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## Observations of *Meloe strigulosus* (Coleoptera: Meloidae)

Ron Lyons

In late December 2017, I began a study of the life cycle of the chrysomelid beetle, *Galeruca rudis*, which feeds on lupines (Lyons 2019).

This ongoing study is being carried out in Bullards Beach State Park just north of Bandon in Coos County, Oregon. The survey area consists of pedestrian / horse trails on the east side of the foredune. The main trail runs from the beach parking lot (approximately 43.1462° N, 124.4152° W \*) about 0.8 miles north to an east-west cross trail called Pearl's Trail (approximately 43.1560° N, 124.4115° W). This main trail is crossed by 2 other intervening east-west cross trails, Red John Trail and Black John Trail, both of which were surveyed to the top of the foredune on the west side, and a short distance to the east (during the winter these two trails are often flooded on the east side).

During my visits I recorded other arthropods of interest, among which were the meloid beetles, *Meloe strigulosus* and *Meloe*

*franciscanus*. Last year I reported the presence of *Meloe franciscanus* found on 2 occasions (February 23 and March 10, 2018), both in the same area (Lyons 2018). I did not see the species this year. Here I report on my observations of *Meloe strigulosus*.

Beetles in this genus are rather large, heavy-bodied, flightless beetles, usually black in color (see Figures 1 and 2). For more information on this genus, please see the monograph by Pinto and Selander (1970). Pages 158–160 contain a description of *Meloe strigulosus*, including a distribution map in Figure 32. Adult males and females can be separated by the structure of the antennae (compare the antennae in Figures 1 and 2).

### Observations of Adults

In 2017, I found a dead *Meloe strigulosus* on June 14. At the time I was not making systematic visits to the area.



Figure 1. Male *Meloe strigulosus* feeding at Bullards Beach State Park April 4, 2019. You can see the feeding marks on the grass blade as the male worked his way up to the tip of the blade. Photo by Ron Lyons.



Figure 2. Female *Meloe strigulosus* feeding at Bullards Beach State Park on April 9, 2019. Note the simple nature of the female's antennae which lacks the complex structure shown in the male's. Photo by Ron Lyons.

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Submit content to **Ron Lyons** <pondhawk@integrate.net>. To be included on the distribution list contact **Jim Johnson** <gomphusjim@google.com>.

In 2018, I did not encounter *Meloe strigulosus* often; in fact I only encountered live adults on 3 occasions: March 20, April 30 and November 14. The individual found on March 20 was wounded, having a sharp indentation in one elytrum. The female seen on April 30 was struggling and a dead female, presumably the same one, was found at the same spot on May 1. The individual found on November 14 struggled to stand upright.

Despite regular visits to the area, I did not encounter another live adult until March 20, 2019, after which I found adults on 6 visits between April 2 and April 19—7 males and 4 females in total (2 individuals were seen on April 4 and April 9, and 3 were seen on April 16). (One of the females was possibly counted twice—on April 9, I found a dying female in the spot I had seen one feeding on April 5.) Additional visits when no adult *Meloe* activity was observed were made during this time period. (The period when I observed the adult *Meloe* activity in 2019 corresponded to a period of poor coverage in 2018—the first visit in April did not occur until April 19.)

For the most part the adults I found walked briskly away from me, or fed calmly, ignoring me—the adults were more likely to tolerate my presence and picture-taking efforts if they were feeding. The adults were only observed walking or feeding; no encounters were observed. The feeding adults appeared to be eating grasses (Figures 1 and 2).

Between April 20 and May 13, I only found dead individuals, and I have not come across any new corpses since then. (Earlier I came across a dead male on April 4 and a dying female on April 9.)

Pinto and Selander (1970: Figure 1) give the activity period of *Meloe strigulosus* as the beginning of August to the beginning of June. John Pinto commented that my June 14, 2017 record indicated above was a bit late for this species. In 2019, I decided to see how long corpses of *Meloe strigulosus* could exist in the field, subject to all the rain, wind and other disturbances, and still

remain recognizable. I placed the 4 corpses from May 12 and May 13 just off the trail and marked their locations by placing stones nearby. As of June 23, 3 of the 4 were still present and easily recognizable; the 4th individual disappeared sometime between June 9 and June 19. So, the dead individual from 2017 could have been around for some time before I found it.

### Observations of Triungulins

According to Pinto and Selander (1970: 55) species of *Meloe* are larval parasitoids of wild bees. The first instar is called a triungulin and is an active phase which locates the relevant host species. Last year with the aid of John Pinto I was able to see triungulins in action on strawberry plants at a site in the Baker Beach Recreation Area north of Florence in Lane County, Oregon.

