Oregon originated from the type locality, "Or". However, when LeConte (1850) described this beetle Oregon was not a state. His reference can refer only to the Oregon Territory.”

Several photographs (#381604 - #381606) of a pinned specimen were posted to BugGuide.net by Andrew McKorney with the following data: Dalles, Oregon, USA. At Deschutes river around the sage bushes. March 27, 2010. Size: 17 mm.

Diagnosis

The following features distinguish *Piodes* from other PNW genera: Tibial spurs subterminal, inserted into an emargination near apex of tibiae. Antennae with segments very short, stout, almost subequal in length from third segment, not extending beyond middle of elytra; tempora subparallel; eyes entire.



Figure 59. *Piodes coriacea*. California Academy of Sciences specimen. Male. Pascoe, Wash., IV-10-1925, on Artemesia, Walter Carter, Col.



Figure 60. *Piodes coriacea*. Left: Female. Right: male. Specimens in the personal collection of Dan Heffern. Photograph by Dan Heffern.

***Enoploderes (Enoploderes)* Falderman, 1837**

(*Pyrotrichus* LeConte, 1862)

Type species: *Enoploderes sanguineus* Faldermann, 1837

One species of this unusual, and probably very ancient genus occurs in the Pacific Northwest. *Enoploderes vitticollis* ranges from British Columbia to southern California and western Nevada, and is easily recognizable for its parallel form and the bright yellow stripes of thick pubescence adorning its head and pronota. Adults are active as early as February to June, but their activity is apparently confined to their host plants, as no flower records exist. The other two species are *E. bicolor* Ohbayashi, endemic to Japan, and *E. sanguineum* Faldermann, found in the Caucasus, Balkan Peninsula (Albania), Northern Iran, and Turkey (see Miroshnikov, 2000).



Figure 61. Four specimens of *E. vitticollis* in the OSAC. The species is easily recognized among the PNW genera by the distinct yellow stripes on its head and pronotum, as well as its parallel form.

Notes on species of *Enoploderes*

The unusual life history of *E. vitticollis* may account for its scarcity in collections. The most detailed account of the behavior of *E. vitticollis* was made by Hardy (1944:16), who reared a number of specimens from the decaying heartwood of a dead maple, *Acer macrophyllum*, in January, 1935. Hardy found the larvae and pupae “in some numbers in a spot twelve feet from the ground.” Upon rearing his specimens in the lab, Hardy observed that “the adults, all females, evinced a decided aversion to daylight; as soon as exposed to its influence they burrowed into the friable rotten wood.”

Distribution and life history data for this species are limited. Jim Labonte (personal communication) reports finding adults in rotting portions of willow trees (*Salix* sp.) at Willamette Park, in Corvallis, Oregon, and similar observations have been made by Hovore and Giesbert (1976:350) and Cope (1984). The larvae are also reported from the following host plants: *Alnus*, *Populus*, *Umbellularia*, *Ulmus procera* Salsib (see Cope, 1984).

And other stories... Journal entry: 7/19/2017

Two days ago, having had a day off from my usual duties, I made a customary visit to the Maddison Lab in Oregon State’s Cordley Hall to inquire into the goings-on of the Carabidologists there. I was speaking to a Mr. Toño Gomez, who was busy making measurements of sperm conjugates, when a dark visage emerged from my periphery—the scarfed and mustachioed grad student, James Pflug. In his hand was a deranged assemblage of sawdust, cobweb, and black chitin. I spotted something reminiscent of pseudotetramery.... “*What is it?*” I said, as my neurons assembled themselves. “Oh, I don’t know,” he said, “it was on the door to Cordley a month ago. I put it on Olivia’s desk and told her to give it to you. I just found it again, in a cobweb in the window of our office.” Olivia Boyd, having not yet returned from Ecuador, was unable to contradict Mr. Pflug’s account, nor provide a plausible alibi for allowing the escape of this rare specimen of *E. vitticollis*. “Guilty until proven guilty!” we cried, and it was determined that she should live in infamy.

Taxonomic status of *Enoploderes*

North American taxonomists (e.g., Linsley and Chemsak, 1972; Bezark and Monné, 2013) had historically placed *E. vitticollis* in the monotypic genus *Pyrotrichus* LeConte, 1862, although Kasuma & Hayashi (1971) demonstrated convincingly some time ago that *Pyrotrichus* was a synonym of *Enoploderes*. The placement of *Enoploderes* in the tribe Encyclopini LeConte, 1873, also followed by North American authors, is a relict of LeConte's original characterization of that tribe. Švácha and Danilevsky (1989, p. 14) separated *Enoploderes* and the Palearctic genus *Rhamnusium* Latreille as an informal tribe ("Tribe II") in the Lepturinae based on a series of unique larval characters. Sama & Sudre (2009, p. 383) established the tribe Rhamnusiini based on Tribe II (type genus: *Rhamnusium*), however it is not necessarily stated that *Enoploderes* belongs there with it. Although in a previous edition of this text I had placed *Enoploderes* in the tribe *Rhamnusiini* Sama, I am now placing it in Rhagiini to be consistent with Bousquet et al. (2017) and other authors.

***Leptalia* LeConte, 1873**

Type species: *Anoplodera macilenta* Mannerheim
(by original designation)

Leptalia is a monotypic genus consisting of the type species, *Leptalia macilenta* Mannerheim, which is found in Montana, and in the Pacific Northwest from Alaska southward along the Cascade and Coastal ranges to Central California.

Specimens of *L. macilenta* are abundant in OSAC. The life history and mating behavior of *L. macilenta* was described in detail by Chemsak and Powell (1971). Since the species was last reviewed by Linsley and Chemsak (1972), Penrose and Westcott (1974b) found teneral adults and pupae of *L. macilenta* in mid April “boring under the bark of decaying logs of bitter cherry, *Prunus emarginata* (Dougl.) Walp.,” at Salem, Oregon, and also reared adults “from portions of a dead trunk section of big leaf maple, *Acer macrophyllum* Pursh., in McDonald Forest, near Corvallis, Benton Co.” Swift (2008) reared specimens from dead logs of *Quercus agrifolia* from Marin County, California.

According to Linsley and Chemsak (1972:99), *Leptalia* “is closely related to *Encyclops* and may be separated by the very feebly emarginate eyes, more strongly tuberculate sides of the pronotum, and arcuately constricted head behind the eyes.” *Leptalia* was one of the three genera, including *Encyclops* and *Pyrotrichus* (now *Enoploderes*) to comprise LeConte's original concept of the tribe Encyclopini (see LeConte, 1873b).

In previous versions of this text, I had placed *Leptalia* in that tribe, but I have now moved it to the Rhagiini so as to be consistent with Bousquet et al. (2017). Bezark (2022) places this genus in the Encyclopini.



Figure 62. *Leptalia macilenta* (Mannerheim, 1853). OSAC_0000 584281



Figure 63. *Encyclops californicus* Van Dyke, 1920. A single specimen at OSAC (shown above) has the following label data: "Cong Springs. 5-19-[19]18. R.D. Hartman, Colr. *Encyclops californicus* Van D. V.D. ID." OSAC_0000579556.

*Schapker's MS thesis reported the label data for this photo incorrectly. Since Penrose and Westcott (1974b) referred to a single specimen at OSU being from central Oregon, Schapker erroneously assumed the photo above – the only *E. californicus* present at OSU at the time of writing – was *that* specimen. The P&W specimen from central Oregon appears to be missing at this time.

Tribe Encyclopini LeConte, 1873

Encyclops Newman, 1838

Type species: *Encyclops pallipes* Newman (= *Leptura caerulea* Say) (monobasic).

The genus consists of 10 species worldwide. Two of these are endemic to North America, including the type, *E. caeruleus* (Say, 1826), and *E. californicus* (Van Dyke, 1920). The eight Palaearctic species are *E. concinna* Holzschuh, 1991, *E. hubeiensis* Ohbayashi & Wang, 2004, *E. luteoscelis* Chou & Ohbayashi, 2010, *E. macilenta* (Kraatz, 1879), *E. olivacea* Bates, 1884, *E. ussuricus* Cherepanov & Cherepanova, 1975, *E. viridipennis* Makihara, 1978, and *E. x-signata* Chiang, 1981.

