Summer 2011

Bulletin of the

Oregon Entomological Society

Notes on the Status of Butterfly Populations in NW Oregon

David V. McCorkle

I parked my vehicle in the forest shade near Pedee Creek in Polk County. I took out my insect net and walked a few paces to the edge of the open field, hoping to at least see another female Puget Sound Fritillary, *Speyeria cybele pugetensis*. This is the exact spot that, two years previously, I had taken the only other female I had ever seen in this population.

The males of this species freely patrol forest openings, such as roadsides, and are not uncommon at this site. But the mated females mostly stay in the woods where the species' host violet, *Viola glabella*, grows. They apparently fly up into the sunlit forest canopy on cooler days to bask as needed to maintain a body temperature allowing their egg-laying activities in the shade below. But when they need to find nectar at flowers, they too must venture into forest openings, usually late in the afternoon after the males have left to roost.

It was now 5:45 PM. And, yes, to my delight, there before me, imbibing nectar from a composite blossom, was a fresh female *pugetensis*, not five yards from the very spot I had taken the first female back in 2007! I approached cautiously, net at the ready. But when almost in range, the beautiful dark female with her silvery ventral spots, suddenly took flight! She rapidly flew directly over me! Almost by reflex, I took a wild sweep in her wake over my shoulder and made a rare "blind catch". For there she was flopping in my net when I returned it to view. Later, after feeding her with sugar solution soaked into a cotton swab, I set her up for egg laying back at my home in Monmouth.

And here is what makes this catch of 31 July 2009 so significant. In the time since my family and I had moved to Monmouth back in 1963, I had located nine populations of this western representative of the Great Spangled Fritillary, *Speyeria cybele*, the subspecies *pugetensis*, in this area of the Willamette Valley. Of these populations, only three remained in 2007, even though good habitat remains at at least seven of the sites. The extended rains of August and the first half of September in 1978 apparently prevented the reproductive activity of the Mary's Peak population, the bad weather correlating with its disappearance. (This was also the year that the only known Willamette Valley populations of *S. zerene bremneri*, the inland subspecies of the threatened Oregon Silverspot, *S. z. hippolyta*, went extinct.) In the late 1960s a farmer plowed under his violet rich hillside just a mile or so northwest of Monmouth. After that the local population of *pugetensis* disappeared. What caused the disappearance of the MacDonald Forest populations (at least at Sulphur Springs) in about 2005 remains a mystery as does the cause of the disappearance of the Ritner Creek population last seen in 2003.

And it is this last event that is of most pertinence in our present context, for this is the site of my present experiment. The Ritner Creek drainage is the next valley to the south of Pedee Creek which is where *pugetensis* persists at least to this writing. And recall that Pedee Creek is the location of the "blind catch" drama just described. I released many of the progeny of the 2007 Pedee Creek female into the still intact habitat at Ritner Creek, mostly at two sites. (Each female may lay up to at least 500 ova, so I had a good supply of dormant larvae ready for release the spring of 2008.) Although I did not see any adults that year on my brief observation visits, in 2009 I did see males along the roadside at both of the release sites, but nowhere else at Ritner Creek. If these, indeed, were solely the result of my 2008 larval releases, then this new population must be inbred. And now, with the promise of progeny from another female, I would be able to enrich the gene pool of the new Ritner Creek population. But to my great disappointment, the 2009 female turned out to be infertile. Apparently I had found her before she had encountered any males. However, I resorted to another tactic to infuse alleles into the experimental population. In 2010 I captured two males at Pedee Creek and released one each at the two Ritner Creek sites, with the hopes that they would successfully breed with females there. That year I searched for another female at Pedee Creek, but saw none. I do plan to continue my experiment and act to further enrich the gene pool of the new population so that it does not become so inbred as to die out.

What of Other Species in this Area?