The triungulins of *Meloe strigulosus* occupy the flower heads of plants visited by their host species. This year, I was on the lookout for the triungulins early and photographed them in the flower heads of various plants from the beginning of April to the end of May (Figure 3). I was not in the survey area between May 31 and June 8. Since June 9, I have not found any triungulins in the

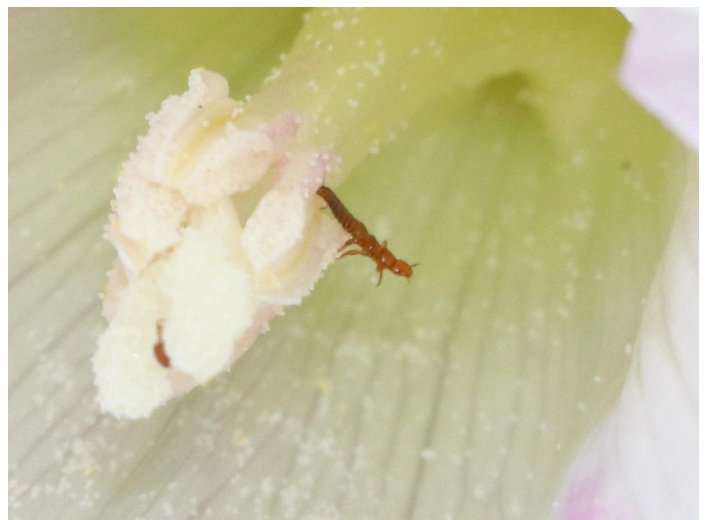


Figure 3. Triungulins on flowers of *Platystemon californicus* (above), *Sanicula arctopoides* (top right) and *Calystegia soldanella* (bottom right). Photos by Ron Lyons.

flowers that I have checked.

In the survey area, some of the flowering plants have a restricted distribution while others are more generally distributed. I found my first triungulins (identified by John Pinto) on the flowers of *Platystemon californicus*\*\* (cream cups\*\*, Figure 3). These flowers are found mainly spread along the main trail between Black John Trail and Pearl's Trail. The next flowers were *Sanicula arctopoides* (footsteps of spring, bear's foot sanicle; Figure 3). These plants occur mainly in a small patch at the intersection of the main trail and Pearl's Trail. On April 25, I found some triungulins on *Fragaria chiloensis* (coastal strawberry); these plants are not very abundant in the survey area and occur here and there. At the time, I was still able to find the occasional triungulin on *Platystemon californicus* and *Sanicula arctopoides* but their flowers were past their prime. About this time I started to find triungulins on some dandelion-type flowers (I'm not very good at identifying these yellow composites so we'll just leave it at that—the various species are generally distributed along the main trail; Figure 4.) Eventually I also found some triungulins on the flowers of *Calystegia soldanella* (formerly *Convolvulus soldanella*; coast morning-glory; Figure 3); these plants are not very abundant.

I checked a number of *Camissoniopsis cheiranthifolia* (formerly *Oenothera cheiranthifolia*; beach evening primrose) blooms without success; these plants bloom early and are generally distributed along the main trail. *Tanacetum camphoratum* (dune tansy) blooms late and is restricted to a small section of Black John Trail; it has also proved negative. *Erigeron glaucus* (beach fleabane, seaside daisy) is widespread but another later bloomer that has proven negative. *Armeria maritima* (California thrift, California sea pink), another widespread later bloomer, has not been checked extensively. *Polygonum paronychia* (black knotweed) is widespread and starts fairly early but has not been checked extensively. As the food plant for *Galeruca ruidis*, the actual subject of my primary study, the *Lupinus littoralis* (seashore lupine) plants have been examined regularly but I have not seen any triungulins on these plants.

On one occasion, while I was photographing some triungulins on one of the dandelion-type composites, a small bee flew in and I was able to get a couple pictures of the bee with triungulins attached (Figure 4). Normally, bees did not stay on flowers that I approached, so I was lucky that the bee came in after I was set up and did not immediately fly away.

On two occasions, I have encountered triungulins unassociated with plants. Between May 8 and May 11, 2018, I found triungulins running around on the ground in a small area (the triungulins were identified by John Pinto). On April 12, 2019, I found a *Habropoda* bee digging a nest in the sand along the edge of the main trail. While photographing this excavation, I noticed a couple triungulins on the sand outside the nest site. I suspect that they may have dropped from the bee or been expelled during the nest-building process. Both were working their way across the sand towards the excavation site. At one point, I did see what

might have been a third triungulin on the bee as it prepared to leave.