A single species, *Encyclops californicus* (Van Dyke, 1920) (**Fig. 63**) is thought to occur in the Pacific Northwest, but the majority of its range is in Coastal northern California. The PNW record is based on the existence of a single museum specimen taken in central Oregon (Lane Co., Blue River, H. J. Andrews Experimental Forest, mid-age Douglas-fir stand, 10-VII-1972, IBP Biome Survey, beating *Tsuga*) (see Penrose and Westcott, 1974b). The larvae of *E. californicus* are known to develop in *Rhamnus* and *Notholithocarpus*. No flower records have been reported.

Diagnosis.

The deeply emarginated eyes and narrow, elongate body, which is at least 4 times as long as broad will separate *Encyclops* from most Pacific Northwestern lepturine genera. In addition to the eyes, in *E. californicus* the area between the front of the eyes and the mandibles is shorter than the width of the first antennal segment, serving to distinguish the species from the paler forms of *Leptalia macilenta* (**Fig. 62**).

Tribe Oxymirini Danilevsky (in Althoff & Danilevsky, 1997)

The taxonomic status of the tribe Oxymirini was discussed by Özdikmen (2010).

***Neanthophylax* Linsley & Chemsak, 1972**

(*Anthophilax* Horn in Leng, 1890:98 (part))

Type species: *Anthophilax tenebrosus* (LeConte) (By original designation).



Figure 64. *Neanthophylax tenebrosus tenebrosus*. OSAC_0000399158.

A more thorough treatment of PNW *Neanthophylax* is forthcoming in later volumes of this work. Species use various conifers as hosts. No flower records are currently recorded for our Pacific Northwest species.

Key to Neanthophylax species in the Pacific Northwest

- 1. Disk of pronotum convex, not longitudinally impressed, never densely pubescent. (*tenebrosus* ssp.). 2
- 1'. Disk of pronotum deeply, longitudinally impressed with a longitudinal callus on each side or pubescence dense. 4
- 2(1). Elytra coarsely punctate and rugose. 3
- 2'. Elytra rather finely punctate, rugae not coarse. Length, 13-18 mm. Wallowa Mtns., Oregon. ***N. tenebrosus orientalis***
- 3(2). Pronotum with punctures on disk fine, separated, not rugose; lateral tubercle of pronotum obtuse. Elytra moderately coarsely punctate and rugose; pubescence very obscure. Length, 11-18 mm. Sierra Nevada Mts. to southern Oregon. ***N. t. tenebrosus***
- 3'. Pronotum with disk densely, confluent, rugosely punctate; lateral tubercles of pronotum acute. Elytra coarsely punctate and rugose, pubescence pale, visible. Length, 11- 17 mm. Cascade Range of Oregon and Washington to British Columbia. ***N. t. nigrolineatus***
- 4(1). Pronotum not densely clothed with depressed pubescence; elytra black and rugose or black and red, opaque and finely punctate at base only. Length, 12-19 mm. Rocky Mts. ***N. mirificus***
- 4'. Pronotum densely clothed with short, depressed pubescence, surface subopaque; elytra vittate, finely, separately punctate over entire length. Length, 10-12 mm. Idaho. ***N. pubicollis***

Tribe Xylosteini Reitter, 1913

The tribe Xylosteini presently includes around 8 genera, which are parallel in form and usually have prominently spined pronota. These include (from Wikispecies): *Caraphia*, *Centrodera*, *Formosotoxotus*, *Leptorhabdium*, *Noctileptura*, *Palaeoxylosteus*, *Pseudoxylosteus*, and the type genus, *Xylosteus*. *Centrodera* is placed in Xylosteini based on larval characters discussed in Svacha and Danilevsky (1989:15), but the genus grouped closely with *Rhagium* in a molecular phylogenetic study by Sýkorová (2008, thesis in Czech). (See also: Sama, 1993.)

***Pseudoxylosteus* Sama, 1993.**

Type species: *Xylosteus ornatus* (LeConte) (Monotypic)

Pseudoxylosteus is a monotypic genus established by Sama (1993) for *Xylosteus ornatus* LeConte. *Pseudoxylosteus ornatus* is a nocturnal species found only in North America, where it ranges from the Siskiyou Mountains of southern Oregon to California. The species is instantly recognizable for its sharply-spined pronotum, and parallel black elytra with four inward-pointing white or reddish lines, that form an 'X' with the middle erased. An apparent mimic of *P. ornatus* in the subfamily Cerambycinae is also found in the Pacific Northwest. *Phymatodes obliquus* has the same elytral markings but does not have lateral spines on the pronotum. *Pseudoxylosteus ornatus* is rare in collections, and very little is known about its habits. Linsley and Chemsak (1972) report *Abies* as a host, presumably based on specimen label data.

In 2017, I reported that two *P. ornatus* photos were on BugGuide.net. Well, there has been one more! Photo #1554865, submitted by P. Piombino, records a specimen at the entry to the campground at Yuba Pass, Nevada Co., California, on July 10, 2018. "This was in a wetter, shaded area, dominated by *Veratrum californicum*." Brady Richards commented that 2018 was "a good year" for *P. ornatus*.

Previously reported photos were also taken in California, associated with deer brush, *Ceanothus integerrimus*. Hovore & Giesbert (1976: 350) report a specimen “beaten ... from dead portions of a living Elderberry bush (*Sambucus* sp.) in company with *Desmocerus auripennis auripennis* Chevrolat in July, near Buck’s Summit, Plumas County, California.”



Figure 65. *Pseudoxylosteus ornatus* (LeConte, 1873). A single specimen in OSAC, pictured here, has the following label data: OR: Josephine Co., Flat Top. T.36S-R.9W-sec.19. 4300'. Aug. 5, 1999. Dana Ross, leg. (42.425o N, -123.795oW). Dr. Paul Hammond, a Lepidopterist at OSAC, recalls having noticed the unusual lepturine specimen and deciding to preserve it while he was assisting Mr. Ross with moth specimens taken from a blacklight trap.

***Centrodera* LeConte, 1850**

(*Rhamnusium* Haldeman, 1847; *Centrodera* (Apatophysis)

Gressitt, 1947; *Parapachyta* Casey, 1913)

Type species: *Rhagium decoloratum* Harris (Thompson designation, 1864).



Figure 66. *Centrodera dayi* Leech, 1963 – paratype female. Hood River, OR, “Mid. Col. Expt. Sta.” OSAC_000061835 (1 of 18 paratype specimens at OSAC).

Centrodera has 13 species and subspecies worldwide, all species are nocturnal and restricted to the North American continent. Three species occur in the Pacific Northwest.

The most common species, *C. spurca*, is found from British Columbia to southern California and Utah, and is known from a variety of host plants, including *Quercus*, *Amelanchier*, *Shepherdia*, and *Arbutus* (see Linsley & Chemsak, 1972).

Centrodera dayi Leech ranges from the Cascade Mountains of Washington to central California. Leech's (1963) original description of *C. dayi* includes figures and discussion on its biology. The host plant for that species is unknown.

Centrodera nevadica nevadica ranges along the east side of the Sierra Nevada mountains, and was previously thought to extend as far north as southeastern Oregon and Idaho. Four specimens present at the OSAC now extend the range of *C. n. nevadica* to the eastern flank of the central Oregon Cascades. Label data are as follows: 2 males—Redmond, Oreg., August 13, 1930; 1 male and 1 female—Oregon, Deschutes Co., 13 mi. S. E. Sisters, July 24, 1965 bl. lt. (C. W. Baker, J. Cornell, and N. Virkii). Diagnosis Brown or pale-colored insect with eyes deeply notched and coarsely faceted. The lateral spines of the pronotum and proportions of the antennal segments separate *Centrodera* from the nocturnal genus *Ortholeptura* and other pale-colored species, such as *Stenocorus obtusus*. In *Centrodera* the 1st antennal segment is always longer than the 4th, and the 3rd longer than 4th.

Taxonomic Status

Centrodera is atypical and difficult to classify among other lepturine genera. Based on larval characters, Švácha and Danilevsky (1987: 15) state, "the North American genus *Centrodera*... is a true Lepturine, belonging into the tribe Xylosteini." Others, however, treat *Centrodera* in *Rhagiini* (see Özdikmen, 2010). Gressitt (1947, p. 191) thought *Centrodera* was subgenerically related to the Palearctic genus *Apatophysis* Chevrolat, 1860, however, Adlbauer et al. (2010) follow Danilevsky (1979) in treating *Apatophysis* within a separate subfamily, the Apatophysinae Lacordaire, 1869 (see also Rapuzzi & Sama, 2013).