What I have described here as the documentation of the decline in one species of butterfly in the area I have monitored over the

years, I suggest is representative of butterfly populations in general in this area. For instance, *Papilio zelicaon*, the Anise Swallowtail, no longer is to be found in Monmouth nor Salem nor apparently even in parts of MacDonald Forest, sites that once held robust populations. The Snowberry Checkerspot, *Euphydryas chalcedona colon*, now has a greatly reduced range in this area, along with its sister species *E. editha taylori* which has received much more attention. Over the years I have monitored the reproductive activity of the Western Tiger Swallowtail, *Papilio rutulus*, in my yard. Now, for the first time in decades of study, no larvae have persisted beyond the first or second instar on my host plant trees. In addition to falling prey to native wasps, it may be that the young larvae fall prey to the introduced Multicolored Asian Lady Beetle, *Harmonia axyridis*, that has recently been released for biocontrol of pest species. In 2003, one *rutulus* larva did reach maturity, but then perished as a number of parasitoid maggots exited its carcass. These yielded adults of the introduced European tachinid fly, *Compsilura concinnata* (18 from the one larva!). This parasitoid has also been used in biocontrol of pest species, but is known to attack a wide spectrum of native species as well. So far (2010) the tiger swallowtail is still found in the Willamette Valley including Monmouth, but in lower numbers. And one wonders about the fate of the native parasitoids that used to keep the host in balance at a thriving level.

This raises the question as to the population trends in species of other insect orders. In the water beetle genus *Helophoris* (Hydrophilidae), which I study and have monitored over the years, only one species of the five that I found in the 1960s still persists in most of at least the central Willamette Valley lowland marshes. I know of no other groups that have been monitored except the Odonata and some Hymenoptera.

So what can be done about the trend we perceive? Please do not release foreign biocontrol agents unless they can be proven to not compete with nor attack native species. If you must, do use pesticides but only locally and sparingly. Perhaps reintroduction projects are in order, but would best be done with the coordination and supervision of the professional entomological community. And most importantly, let us all become aware of nature around us so that we can better appreciate its significance and value.

A Heavy Load . . . Or A Free Ride *Ron Lyons*

On 30 May 2011 I visited New River ACEC, a BLM managed property along the south coast in Coos County. The weather was poor—it was windy and overcast. This carabid beetle was out hunting along the trail. Jim LaBonte identified my picture as *Scaphinotus velutinus*, sort of the south coastal replacement for *Scaphinotus angusticollis*.

When I looked at it through my camera with its macro lens, I thought the beetle looked strange. Along the edges of its thorax, it had a lot of moving tentacle-like hairs that turned out to be the legs and antennae of mites. Excluding the one walking on top, they all seem to be facing head down. Jim indicated that it is not unusual to find carabids, and *Carabus* and *Scaphinotus* species in particular, heavily encrusted with phoretic mites.

Desert Odonate Hunt 2011 *text and accompanying photos by Ron Lyons*

The hunt for odonates in the desert region of eastern Oregon this year took place the weekend of 17–19 June. On Thursday I headed out to the rendezvous at Mann Lake taking my regular scenic but circuitous route—heading east towards Roseburg, dropping down I-5 to Canyonville for lunch at Seven Feathers, and then heading across to Highway 62 via the road through Tiller. Traveling north along Highway 62, I encountered a number of large insects flying uphill while passing Joseph Stewart State Park. Pulling off to satisfy my curiosity, I searched briefly along the roadside before finding some large road-killed stoneflies.

At Crater Lake, debris-covered snow was piled along the side of the road starting near the west entrance. The wall of snow on both sides of the road was the highest I had seen on any of my June trips. I stayed on 62 since the road through the Park along the rim was only open for a short distance. At Pole Creek I turned off on the dirt road to the Park's maintenance area—this plowed road had vertical walls of snow varying from about 2–6 feet along the short section before the closed gate. During the summer, the area bordering the creek is a wet meadow where I have found *Tanypteryx hageni*, the Black Petaltail. It is also one of the collecting


Steens Mountain from Mickey Hot Springs

areas frequented by Herman A. Scullen and F. Lyle Wynd when they worked in the Park in the summer of 1930 as ranger-naturalists. (Scullen later became noted for his work on Hymenoptera, primarily one particular group of sphecid wasps, the Cercerini. Wynd collected plants extensively in the Park eventually writing the "Flora of Crater Lake National Park" in 1936. A number of the insect specimens they collected that summer were deposited in the collection at OSU.) By the time I arrived at the old South Entrance on Highway 62, there wasn't any snow. (The unnamed pullout here is paved and there is a marker in the bushes.) Around 4 PM, I stopped at the Ponderosa Picnic Area, just north of the Park's current south entrance. The *Ceanothus velutinus* had some buds but was far from blooming; nothing else was close. A number of beetles seemed to be enamored by my bronze-colored Saturn wagon parked in a patch of late afternoon sunlight. I saw some ants about and a few flies but otherwise it was pretty quiet. One lone swallowtail, probably a Pale Swallowtail, flew by.