## Acknowledgements

I want to thank John Pinto and Rick Westcott for their interest, advice and suggestions on this side project over the past two years and to John Pinto for his expertise in identifying the triungulins. Both John and Rick also supplied identifications for some of the other insects in my photographs for which I am extremely grateful.

## References

- Lyons, R.W. 2018. A New Coastal Oregon Location for *Meloe franciscanus* (Coleoptera). Bulletin of the Oregon Entomological Society 2018(2): 1-2.
- Lyons, R.W. 2019. *Galeruca ruidis* (Coleoptera: Chrysomelidae). Bulletin of the Oregon Entomological Society 2019(1): 2.
- Pinto, J.D., and R.B. Selander 1970. The Bionomics of Blister Beetles of the Genus *Meloe* and a Classification of the New World Species. Illinois Biological Monograph No 42: 222 p. (Access the PDF at <<https://www.archive.org/download/bionomicsofblis42pint/bionomicsofblis42pint.pdf>>.)

- \* The latitude and longitude coordinates for Bullards Beach were determined using Google® maps.
- \*\* The plant identifications were based mainly on:  
Wiedermann, A.M., L.R.J. Dennis and F.H. Smith 1974. Plants of the Oregon Coastal Dunes. OSU Books Stores, Inc. (Corvallis, Oregon). 117 p.  
The generic and common names of the plants were taken from the Oregon Flora Project by interrogating the checklist for the species indicated <<http://www.oregonflora.org/checklist.php>>. [accessed June 25, 2019]



Figure 4. This small bee on the flower head of one of the unidentified dandelion-type composites has small orange bumps on each side. These bumps are attached triungulins. The two orange objects on the right hand side of the flower are two parts of one triungulin, split by an intervening portion of the flower head. Photo by Ron Lyons.

## Night Visitor Knocking *Ron Lyons*

Late the other evening while I was working on this issue of the Bulletin, I began hearing some thumping that seemed to be coming from the window beside my desk. I opened the door and looked out into the blackness to see if there was something unusual going on but did not see or hear anything. The noise stopped and I continued working. As I was getting ready to call it quits, the noise began again. I picked up my flashlight and went outside. From the deck, I could see some large wings partially silhouetted at the edge of the window by the light from inside. I went over thinking perhaps it was an *Ascalapha odorata* (Black Witch), however unlikely that would have been. Instead I found a large male silk moth, *Antheraea polyphemus*, fluttering at the window. This is only the third time in 17 years I have encountered this moth at my place near Bandon; both other encounters were also in late June. After taking a couple pictures I turned the inside light off and removed the stimulus for its activity.



## Upcoming Insect Classes in 2019

### Siskiyou Field Institute Class

The Siskiyou Field Institute (SFI) is located in Selma, in the Illinois Valley about 20 miles south of Grants Pass off Highway 199. For full details on the various offerings consult their website and course catalog at <http://www.thesfi.org>.

#### Butterflies of the High Desert

Instructor: Dana Ross, M.S.

Dates: Friday–Sunday, July 12–14

Location: Malheur Field Station, Harney County, Oregon  
Harney County, Oregon is known as a butterfly hotspot as well as a migratory bird stop along the Pacific Flyway. We will base our butterfly and moth studies at Malheur Field Station, where we'll learn both typical and rare species historically seen in southeast Oregon in a classroom session and studying collected specimens. Then we'll foray to alkaline lakes and hot springs, landscaped areas, bogs and high-elevation sites including Steens Mountain in search of summer butterflies including checkerspot, swallowtails, fritillaries, metalmarks, blues and whites. (Catalog page 14.)

### Bumble Bee Atlas Training in Ashland

This day-long workshop for the Bumble Bee Atlas Project is scheduled for Ashland, Oregon on July 20, 2019. The workshop includes a classroom session and field practice and covers bumble bee identification, survey techniques and habitat assessment. There is a fee. For more information or to register, please visit <https://www.pnwbumblebeeatlas.org/events.html>.

### Malheur Field Station Workshop

#### Entomology in the High Desert

Instructor: Matt Medeiros

Dates: Tuesday–Friday, September 10–13

Learn more about the insects of sagebrush country and their importance to the ecosystem. This course will consist of a field trip to observe insects in the field, insect collecting demonstrations, and learning about insect anatomy and ecology in the classroom.

For more information and registration details please visit <https://malheurfieldstation.com/programs>.

#### Xerces Society Information

Please check their website, <http://www.xerces.org/event/>, for events being held locally.

Check out their blog (<https://xerces.org/blog/>) and links to various videos (<https://xerces.org/videos/>) for other materials of interest. Executive Director, Scott Black, discusses issues surrounding Oregon's native bees on a video from Oregon Public Broadcasting's Oregon Field Guide series.