Key to *Centrodera* species in the Pacific Northwest

1. Elytra coarsely, closely punctate near base, surface never partially obscured by pubescence 2
- 1'. Elytra finely, shallowly punctate near base **C. nevadica nevadica**
2. Elytra with vestiture not conspicuous, hairs on basal half suberect, apices not dentate at suture; antennae of males with pubescence of outer segments bristling. Length 13.5-20.5 mm. Washington to central California. **C. dayi**
- 2'. Elytra with hairs at basal portion depressed, recurved, apices dentate at suture; males with pubescence of outer antennal segments smooth, satiny. Length 19-30 mm. British Columbia to southern California and Utah.
C. spurca

Tribe *Desmocerini* Blanchard, 1845

The tribe *Desmocerini* comprises just one genus, *Desmocerus*, with 6 species entirely restricted to the North American continent.



Figure 67. *Desmocerus aureipennis* Chevrolat, 1855. Taken on blue elder in late July on Mt. Ashland in southern Oregon.

Desmocerus Dejean, 1821

Type species: *Stenocorus cyaneus* Fabricius (monobasic)

Desmocerus has an obligate relationship with a living host plant, elderberry (*Sambucus*). The use of a living host and leaf eating are notably uncommon in lepturines, the majority of which bore into decaying wood and feed on flowers. The atypical diet of *Desmocerus* probably accounts for its characteristically broadened mandibles, and may also be involved in an apparent predisposition in the genus for aposematism. There are 6 species in the genus, all in North America. The large yellow-and-purple species *D. palliatus* is popular among collectors on the east coast and has appeared on a United States postal stamp. In California there is *D. californicus*, with two subspecies. *Desmocerus californicus dimorphus* from the central valley of California is one of a very short list of federally

endangered beetles in America, and has been the subject of much controversy.

Pacific Northwest *Desmocerus* - a taxonomic quandary

The Pacific Northwest is the hotbed of *Desmocerus* diversity, with at least 4 (but potentially more) closely-related species that bore into either blue or red elderberry. The largest, and most visually striking PNW *Desmocerus* is the blue elderberry-boring *D. aureipennis* (**Fig. 67**), known from California to the Rocky Mountains of Alberta, Canada.

Linsley and Chemsak (1972) considered all of the red elderberry-boring populations in the PNW as subspecies of *D. aureipennis*, as they are, aside from size, nearly identical to each other in their external anatomy, and some populations are difficult to identify without internal genitalia and/or DNA. Schapker's MS Thesis (2014) rejected the subspecies hypothesis on the grounds of morphology, DNA, and separate ecological niches, and elevated the former subspecies of *D. aureipennis* to full species as follows in this section. This arrangement was accepted by Bouchard et al. (2017) but not yet by Bezark (2021), who is waiting on the publication by Schapker and Marshall (in prep).

PNW *Desmocerus* species following Schapker's MS Thesis (2014):

D. aureipennis - Rocky Mountains of BC, Cascades of Northern Washington and Oregon to the Siskiyou Mountains. *Type locality*: Rocky Mountains. Large species, with male elytra always bright reddish orange. Emerges in late July through early September when the elderberry *S. nigra cerulea* is flowering, and may be found on the leaves, sometimes in large aggregations. (See **Fig. 67.**)

D. cribripennis – Washington, and Oregon and Northern Cal. *Type locality*: Washington. Uses red elderberry exclusively as host plant. Male elytra are always dark green. Includes populations which are the smallest among all *Desmocerus*. (**Fig. 68.**)

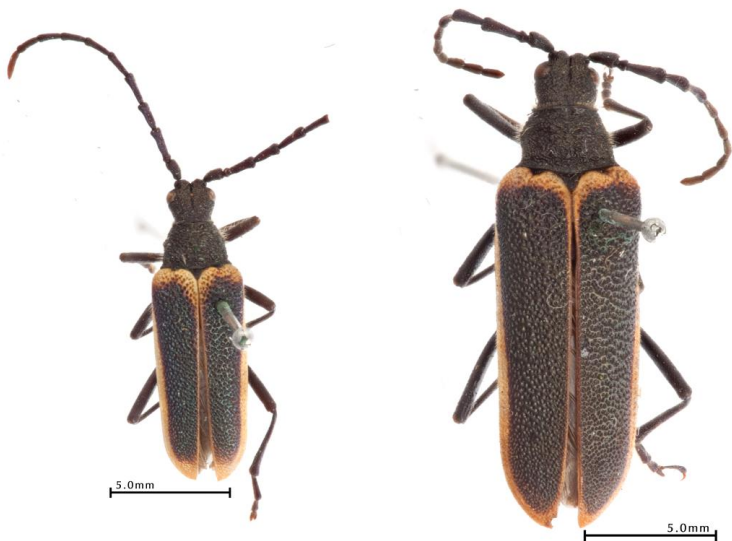


Fig. 68. *Desmocerus cribripennis* Horn, 1881. Left: male lectotype, MCZ Type 34546. Right: female, "Allotype 3739." Both are labeled "W.T." [Washington Territory].

D. lacustris – Oregon Cascades, Coast range of Oregon and Haida Gwaii. *Type locality*: Crater Lake. Uses red elderberry exclusively as a host plant. Male elytra variable within populations from entirely dark green to reddish green or completely red. (**Fig. 69.**)



Fig. 69. *Desmocerus lacustris* Linsley and Chemsak, 1972. Left: male from Haida Gwaii, British Columbia. Middle and Right: males from Monument Peak, in the Cascade Range of central Oregon, showing within-population variation in elytral pattern.

D. piperi – Blue mountains of NE Oregon to western Montana and Rocky Mountains of Alberta. *Type locality*: Blue Mountains. Bores into red or black elderberry, *Sambucus racemosa* var. *melanocarpa*. Male elytra entirely red, or in pinned specimens bright yellow, only occasionally with faint dark streaks as in the specimen below. (**Fig.70.**)



Figure 70. *Desmocerus piperi* Webb. *Left*: adult male. *Right*: adult female from same series as type specimen (OSAC_000824761).

Extroduction

Am I in the right place?

If you're reading this book, I assume you either have some pre-existing interest in lepturines, want to know more about a particular lepturine, or you recently found a bug, identified it as a lepturine, and want to know "what it does" (most cases: I have no idea). Maybe, like Robert, you tested your '*maybe it's a lepturine*' hypothesis by zooming through the pictures, and you found something that looks pretty darn close. If you have a microscope, and want to make sure, I would suggest tilting the pronotum forward to see if you can observe a stridulatory plate— a patch of very fine ribs used for making mechanical chirping noises – just north of the scutellum (see **Fig. 1.**, stridulatory plate not visible because it's hiding under the back of the pronotum.) If there's not a division running right down the middle of that thing (**a *divided stridulator plate***, essential to lepturines), you've got something else. If there is, well, good day.

The lepturines

The Lepturinae is a subfamily of cerambycid longhorn beetles, often referred to as “the flower-visiting longhorn beetles,” or simply “the lepturines.” It is one of the mid-sized subfamilies, comprising up to 1500 species worldwide (Rossa and Goczał, 2021). Unlike the majority of longhorn beetles that are nocturnal, most lepturine species occur on flowers during daylight, making them easy to observe and collect (**Fig. 71**). Ecologists recognize lepturine species for their role as forest ecosystem pollinators (Gosling, 1986; Kakutani et al., 1990), and as decomposers, due to the tendency for lepturine larvae to develop in already dead, or decaying wood. For this reason lepturines are not commonly implicated as significant economic pests (Linsley, 1958b; 1959). In a four-year survey of a single, 800 meter forest edge in Ohio, Bond and Philips (1999) found 18 lepturine species in 14 genera on a wide variety of plants, with an average of 9.38 flower species visited, and a maximum of 16. The authors found a positive correlation between the number of different flowers used, and the abundance of individuals, suggesting that the most common lepturines are generalist flower feeders.