Cary Kerst

I arrived in Burns after midnight, having waited till after dark at Lake Abert to look for katydids along Highway 395. I didn't find any, but I did see three Jerusalem Crickets scurrying about looking for food. During the summer, I regularly encounter them on the roads at night when I am looking for katydids. A lump on the road turned out to be a Spadefoot Toad. I checked in at the Best Western for a few hours sleep. The morning was chilly and clear as I headed out to Mann Lake. Portions of the highway were surrounded on both sides by extensive wetlands, so much so that I felt like I was on a causeway,


Steve Berliner


Jim Johnson, Steve Valley, and his grandson Max


Argia alberta


Cicindela hemorrhagica

or except for the vegetation differences, in the Everglades. There were ducks and shorebirds within a couple of feet of the edge of the road.

In the desert, there were lots of lupines along the roadsides, but none of the bright yellow flowers that had lined the road in early July two years ago. I arrived at Mann Lake in time to meet Steve Berliner driving out. Steve had camped at the lake along with Jim Johnson and Cary Kerst both of whom had left earlier that morning to go to Mickey Hot Springs. After a short but dusty trip we arrived at the Springs. Steve Valley and his grandson Max had also stayed at Burns overnight and arrived later, rounding out this year's expedition at six people.

The odonates weren't particularly abundant, at least not as flying adults. Some were just emerging. Jim found a number of nymphs. The grasshoppers were noticeable for their absence; I only noticed a single adult. There were a few butterflies (one was a Ringlet) and some day-flying moths. Ants were busy working at a number of harvest nests. *Cicindela hemorrhagica* tiger beetles hunted along the runoff streams, but not nearly as many as I had seen on a much hotter day in July two years ago. A few cicadas were out—Cary had located one by its singing, but they were quiet by the time I arrived. A few lizards were about. There was at least one cow carcass from this past winter and some birds flew about, surprised at the crowd. As it turned out, this was the most productive area we visited.

After lunch, we caravaned over to the Alvord Hot Springs. Significant streams flowed beside the road in several areas and the lowland desert area, usually just sand, was now an extensive lake. A lot of snow still covered the Steens Range.

Borax Lake was the next stop. The grassy road was pretty good except for a couple of spots. My Saturn bottomed out at one point, but managed to hold its own with the trucks of the others and Steve Berliners's van. The Saturn has been through a lot and at 205000 miles continues to impress me. Borax Lake was pretty quiet too.

After a short time, we headed over to Fields for their thick milkshakes (essentially whipped ice cream) and gassed up. We camped at Cottonwood Creek, just south of Fields, ate supper, checked out the birds in the trees along the stream, swatted at some mosquitoes, and enjoyed some good conversation.

Saturday morning featured bird calls. The mosquitoes weren't as noticeable, although some spent the night on my tent and were right in my face when I opened up to enjoy the sunrise. Walking along the dirt access road, I found several tenebrionids, a seven-spotted ladybird in the cottonwoods, and some crane flies and other insects floating in the water puddled in some of the deeper ruts. The hills were purplish, colored from the cheat grass and some other plant I don't know. There were some interesting morning clouds, perhaps presaging the poor weather we would have that day.

After breakfast we headed to Twin Springs with its small earthen dam, just off Whitehorse Ranch Road, to look for more odonates. There were a small number of damselflies about. Jim collected some late instar aeshnid and libellulid nymphs. Two years ago, I had found a number of tiger beetle burrows in the area and hoped to find some adults this time. No such luck. I did see some more pale day-flying moths, and as before there were a few pesky mosquitoes.


camp at Cottonwood Creek


morning clouds


Pillars of Rome Scenic Area

Next we headed over to the campground at Willow Creek. The road into this campground is marked with a warning sign—road impassable when wet. We kept an eye on the weather while discussing our next stop. It was raining heavily in the distance and the storm was moving our way. Eventually, we decided not to camp there. Steve Berliner decided to head back; the rest of us headed up to Rome to check out the Owyhee River area.