If you want to help in a science project, please visit the citizen science page <http://www.xerces.org/citizen-science/>. Note: there is a link to the *Vanessa* Migration Project at the bottom of the page.

## Upcoming Lepidoptera Activities in 2019

### Northern California

For the latest information on other count dates in Central and Northern California, please refer to the website <[http://www.sfbaywildlife.info/activities/butterfly\\_counts.htm](http://www.sfbaywildlife.info/activities/butterfly_counts.htm)>.

#### Lassen Volcanic National Park

Date: Saturday July 20 8 am–6 pm

The 2018 count recorded 82 species and 3,256 individuals. The count spans many of the trails and roads in the park and some southern transects just outside the park boundary. This count is an excellent opportunity to see Northern California montane species. For further information or to participate, please contact Joseph Smith at <[foxglove1985@yahoo.com](mailto:foxglove1985@yahoo.com)>

### Oregon

#### North American Butterfly Association (NABA) Eugene-Springfield Chapter

The following events are scheduled:

Saturday, July 6 – Eugene Fourth of July Count

This field trip, the first of two “Fourth of July” butterfly counts, will be led by our experienced local NABA Oregon officers. Four different count groups will explore for butterflies in the West Eugene Wetlands, Mt. Pisgah Arboretum, East Buford Park, and Spencer Butte. Beginners are encouraged to participate in this outing as a learning experience in butterfly identification. Meet at 10:00 am in the Campbell Community Center/Skinner Butte Park parking lot (park at the Skinner Butte end of the parking area, 155 High St., Eugene) to split into groups and carpool to the sites. Preregister with David and Lois Hagen by email at <[NABA-ES-trips@gmail.com](mailto:NABA-ES-trips@gmail.com)>.

Saturday, July 20 – Frissell Ridge/Iron Mountain Count

This field trip is the second of our two “Fourth of July” butterfly counts to be led by our experienced local NABA Oregon officers. Join us for a trip to these flower and butterfly rich environments. Two different count groups will explore for butterflies. One group will travel by car along Browder Ridge with frequent stops and walking along gravel roads. The other group will hike to the summit of Iron Mountain or Cone Peak in the Cascades. Please bring your own food, water, sunscreen, and good walking shoes. Beginners are encouraged to participate in this outing as a learning experience in butterfly identification. Meet at 8:00 am in the Campbell Community Center/Skinner Butte Park parking lot (park at the Skinner Butte end of the parking area, 155 High St., Eugene) to split into groups and carpool to the sites. Preregister with David and

Lois Hagen by email at <[NABA-ES-trips@gmail.com](mailto:NABA-ES-trips@gmail.com)>.

Saturday, July 13 – Butterflies and Dragonflies Walk 11 am–1 pm  
Join nature guide David Hagen on a walk for kids and families. Explore the diversity of butterflies and dragonflies found at the Mt. Pisgah Arboretum. This will be a gentle walk through the meadow lands. Nets and bug boxes are provided to get a closer look at these amazing organisms. Meet at 11 am at the Mt. Pisgah Visitor Center (don't forget your parking pass). \$8 per family, \$5 per person (Mt. Pisgah Arboretum members free). Jointly sponsored by NABA Oregon and the Arboretum, <<http://www.mountpisgaharboretum.com/festivals-events/>>. There is no preregistration.

#### Other Oregon Butterfly Counts

Sue Anderson will lead her *Metolius* count Friday, July 12.

### Washington

#### Washington Butterfly Association (WBA)

Information on WBA activities can be found on their website, <<http://wabutterflyassoc.org/>>.

A number of field trips have been scheduled:

Saturday July 13 – Salmon La Sac area

Tuesday July 23 – Stevens Creek and Stevens Lakes, Shoshone County, Idaho

Saturday July 27 – Bethel Ridge, Yakima County

Friday August 2 – Mt. Townsend, Olympic National Forest (Rain will cancel)

Saturday August 3 – Deer Park and Blue Mountain, Olympic National Park (no nets)

For the latest details, including participation limits, and registration information, please visit <<https://wabutterflyassoc.org/field-trips/35b-2/>>.

### 41st Northwest Lepidopterists' Workshop

The 2019 Northwest Lepidopterists' Workshop will be held at Oregon State University in Corvallis on the weekend of October 19–20, 2019. The program will appear in the Fall Bulletin.

The groups of emphasis this year will be:

- ▶ Butterflies: *Euphydryas* (checkerspots), *Oeneis* (arctics) and *Erebia* (alpines)
- ▶ Moths: Geometridae