Although typically smaller and less colorful than species in the large subfamilies Lamiinae (>20,000 spp), Cerambycinae (>11,000 spp), and Prioninae (~1000 spp.), the lepturines are still a diverse and charismatic group¹. In the largest tribe, the Lepturini (related to the genus *Leptura*), there are commonalities in the basic body structure (slender, with tapering bodies, and smooth-sided pronota) but a whole range of different colors, shapes and sizes – reflections of an equally diverse array of strategies for adapting to life on a flower. Bee mimicry, with bold black-and-yellow stripes, occurs in several genera like *Xestoleptura*, *Judolia*, *Strophiona*, *Evodinus*, and *Typocerus*. Other species, such as *Neobellamira delicata*, have taken on the slender form of a wasp.



Figure 71. Habitat of *Lepturobosca chrysocoma* and *Trachysida aspera aspera* at Colchuck Lake, Washington. Schapker is picking several specimens of both species from a single flower of Cow Parsnip, *Heracleum maximum*, in June, 2012.

In the second largest tribe, Rhagiini (related to *Rhagium*), the pronota are often sharply spined, the body forms are more variable, and a whole range of unique color patterns exist, but the tendency towards bee-mimicry appears to be largely absent. *Rhagium* itself is covered in thick black,

¹ These numbers differ substantially from those reported in Schapker's MS Thesis (2014). Current numbers are based on Rossa and Goczał (2021).

gray and brown hairs, giving it a mottled appearance—a cryptic coloration suggesting something other than life on a flower. A number of smaller, more obscure tribes diverge even further from the appearance of the common lepturine, as exemplified in our fauna by the parallel, elongate forms found in the Encyclopini and Xylosteini.



Figure 72. The two major tribes within subfamily Lepturine.

Left: Tribe Rhaggini, represented by *Rhagium inquisitor*.

Right: Tribe Lepturini, represented by *Strophiona laeta*.

Several atypical genera are difficult to place within the Lepturinae and occupy monotypic tribes. *Desmocerus*, for example, the sole genus in the tribe Desmocerini, exhibits a mix of characters shared by genera in several of the tribes, and its uniquely broad mandibles lack the internal pubescent fringe common to the rest of the subfamily.

Global distribution

The bulk of lepturine species are distributed across the Northern Hemisphere, with many North American genera and species having close counterparts in Europe and Asia (Gressitt, 1953; Linsley and Chemsak, 1972, 1976; Bily & Mehl, 1989; Sama, 2002; Danilevsky, 2014a). The highest diversity of species are in the Asian continent (Aldlbauer et al., 2010; Danilevsky, 2014b; Cherepanov, 1990; Hayashi & Kimoto, 1984; Gressitt, 1951; Gressitt and Rondon, 1970; Hayashi and Villiers, 1985,

1987, 1989, 1995; Lobanov et al., 1981, 1982; Ohbayashi & Kojima, 1992). The Afro-tropical region has only 1 Lepturine species (Bousquet et al., 2017), while South America has 122 species, and the Caribbean 4 species (Ribardo & Cope, 2000; Bezark, 2012; Bezark & Monné, 2013; Di Iorio, 1998). At the extreme of its range in the eastern hemisphere, 44 species are currently known from Borneo, several of which are undescribed (Heffern, 2005). A similar, though less speciose fauna is also present in the Philippines. However, to the east of the "Wallace line" lepturines are suddenly absent, with just a single species known from New Guinea and none from Australia (Linsley, 1958b:103; Heffern, 2005). Greenland and the Hawaiian islands also lack lepturines (Böcher, 1988; Heffern, 2006).

The Pacific Northwestern lepturine fauna – history and present state of knowledge

The Pacific Northwest region of North America is roughly defined as the area from British Columbia, south to the Siskiyou Mountain range of southern Oregon, and east to the Rocky Mountains of Idaho and Southwest Alberta. The region as a whole is incredibly varied, with a suite of local biomes, from temperate rainforest along the coast range, to huge deserts east of the Cascades in Washington and Oregon.

Nevertheless, a wide survey across plant and animal taxa tends to reveal endemic and closely-related sets of fauna in the region, indicative of a long history of shared geographical and a climactic events that have influenced and united the region as a whole (Linsley, 1958a; Galbreath et al., 2010). This makes the Pacific Northwest a sensible boundary within which to conduct a faunistic study.

The earliest important contributions to the study of Pacific Northwest lepturine fauna were made by John L. LeConte, who described 38 of the species, and 6 genera now recognized to occur in our region. LeConte (1850; 1851) and LeConte and Horn (1883) also published the most important early revisions of the Cerambycidae to include Pacific Northwest taxa. Nearly a third of the modern generic concepts were described by Casey (1913, 1924), who, like LeConte, also described a large number of species. Unfortunately, many of Casey's names were based on only a few atypical specimens of previously-described species,

and are now regarded as junior synonyms (see Schapker, 2014, Appendix A.) Swaine and Hopping (1928) and Hopping (1937), conducted the first revision of the Lepturinae of North America, and provided host and flower records, and photographs of hindwing venation for many of the species in our fauna. These authors placed many of Casey's generic names into synonymy, and arranged most of the species in the tribe Lepturini into a single large genus, Anoplodera. The key and review of Pacific Northwestern species by Hatch (1971) was based on that work. (See also Hatch, 1949, for a great little history of entomology in the Pacific Northwest. OSAC hopefully still has a copy.)

The most recent modern revisions of North American Lepturinae were conducted by Linsley and Chemsak (1972; 1976), who removed from synonymy many of Casey's generic names, and defined several new ones. They also provided descriptions and keys to the genera and species, and a comprehensive review of flower records, host plants, other biological information, and distribution maps, based on a study of museum specimens. Since that work, subsequent publications have augmented our knowledge of many Pacific Northwestern species' distributions and life history (Penrose and Westcott, 1974a, 1974b; Hovore and Giesbert, 1976; Hovore and Penrose, 1982; Cope, 1984; Robertson, 1988; Westcott et al., 2006; MacRae and Rice, 2007; Swift, 2008; Hart et al., 2013; Schapker, 2014; and Bousquet et al., 2017).

Further refinements to the nomenclature or taxonomic composition of the Pacific Northwestern lepturines, particularly for Holarctic genera studied by European and Asian authors, have been tracked in the annual editions of the Checklist to the Cerambycidae of the Western Hemisphere (Bezark, 2025), and the catalogues of Monné and Nearn (2024)

78 species, or 86 species and subspecies in 36 genera, representing 7 lepturine tribes, are now thought to occur in the Pacific Northwest. Many of these species also extend into Alaska and California, or have close relatives elsewhere on the west coast. A number of these, such as *Pseudoxylosteus ornatus*, have their primary distribution in California, but extend into southern Oregon by way of the Siskiyou mountain range. Others, like *Typocerus serraticornis*, are probably more properly referred to as Great Basin species, which happen to have found themselves in the

very southeastern tip of Oregon, in the area around the Steens Mountains. Because those areas are also occupied by species that have their primary distribution in the PNW, or that occur throughout the entire west coast, we cannot rule out the possibility that *P. ornatus* and *T. serraticornis* (both of them quite rare) have simply yet to be found more broadly in the PNW. I have included these, and other similar species in the review.

The organization of genera in the review

A few different strategies could have been employed for arranging the genera in the review, the simplest being to list them alphabetically. Another common method is to arrange the genera within each tribe according to their apparent phylogenetic relatedness (i.e., the arrangement in Linsley & Chemsak, 1972, 1976), and this is to some degree followed here. However, since the review is also intended to function as a field guide, in several instances I have placed genera closer together that might be easily confused, for example, the several genera that have striped elytral patterns that are actually quite distinct morphologically.

A note on tribes

Nine tribal names within Lepturinae were recognized as available and valid by Bosquet et al. (2009) and Bouchard et al. (2011). However, many of these have never had a universally accepted definition, and the proper arrangement of the tribes continues to be a subject of debate, or simply confusion, among cerambycid systematists (see: Gressitt and Rondon, 1970; Linsley and Chemsak, 1972; Sama, 1993). More recently, larval characters (Švácha & Danilevsky, 1989) and DNA sequence data (Sýkorová, 2008) have been used to assess the tribal hypotheses that were historically based on adult external morphology alone and led various authors to adopt widely different classification schemes (reviewed in Sýkorová, 2008). Vives (2000), for example, rejected a large, inclusive Rhagiini, restricting it to only Rhagium and Rhamnusium (see also Cebeci & Özdikmen, 2010). A phylogenetic study by Sýkorová (2008) supported the Lepturini (including *Desmocerus*), and Oxymirini (see Özdikmen, 2010) as natural, monophyletic lineages. A more recent molecular analysis using 5 genes, by Zamoroka (2022), also supported Lepturini, but demonstrated the paraphyly of Rhagiini sensu latu, proposing three new tribes, the Cariliini, Pidoniini and Evidoniini.