At Rome, the river was high, and the parking area and campsites were crowded with the trucks (mainly) of people rafting or about to go out rafting and/or kayaking. Apparently activity normally drops off by this time, but with the wet spring the season was extended. Steve, Max and Jim headed into Jordan Valley to spend the night, while Cary and I elected to stay. We ate at the Rome Station, surprised to find veggie burgers on the menu in such a small place. After supper we searched for a scenic area called the Pillars of Rome on my map. Searched is the appropriate word because there were no signs marking this area, and the dirt road, which we eventually realized was the right one, looked like it went into a farm. Eventually we found the area, and it was quite impressive, even late on a cloudy day with light rain.

We returned to find the campground more occupied and it looked like, at least initially, it would be noisy. The road and much of the open dirt area was muddy so I elected to not pitch my tent and headed back to sleep in my car along the highway. I found a good spot at the top of the valley in the chain-up area to the east of town where I had a great view of a massive thunderstorm moving towards me. It rained fairly heavily, so I was glad I hadn't camped out. Around sunrise, I drove back to the Pillars. The low-lying clouds and rain eventually cleared off and I spent some time taking pictures of the rock formations. My car which had been washed by the rainstorm, was pretty muddy by the time I got back to the highway.

Cary and I went back to the same (and only) restaurant in town for breakfast. The pancakes Cary got with his eggs were large and thick. Jim, Max and Steve arrived back and checked out the river for a bit. Eventually we all agreed that it was time to head home and we went our separate ways.

I went back via Lake Abert where I stopped to look for odonates and tiger beetles down by the shore. No luck. There were no swarms of shore flies either. Except for a small flock of Canada Geese (I think they have a different name now) I had seen the other day, there were no birds on the water or along the shore, quite the opposite of what I have encountered on my July visits. The water looked green and there was lots of algae/debris near the shore. As I went back up the hill to the car wondering where the grasshoppers were, I realized there were a bunch of them bouncing all around as I walked along—they were just very small, early instars. I tried to get a few pictures but they were hard to track in the grass. Then I noticed some larger insects also jumping/crawling through the grasses in response to my disturbance and after some effort I was able to find and photograph several late (last?) instar *Steiroxys* individuals (one of the shield-backed katydid species). The earliest I had been in this area before was the first weekend in July. On that occasion I found nymphs of other species on the road, but I only found adult *Steiroxys*. Despite the late spring, they appeared to be on track. It was warm (around 80° F) and sunny during the afternoon. I drove the road after dark and picked out one katydid crossing (they look like an A with an elongated thickened cross bar).


Steiroxys sp., male on Cheat Grass

I drove through the night, getting gas and food at the casino near Chiloquin, arriving back home on the coast in the morning.

It could have been a more productive trip at least as far as the odonates go, but it was fun to get back out to the desert with friends. And, I found some katydids during the daytime, in vegetation—a rare event for me! I had a good time and look forward to next year's trip.

From The Bookshelf

Freshwater Mussels of the Pacific Northwest, 2nd Edition by Ethan Jay Nedeau, Allan K. Smith, Jen Stone, and Sarina Jepsen

Okay so this isn't an insect book or even an arthropod book, but a number of readers are interested in aquatic environments, so they might like to know that this guide is available.

This guide provides basic identification, distribution, life history and conservation information for each of the seven species of freshwater mussels native to the Pacific Northwest.

Download for free from the Xerces Society web site or purchase a hard copy from their online store. Either way visit: <http://www.xerces.org/identification-guides/>

Tracks and Sign of Insects and Other Invertebrates—A Guide to North American Species by Charley Eiseman and Noah Charney

Published by Stackpole Books ©2010, ISBN 978-0-8117-3624-4 (soft cover, about 590 pages), price $39.95 (at the OSU Bookstore). This is not your normal insect identification guide. It illustrates, with a number of excellent photographs, such things as egg masses, burrows, feeding damage, pupae, exuviae, frass, galls, medical impacts, etc. For instance, there is a photo of owlfly eggs, showing the aborted eggs which form a stick-like barrier that protect the viable eggs from ants. Another shows compacted frass rods in a log of firewood. You get the idea.

This unique guide fills a void in entomology field guides. It could probably be used as a textbook for a special entomology course for students with a general knowledge of the orders and families.