Lacking a definitive, global study of the Lepturinae (elaborated most recently by Krajčák (2025), and in attempting to arrange the PNW tribes according to a system that will be broadly acceptable to the global taxonomic community, I have made some subjective judgments where competing hypotheses for our taxa exist. The current arrangement is in agreement with the system used by Bousquet et al. (2017).

The use of specimens in conducting the review

This current work is an update and extension of an MS thesis project completed in 2014 (Schapker, 2014). For that project, I was able to obtain specimens from all but three of the 86 species and subspecies in the Pacific Northwest. The Oregon State Arthropod Collection had at least 80 species and subspecies in its holdings, a large number of which bore determination labels from previous experts, in particular Melville Hatch, Ralph Hopping, E. G. Linsley and John Chemsak. (**Figure 73** shows a single specimen that was determined as *Acmaeops proteus* by Ralph Hopping, and then again in 1968 by Melville Hatch, who indicates that he compared it with the collection of the eminent John LeConte.)

I have also benefited greatly from being able to sort through hundreds of unidentified lepturine specimens that had arrived at the OSAC over the last few decades, and which continue to arrive (though I am woefully behind). Though my participation has been limited by my primary job as a middle school teacher, I remain fascinated by these creatures, and hope you will be too!

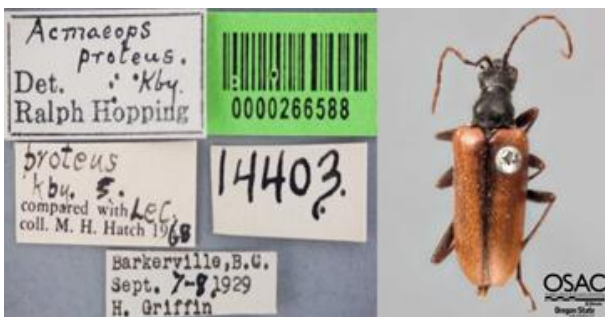


Figure 73. *Acmaeops pratensis* (Kirby in Richardson, 1837), with determination labels by Ralph Hopping and Melville H. Hatch

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1 - Includes key to the tribes of Lepturinae.

2 - According to Heffern (2005): "The cerambycid fauna of Borneo is closely related to the fauna of the Malaysian Peninsula, Sumatra and Java, with a distinct overlap of species and a strong commonality of tribes and genera. ... Nearly all tribes and many genera which occur in Southeast Asia are found in Borneo. ... The cerambycid fauna of Borneo is also closely related to the Philippine island of Palawan, since it was part of the Sunda Shelf around 160,000 years ago when sea levels were at their lowest, permitting dispersion of ancestral fauna to that island via a land bridge."

3 - *G. molybdica* (LeConte, 1851("1850")) and *B. californica* (LeConte, 1851 ("1850")). The ("1850") is due to an appendix (on page 101) that amends pages from LeConte (1850) and inserts original descriptions. Although the article was published 1852, the reference is cited as 1851 because, in a footnote in the table of contents, it is indicated that LeConte had pre-prints in December of 1851.

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- 1 - *G. molybdica* (LeConte, 1851("1850")) and *B. californica* (LeConte, 1851 ("1850")). The ("1850") is due to an appendix (on page 101) that amends pages from LeConte (1850). The reference is cited as 1851 because, in a footnote in the table of contents, it is indicated that LeConte had pre-prints in December of 1851, although the article was published 1852.
- 2 - Unverified. **Appears in L&C (1976) as:** *Leptura miquelonensis* Pic, 1922, L'Exchange, 37(405):11. **B&M (2013):** Pic, M. 1921. Diagnoses de coléoptères exotiques (suite). L'Échange, 37(409):10-12.
- 3 - [ICZN opinion 71](#) in 1956 regarded type species designated in Westwood's *Synopsis of Genera of British Insects* that accompanied the main work as valid. The publication dates for specific page ranges within the accompanying *Synopsis* were clarified by [ICZN Direction 63 in 1957](#).

Appendix: Host Plant and Flower Records

While I was working on my 2014 MS thesis, I never committed any host or flower records to a spreadsheet because it seemed like a waste of time. 12 years later, I am trying to convert a couple acres of lawn at the middle school where I work to an "eco-lab." A local nursery introduced me to a [Native Plant Finder](#) from the NWF that generates a ranked list of plants that are beneficial to the highest number of *butterflies* in your area. I then sighed, and headed to a coffee shop with my laptop and L&C.

The following data is predominantly taken from Linsley and Chemsak (1972, 1976) with additional records I had already noted in the text from more recent sources like Cope (1984), Hovore & Giesbert (1976), Penrose and Westcott (1974a, 1974b), Penrose (1979), Swift (2008), and Bousquet et al. (2017) as well as from additional observations in the field, OSAC specimen records, and occasionally, [BugGuide.net](#) and [iNaturalist.org](#). (Though I'm sure a *lot* more could be done with the latter two.)

Table 1, below, is taken from the raw data. My spreadsheet, available upon request, and perhaps available in a future publication, has sources for newer records, other remarks, and in some cases full quotations from the sources above related to host plant discovery, rearing experiments, etc.

Tables 2-4 show the most common host plants, flower records, and the lepturines sorted by the number of flowers visited. Note that the most common host plant is "unknown," and that the most common flower record, for 29 species of PNW flower-visiting longhorn beetles, is "none."

My goal is to use this information to create a small lepturine utopia at Memorial Middle School in Albany, Oregon. My goal is to include plenty of flowers that are broadly used by lepturines (*Achillea*, *Heracleum*, *Ceanothus*) as well as a variety that might target less-common species, like honeysuckle for *Pseudogaurotina*. Hopefully, I can also include a variety of locally-sourced, freshly-felled logs of *Pinus*, *Abies*, etc.

Wish me luck!

- Phil (August, 2025)

Table 1: Host Plant and Flower Records for PNW Lepturinae + Index to lepturine species.

Taxon	Host Plants	Flower Records
<i>Acmaeops pratensis</i> (p.72)	Picea spp., Pinus spp.	Thalictrum, Heracleum, Spiraea, Erigeron, Pyrus, Viburnum, Sorbus, Chrysanthemum, Achillea, Ledum, Coreopsis, Taraxacum, Epilobium, Galium
<i>Acmaeops proteus</i> subsp. <i>proteus</i> (p.73)	Pinus spp., Picea spp., Tsuga spp., Abies spp.	Achillea millefolium, Rosa spp., Heracleum spp., Viburnum, Pyrus, Chrysanthemum
<i>Anastrangalia laetifica</i> (p. 48)	Pinaceae	Achillea, Adenostoma, Asclepias, Brassica, Brodiaea, Calyptridium, Calochortus, Ceanothus, Chamaebatia, Chrysanthemum, Chrysothamnus, Cirsium, Clarkia, Conium, Cornus, Cryptantha, Daucus, Erigeron, Eriodictyon, Eriogonum, Eriophyllum, Erysimum, Gilia, Heracleum, Iris, Lupinus, Mimulus, Oenothera, Opuntia, Phacelia, Ranunculus, Rhamnus, Rosa, Rubus, Spiraea, Symphoricarpos, Symplocarpus, Triteleia, Vaccinium
<i>Anastrangalia sanguinea</i> (p. 49)	unknown	Ceanothus, Chrysothamnus, Eriogonum, Achillea, Viburnum, Chrysanthemum, Galium, Cornus, Cicuta, Helichrysum, Rubus, Heracleum, Veratrum, Thalictrum, Aruncus
<i>Brachyleptura dehiscens</i> (p. 51)	Pinus, Pseudotsuga (reported in Cope 1984)	Daucus, Spiraea, Angelica, Ceanothus, Chrysopsis
<i>Brachysomida atra</i> (p. 60)	unknown	Lupinus, Purshia, Symphoricarpos foliage
<i>Brachysomida californica</i> (p. 62)	unknown, Lomatium lucidum (living roots - reported in Swift 2008)	Ranunculus, Chamaebatia, Wyethia, Calochortus, Convolvulus, Daucus, Ceanothus, Phacelia, Eschscholtzia, Penstemon, Hypericum, Lupinus, Helianthus, Gilia, Stenotopsis, Mimulus, Achillea, Agoseris, Althaea, Heracleum
<i>Centrodera dayi</i> (p. 99)	unknown	None
<i>Centrodera spurca</i> (p. 100)	Quercus, Amelanchier, Shepherdia, Arbutus	None
<i>Centrodera nevadica</i> subsp. <i>nevadica</i> (p. 100)	Artemisia tridentata (possibly)	None
<i>Cortodera barri</i> (p. 69)	unknown	Eriogonum ovalifolium, Phacelia leucophylla
<i>Cortodera coniferae</i> (p. 69)	Picea, Pinus	None
<i>Cortodera impuctata</i> (p. 63)	unknown	none, "Sunflowers" (OSAC specimens - Schapker)
<i>Cortodera longicomis</i> (pp. 64 & 66)	unknown	Balsamorhiza, Heracleum, Purshia, Rosa, Symphoricarpos, Potentilla, Ceanothus
<i>Cortodera militaris</i> subsp. <i>constans</i> (p. 70)	Ranunculus?	Ranunculus