If, however you are particularly interested in plant galls, I would recommend a different book:

Desert Odonate Trip (17–19 June 2011) Odonate Species List *Jim Johnson*

See Ron Lyon's trip summary starting on page 2. With the extended cool wet period this spring, we were too early for most species. The following species were seen, photographed or collected:

Rhionaeschna sp. (presumably *californica*), Darner (presumably the California Darner)
Libellula composita, Bleached Skimmer
Libellula nodisticta, Hoary Skimmer
Plathemis subornata, Desert Whitetail
Erythemis collocata, Western Pondhawk
Sympetrum corruptum, Variegated Meadowhawk
Argia alberta, Piaute Dancer
Ischnura cervula, Pacific Forktail
Ischnura denticollis, Black-fronted Forktail
Ischnura perparva, Western Forktail
Amphiagrion abbreviatum, Western Red Damsel

Top left, *Libellula composita*, Bleached Skimmer, a young male; top right, *Plathemis subornata*, Desert Whitetail, female; bottom, *Ischnura denticollis*, Black-fronted Forktail, male (left) and an androchromatic female. All photographed at Mickey Hot Springs on 17 June 2011 by Jim Johnson.

Field Guide to Plant Galls of California and Other Western States by Ron Russo

Published by the University of California Press as one of the California Natural History Guides ©2006. This book comes in soft cover and hard cover and runs about 400 pages. It is an outgrowth of Russo's long out-of-print guide "Plant Galls of the California Region" from 1979.

Robert Furniss Oral History Interview *Mal Furniss, Moscow Idaho*

Robert L. (Bob) Furniss (1908–1980) was a long time member and participant in the OES. He headed the Portland Forest Insect Lab after Paul Keen left for Berkeley in 1942. He is included in the Portland World Forestry Center Memorial Gallery of people who have contributed to the advancement of forestry worldwide. OES members might be interested in reading his 1972 oral history interview posted on the Forest History Society (FHS) web site. I edited the rough transcript rather recently at the request of the FHS and it is now available as a PDF file at <http://www.foresthistory.org/Research/ohisrch.html#F>.

Native Bee Research

With the problems in the honey bee populations and real concerns about the bumble bee populations, there is considerable interest in other native bees and their potential as crop pollinators.

Chiho Kimoto, a recent OSU graduate, now works as a Faculty Research Assistant for the OSU Department of Fisheries and Wildlife at the Hermiston Agricultural Research and Extension Center. What follows is the abstract of her thesis work on native bees. Her research was presented in two parts so the abstract below is in two parts. She continues her work on bees in Hermiston.

Effect of Livestock Grazing on Native Bees in a Pacific Northwest Bunchgrass Prairie, Chiho Kimoto

1) Abstract of "Investigating temporal patterns of a native bee community in a remnant North American Bunchgrass Prairie using blue vane traps".

Native bees are important ecologically and economically because their role as pollinators fulfills a vital ecosystem service. Pollinators are declining due to various factors, including habitat degradation and destruction. Grasslands, an important habitat for native bees, are particularly vulnerable. One highly imperiled and understudied grassland type in the United States is the Pacific Northwest Bunchgrass Prairie. No studies have examined native bee communities in this prairie type. To fill this gap, we examined the bee fauna of the Zumwalt Prairie, a large, relatively intact remnant of the Pacific Northwest Bunchgrass Prairie. We sampled pollinators during the summers of 2007 and 2008 in 16 40-ha study pastures on a plateau in northeastern Oregon using a sampling method not previously used in grassland studies—blue vane traps. We found that this grassland contained an abundant and diverse community of native bees that experienced marked seasonal and inter-annual variation, which appears to be related to weather and plant phenology. This temporal variability in bee abundance and taxa richness was relatively large in magnitude compared to the spatial variability detected over the sampling area. These results demonstrate that temporal variability in bee communities can have important implications for long-term monitoring protocols. In addition, we found that the blue vane trap method appears to be well-suited for studies of native pollinators in large expanses of grasslands or other open habitats and suggest that it may be a useful tool for monitoring native bee communities in these systems.

2) Abstract of "Effect of livestock grazing on native bee communities of a Pacific Northwest Bunchgrass Prairie".