<i>Cortodera militaris</i> subsp. <i>militaris</i> (p. 70)	Ranunculus?	Ranunculus, Geum, Rhamnus
<i>Cortodera nitidipennis</i> (p. 69)	unknown	Balsamorhiza
<i>Cortodera robusta</i> (p. 71)	unknown	None
<i>Cortodera spuria</i> (p. 69)	unknown	None
<i>Cortodera subpilosa</i> (p. 71)	unknown	Balsamorhiza, Lithospermum, Lomatium, Phacelia, Rosa, Wyethia, Achillea
<i>Desmocerus aureipennis</i> (102)	Sambucus nigra cerulea	Sambucus (leaves, primarily)
<i>Desmocerus cribripennis</i> (102)	Sambucus racemosa var. arborescens	Sambucus (leaves, primarily)
<i>Desmocerus lacustris</i> (p. 103)	Sambucus racemosa	Sambucus (leaves, primarily)
<i>Desmocerus piperi</i> (p. 104)	Sambucus racemosa var. melanocarpa	Sambucus (leaves, primarily)
<i>Dorcasina matthewsii</i> (p. 208)	Sequoia sempervirens, Thuja plicata, Libocedrus	Rubus, Vaccinium ovatum (leaves)
<i>Encyclops californicus</i> (p. 94)	Rhamnus, Lithocarpus	None
<i>Enoplodera vitticollis</i> (p. 89)	Acer, Alnus, Populus, Umbellularia, Ulmus procera, Salix	None
<i>Etorofus anthracina</i> (p. 26)	Abies concolor, Abies concolor (decaying scars in living trees, high above ground (Cope, 1984))	Spiraea
<i>Etorofus kerniana</i> (p. 25)	Abies, Pinus sabiniana, Pinus coulteri	Eriodictyon, Agastache, Veratrum, Ceanothus, Rhamnus, Achillea, Adenostoma fasciculatum
<i>Etorofus obliterated</i> subsp. <i>obliterated</i> (pp. 26-27)	Pinaceae (including Pinus, Abies, Tsuga, Pseudotsuga, Picea), Sequoia	Bidens, Brassica, Veratrum, Chrysothamnus, Daucus, Spiraea, Heracleum, Achillea, Schizonotus, Anaphalis, Cicuta, Chrysopsis
<i>Etorofus plagifera</i> (p. 25)	Pinus ponderosa, Picea	Heracleum
<i>Etorofus propinqua</i> (p. 26)	Picea engelmannii, Pinus spp. (incl. P. ponderosa, P. monticola, P. murryana, P. jeffreyi)	Achillea, Agastache, Daucus, Lupinus, Chrysothamnus, Spiraea, Chrysopsis, Heracleum
<i>Evodinus monticola</i> subsp. <i>monticola</i> (p. 74)	Tsuga, Abies, Picea, Pinus	Cornus, Rosa, Sambucus, Amelanchier, Azalea, Sorbus, Viburnum, Acer, Ledum, Spiraea, Prunus, Rubus, Thalictrum, Trillium, Pyrus, Chrysanthemum
<i>Grammoptera molybdica</i> (37)	Aesculus	Ceanothus, Cornus, Daucus, Rosa, Conium, Aesculus, Arctostaphylos
<i>Grammoptera rhodopus</i> (p. 37)	Lithocarpus, Rhamnus californica (living) (see Cope 1984)	Rhamnus

<i>Grammoptera subargentata</i> (p. 37)	Rhus sp. (including R. glabra), Populus, Quercus, Lithocarpus	Rosa, Cornus, Ranunculus, Acer, Hydrangea, Geranium, Aruncus, Artemisia, Pyrus, Viburnum, Spiraea, Thalictrum, Crataegus
<i>Judolia gaurotoides</i> subsp. <i>auripilis</i> (p. 21)	Juniperus occidentalis	None
<i>Judolia gaurotoides</i> subsp. <i>gaurotoides</i> (p. 18)	unknown	Eriogonum, Artemisia, Arenaria, Spiraea, Lupinus
<i>Judolia impura</i> (p. 21)	Sequoia sempervirens, Libocedrus decurrens	None
<i>Judolia instabilis</i> (p. 19)	Pinus, Lupinus	Lupinus, Daucus, Calochortus, Rudbeckia, Eriogonum, Ceanothus, Achillea, Helenium, Heracleum
<i>Judolia montivigans</i> subsp. <i>barberi</i> (p. 21)	Picea	Calyptridium
<i>Judolia montivigans</i> subsp. <i>montivigans</i> (p. 19)	Pseudotsuga, Abies, Pinus, Picea, Populus, Salix	Rubus, Heracleum, Spiraea, Epilobium, Achillea, Rosa, Viburnum, Sorbus, Amelanchier, Pyrus, Aruncus, Chrysanthemum
<i>Judolia scapularis</i> (p. 20)	unknown	Sphaeralcea, Eriogonum, Nolina, Opuntia, Adenostoma, Lupinus, Calochortus, Salvia, Hugelia, Malva, Rhamnus
<i>Leptalia macilentata</i> (p. 92)	Alnus spp., Umbellularia californica	Ceanothus, Ribes, Rubus, Rosa
<i>Lepturobosca chrysocoma</i> (30)	Pinus, Picea, Populus, Alnus	Achillea, Artemisia, Aruncus, Brodiaea, Calochortus, Calyptridium, Ceanothus, Chamaebatia, Cirsium, Daucus, Eriogonum, Iris, Ligusticum, Lupinus, Melilotus, Prunus, Solidago, Sonchus, Symphoricarpos, Tanacetum, Veratrum, Senecio, Spiraea, Rosa, Cornus, Viburnum, Sorbus, Heracleum, Ledum, Chrysanthemum, Epilobium, Aralia, Pyrus, Rubus, Helichrysum, Chrysopsis
<i>Lepturopsis dolorosa</i> (p. 41)	Pseudotsuga	Achillea, Angelica, Ceanothus, Cicuta, Solidago, Verbascum, Anaphalis, Spiraea, Chrysopsis, Acer (leaves)
<i>Neanthophylax mirificus</i> (p. 96)	Pinus, Abies, Picea, Pseudotsuga	None
<i>Neanthophylax pubicollis</i> (96)	unknown	None
<i>Neanthophylax tenebrosus</i> subsp. <i>nigrolineatus</i> (p. 96)	Pseudotsuga	None
<i>Neanthophylax tenebrosus</i> subsp. <i>orientalis</i> (p. 96)	unknown	None
<i>Neanthophylax tenebrosus</i> subsp. <i>tenebrosus</i> (p. 95)	Pseudotsuga	None
<i>Nealostema rubida</i> (p. 47)	Tsuga, Abies	Ceanothus, Lupinus

<i>Neobellamira delicata</i> subsp. <i>delicata</i> (pp. 38-39)	Juglans, J. regia, J. californica	Pyracantha, Rhamnus, Ceanothus spp., Eriodictyon, Adenostoma, Lupinus, Yucca, Calochortus, Chamaebatia, Eriogonum, Crataegus, Baccharis
<i>Ortholeptura obscura</i> (pp. 53-54)	unknown	None
<i>Ortholeptura valida</i> (pp. 53-54)	Abies, A. concolor, A. magnifica, Tsuga, Pinus ponderosa, Pseudotsuga	None
<i>Pachyta armata</i> (p. 79)	Pinus, Tsuga	Heracleum, Sorbus
<i>Pachyta lamed</i> subsp. <i>liturata</i> (p. 80) (cf. <i>Prorhagium</i> Krajčik, 2025)	Pinus, Abies, Picea, Pseudotsuga	None
<i>Pidonia gnathoides</i> (p. 78)	unknown, Pinus ponderosa (possibly/on), Libocedrus decurrens (possibly/on)	Ceanothus thrysiflorus, Rubus sp.
<i>Pidonia quadrata</i> (p. 78)	unknown	None
<i>Pidonia scripta</i> (p. 76)	Quercus agrifolia	Rosa, Rhododendron, Rubus, Daucus, Azalea, Cornus, Achillea
<i>Piodes coriacea</i> (p. 88)	Artemisia	None
<i>Pseudogaurotina cressoni</i> subsp. <i>cressoni</i> (p. 57)	Pseudotsuga, Abies	Heracleum, Xerophyllum, Rosa, Ranunculus
<i>Pseudogaurotina cressoni</i> subsp. <i>lecontei</i> (p. 59)	Pseudotsuga, Abies	Lonicera, Sorbus
<i>Pseudoxylosteus ornatus</i> (97)	Abies	Prunus, Ceanothus integrerrimus, Sambucus
<i>Pygoleptura brevicomis</i> (p. 43)	Abies, Pinus	None
<i>Pygoleptura carbonata</i> (p. 42)	Populus	None
<i>Pygoleptura nigrella</i> subsp. <i>nigrella</i> (p. 43)	Picea, Pinus, Pseudotsuga, Abies, Larix	Heracleum, Thalictrum
<i>Pygoleptura nigrella</i> subsp. <i>oregonensis</i> (p. 44)	unknown	None
<i>Rhagium inquisitor</i> subsp. <i>inquisitor</i> (p. 55)	Picea engelmannii, P. sitchensis, Abies spp., Pseudotsuga menziesii, Larix occidentalis, Tsuga, Pinus spp. (including P. ponderosa, P. monticola, P. contorta, P. sabiniana, P. radiata, P. jeffreyi, P. strobus, P. rigida, P. resinosa, P. murryana, P. palustris, P. strobiformis	None
<i>Stenocorus flavolineatus</i> (83)	unknown	Spiraea
<i>Stenocorus nubifer</i> (p. 84)	unknown	Eriodictyon, Balsamorhiza, Rubus, Ceanothus, Chamaebatia, Arctostaphylos, Lupinus, Heracleum, Achillea, Rhamnus

<i>Stenocorus obtusus</i> (p. 81)	unknown	Lupinus, Achillea, Heracleum, Galium
<i>Stenocorus vestitus</i> (p. 82)	Pseudotsuga	Convolvulus, Eriogonum, Ranunculus, Wyethia, Clarkia, Eriodictyon, Salvia, Rhamnus, Ceanothus, Rosa, Heracleum, Balsamorhiza, Sonchus, Calochortus, Lupinus, Althaea, Azalea
<i>Stenostrophia amabilis</i> (p. 35)	Pinus ponderosa, P. jeffreyi	Chrysothamnus, Ceanothus, Verbascum, Spiraea, Chrysolepis
<i>Stenostrophia tribalteata</i> subsp. <i>serpentina</i> (p. 34)	unknown	Achillea, Melilotus, Eriogonum, Symphoricarpos, Chrysothamnus
<i>Stenostrophia tribalteata</i> subsp. <i>sierrae</i> (p. 34)	unknown	Eriogonum nudum, Chrysothamnus, Solidago, Eriodictyon, Achillea, Symphoricarpos
<i>Stictoleptura canadensis</i> subsp. <i>cribripennis</i> (p. 45)	Larix, Pinus, Tsuga, Picea, Pseudotsuga, Quercus	Epilobium, Chrysolepis
<i>Strophiona laeta</i> (p. 32)	Quercus, Castanopsis chrysophylla	Conium, Rhamnus, Eriogonum, Achillea, Pinus
<i>"Strophiona tigrina"</i> (p. 33)	Quercus	Achillea, Anaphalis, Asclepias, Foeniculum, Rhamnus, Adenostoma, Zygadenus, Eriodictyon, Cirsium, Calochortus
<i>Toxoleptura vexatrix</i> (p. 52)	unknown	Achillea, Lotus, Ceanothus, Veratrum, Eriogonum, Daucus, Conium, Calochortus, Gilia, Vaccinium, Rhamnus, Triteleia, Spiraea, Shizonotus, Cicuta, Rubus
<i>Trachysida aspera</i> subsp. <i>aspera</i> (p. 40)	Pinus, Picea, Populus, Salix, Betula, Pseudotsuga	Heracleum, Achillea
<i>Typocerus serraticornis</i> (p. 22)	Oryzopsis hymenoides	Sphaeralcea
<i>Xestoleptura behrensii</i> (p. 15)	Pseudotsuga, Picea, Tsuga mertensiana (OSAC specimen label)	None
<i>Xestoleptura crassicomis</i> (p. 16)	Abies, Pinus	Cirsium, Gayophytum, Chrysolepis, Sambucus nigra (drinking from cut in stem)
<i>Xestoleptura crassipes</i> (p. 16)	Pinus, Pseudotsuga, Tsuga, Larix, Thuja, Umbellularia, Eucalyptus	Achillea, Aralia, Ceanothus, Calochortus, Clarkia, Daucus, Epilobium, Eriogonum, Hypericum, Lupinus, Rhamnus, Rhododendron, Rubus, Sarracenia, Salix, Solidago, Spiraea, Symphoricarpos, Carum, Oenanthe, Anaphalis, Antennaria, Prunella, Holodiscus, Sambucus, Helichrysum, Chrysolepis, Chrysanthemum, Cirsium, Vitis leaves, Vaccinium leaves.
<i>Xestoleptura tibialis</i> (p. 14)	Abies, Picea, Pinus, Larix	Achillea, Spiraea, Heracleum, Daucus, Melilotus, Senecio, Chrysolepis

Tables 2-4: Most common host & flower records + flower generalists.

2) Host Plants	n	3) Flower records	n	4) Flower generalists	n	Flower generalists	n
<i>Pinus</i>	26	none	29	<i>Anastrangalia laetifica</i>	39	<i>Strophiona laeta</i>	5
unknown	25	<i>Achillea</i>	24	<i>Lepturobosca chrysocoma</i>	36	<i>Leptalia macilenta</i>	4
<i>Abies</i>	18	<i>Heracleum</i>	20	<i>Xestoleptura crassipes</i>	31	<i>Pseudogaurotina cressoni</i> subsp. <i>cressoni</i>	4
<i>Picea</i>	18	<i>Ceanothus</i>	20	<i>Brachysomida californica</i>	20	<i>Stenocorus obtusus</i>	4
<i>Pseudotsuga</i>	18	<i>Spiraea</i>	17	<i>Stenocorus vestitus</i>	17	<i>Xestoleptura crassicornis</i>	4
<i>Tsuga</i>	10	<i>Eriogonum</i>	14	<i>Evodinus monticola</i> subsp. <i>monticola</i>	16	<i>Brachysomida atra</i>	3
<i>Pinus ponderosa</i>	6	<i>Lupinus</i>	14	<i>Toxoleptura vexatrix</i>	16	<i>Cortodera militaris</i> subsp. <i>militaris</i>	3
<i>Populus</i>	6	<i>Rosa</i>	13	<i>Anastrangalia sanguinea</i>	15	<i>Pseudoxylosteus ornatus</i>	3
<i>Quercus</i>	6	<i>Daucus</i>	12	<i>Acmaeops pratensis</i>	14	<i>Cortodera barri</i>	2
<i>Larix</i>	5	<i>Rhamnus</i>	12	<i>Grammoptera subargentata</i>	13	<i>Dorcasina matthewsii</i>	2
<i>Alnus</i>	3	<i>Rubus</i>	12	<i>Etorofus obliterata</i> subsp. <i>obliterata</i>	12	<i>Neolosterna rubida</i>	2
<i>Libocedrus</i>	3	<i>Calochortus</i>	10	<i>Judolia montivigans</i> subsp. <i>montivigans</i>	12	<i>Pachyta armata</i>	2
<i>Pinus jeffreyi</i>	3	<i>Chrysolepis</i>	10	<i>Neobellamira delicata</i> subsp. <i>delicata</i>	12	<i>Pidonia gnathoides</i>	2
<i>Lithocarpus</i>	3	<i>Chrysanthemum</i>	8	<i>Judolia scapularis</i>	11	<i>Pseudogaurotina cressoni</i> subsp. <i>lecontei</i>	2
<i>Salix</i>	3	<i>Cornus</i>	7	<i>Lepturopsis dolorosa</i>	10	<i>Pygoleptura nigrella</i> subsp. <i>nigrella</i>	2
<i>Sambucus racemosa</i>	3	<i>Eriodictyon</i>	7	<i>Stenocorus nubifer</i>	10	<i>Stictoleptura canadensis</i> subsp. <i>cribripennis</i>	2
<i>Sequoia</i>	3	<i>Ranunculus</i>	7	<i>Strophiona tigrina</i>	10	<i>Trachysida aspera</i> subsp. <i>aspera</i>	2
<i>Umbellularia</i>	3	<i>Symphoricarpos</i>	7	<i>Judolia instabilis</i>	9	<i>Cortodera militaris</i> subsp. <i>constans</i>	1
<i>Artemisia</i>	2	<i>Viburnum</i>	7	<i>Etorofus propinqua</i>	8	<i>Cortodera nitidipennis</i>	1
<i>Libocedrus decurrens</i>	2	<i>Chrysothamnus</i>	6	<i>Grammoptera molybdica</i>	7	<i>Etorofus anthracina</i>	1
<i>Picea engelmannii</i>	2	<i>Pyrus</i>	6	<i>Pidonia scripta</i>	7	<i>Etorofus plagifera</i>	1
<i>Pinus monticola</i>	2	<i>Sorbus</i>	6	<i>Xestoleptura tibialis</i>	7	<i>Grammoptera rhodopus</i>	1
<i>Pinus murryana</i>	2	<i>Balsamorhiza</i>	5	<i>Judolia gaurotoides</i> subsp. <i>gaurotoides</i>	5	<i>Judolia montivigans</i> subsp. <i>barberi</i>	1
<i>Ranunculus</i> (?)	2	<i>Cirsium</i>	5	<i>Stenostrophia amabilis</i>	5	<i>Stenocorus flavolineatus</i>	1
<i>Rhamnus</i>	2	<i>Epilobium</i>	5	<i>Stenostrophia tribalteata</i> subsp. <i>serpentina</i>	5	<i>Typocerus serraticornis</i>	1
<i>Sequoia sempervirens</i>	2	<i>Thalictrum</i>	5				
<i>Thuja</i>	2	<i>Veratrum</i>	5				
<i>Pinus sabiniana</i>	2	<i>Chamaebatia</i>	5				
+ 41 additional hosts records with only one associated species or subspecies, including individual species of <i>Pinus</i> , <i>Abies</i> , etc. as well as novel genera.		<i>Adenostoma</i>	5				
		<i>Anaphalis</i>	4				
		<i>Aruncus</i>	4				
		<i>Cicuta</i>	4				
		<i>Conium</i>	4				
		<i>Phacelia</i>	4				
		+ 104 more.					

Some findings from the flower record analysis

Overlap of flower species used by lepturines

Hoping to maximize the diversity of species that might want to visit my lepturine utopia, I set up a simple program in Google Sheets that allows me to test whether a given pair of flowers overlapped in the species they attracted, or if two genera attract different, non-overlapping groups of lepturines. Using some of the more common flowers from Table 3, here are some preliminary tests that I found interesting:

Table 5: Comparisons of the number of lepturine species overlapping on a given pair of flower genera vs. species that visit only either one or the other.			
Rhamnus vs. Chrysolepis		Achillea vs. Chrysolepis	
Overlapping lepturine spp.	1	Overlapping lepturine spp.	6
Non-overlapping	20	Non-overlapping	22
Rhamnus v. Achillea		Achillea vs. Spiraea	
Overlapping spp.	7	Overlapping spp.	10
Non	22	Non	21
Rhamnus vs. Spiraea		Achillea vs. Eriogonum	
Overlapping spp.	3	Overlapping spp.	9
Non	20	Non	20
Rhamnus vs. Rosa		Achillea vs. Lupinus	
Overlapping spp.	2	Overlapping spp.	8
Non	21	Non	22
Rhamnus vs. Daucus		Achillea vs. Ceanothus	
Overlapping spp.	3	Overlapping spp.	10
Non	18	Non	24
Rosa vs. Achillea		Achillea vs. Heracleum	
Overlapping spp.	6	Overlapping spp.	14
Non	25	Non	16

The most rudimentary analysis suggests that a garden full of common yarrow (*Achillea*), wild rose, *Spiraea*, lupines, and wild carrot (*Daucus*), below some cascara buckthorn (*Rhamnus*) and chinquapin (*Chrysolepis*) would be well-suited for the needs of many flower-visiting longhorn beetles. In addition, one would want to include blue and red elderberry, as well as some twin-berry honeysuckle, *Lonicera involucrata*, to attract the blue-green metallic *Desmocerus* and *Pseudogaurotina*.

A fun use of Venn Diagrams

Further tinkering allowed me to come up with five flowering plant genera, which, based on the available records, may serve up to 46 different lepturines. With 86 species and subspecies in the PNW, and 29 of those that may not even visit flowers at all, these 5 plants cover nearly 80% of the lepturines known to visit flowers in the PNW.

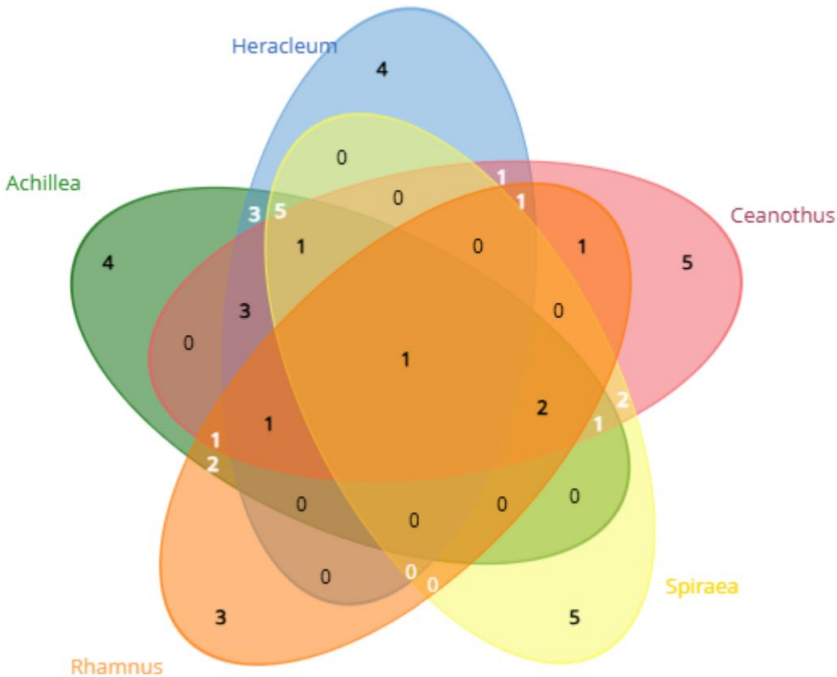


Figure 74. A 5-part Venn Diagram shows the degree of overlap in lepturine species and subspecies that are known to visit the 5 flower genera *Achillea*, *Ceanothus*, *Heracleum*, *Spiraea* and *Rhamnus*. (The focus is flower records, not host plants, so the leaf-eating, elderberry-boring *Desmocerus* are excluded.) Curated data were uploaded to <https://biotools.fr/misc/venny> (accessed 8.28.2026), which generated the diagram. 46 separate lepturines are represented, the most I could capture using only 5 plants. *Rhamnus* incorporated 3 oddballs: *Cortodera militaris*, *Grammoptera rhodopus*, and *Judolia scapularis*. The only species to visit all 5 flowers, represented by the “1” in the center of the diagram, is *Anastrangalia laetifica*, that glutton, whose name means cheerfulness and joy.

With this nifty diagram that looks like a cheerful flower itself, it is time to end the book. Happy beetling! - Phil