Livestock grazing is a widespread land use in western North America. This action may impact native bees by affecting floral and nesting resources. Native bees are considered to be one of the most important pollinators. However, few studies have investigated how livestock grazing impacts native bees in western North America. Our study is the first manipulative study to examine the effect of a gradient of livestock grazing on native bees. We conducted the study in 16 40-ha pastures on the Zumwalt Prairie, one of the largest remnants of the once expansive Pacific Northwest Bunchgrass Prairie. Each pasture was assigned one of four cattle stocking rates (high, medium, low, and no cattle), and grazing intensity was quantified by measuring utilization. Treatments were applied for two years. We measured soil and vegetation characteristics that related to floral and nesting resources as well as several metrics of the bee community, including diversity, richness, abundance, and community composition. Even after exposure to just two years of grazing, some effects on vegetation and soils were detected. For example, increased grazing intensity significantly reduced vegetation structure, the abundance of certain blooming plants, surface soil stability, and the percent of ground covered by herbaceous litter. In addition, increased grazing intensity significantly increased soil compaction and the amount of bare ground. Native bee communities showed corresponding responses to grazing, with changes in abundance, richness, diversity, and community composition. Different group of bees responded to grazing intensity differently and there was a seasonal difference in response of bee communities to grazing intensity. For example, bumble bees were sensitive to grazing intensity early in the season, showing reduced abundance, diversity, and/or richness with increased grazing intensity. In contrast, halictid bees appeared unaffected by grazing throughout the season. However, even within a genus or family, different species responded to grazing intensity in different manners, potentially because of variation in life histories. As a result, in order to conserve this important and diverse pollinator group in the Pacific Northwest Bunchgrass Prairie, it is important to maintain land with a mixture of livestock grazing intensities.

33rd Annual Pacific Northwest Lepidopterists' Workshop: 29–30 October 2011 at OSU Corvallis

Hosted by Paul Hammond and David McCorkle, this weekend meeting, held in Cordley Hall at Oregon State University in Corvallis, provides an opportunity for professionals and non-professionals (of all ages) interested in Lepidoptera of the Pacific Northwest and adjacent states/provinces to get together to share information and socialize. There is no charge for this workshop. Final details will appear in the next Bulletin.

Wanted: Reports of the Brown Marmorated Stink Bug in Oregon Outside of its Known Range

The Brown Marmorated Stink Bug, *Halyomorpha halys*, an Asian species first reported in 1996 in Pennsylvania was found in the Portland area in 2004. (Some of you may remember that Jim LaBonte from the Oregon Department of Agriculture Plant Division spoke about it at the 2005 Annual Meeting of the Oregon Entomological Society.) As of October 2010, it was present in five Oregon counties—Clackamas, Marion, Multnomah, Washington and Yamhill. More exactly, it is established in Aurora, McMinnville, Salem, and from Portland west to Hillsboro, south to Tualatin and east to Sandy.

The Brown Marmorated Stink Bug is unique among the stink bugs found in Oregon because its antennae have distinct white bands. There is a good information brochure complete with photos and life history information that can be downloaded as a PDF file from ODA Plant Division, Insect Pest Prevention and Management web site at <http://www.oregon.gov/ODA/PLANT/IPPM/>. The brochure also has information for reporting findings. Officials are particularly interested in any occurrences outside of the known area.

Accessing Recent OSU Theses

Recent theses from OSU can be downloaded over the internet from the OSU Library as PDF files as follows:

1) Use your browser to access the OSU Library Catalog. Go to <http://oasis.oregonstate.edu/>

2) Use the Quick Search screen to search for the thesis topic you are interested in—try a keyword search. Be flexible in your keywords since works may not be catalogued under the terms you might use

3) The program will return a list of entries it feels match you search criterion or criteria (if there is only one entry it will bring up that publication's record page and you will be at step 5) e.g. using these keywords—*thesis entomology 2011*, the system returned six entries on June 20. Refine the search if you need to and repeat step 2

4) Click on the entry that you are interested in to bring up the publication's record page

5) If you are interested in this thesis, scroll to the bottom of the page and look for the tab showing the "Availability"

6) If this thesis is available over the web you will see an underlined phrase "Connect to the title online via ScholarsArchive@OSU"

7) Click on the underlined phrase

8) A new page with the heading ScholarsArchive@OSU will appear with some additional information on the publication

9) Download the thesis from this page if it is of interest to you

The ability to search the catalog online is available at most university libraries. There are however some university libraries that have adopted what, in my opinion, is an elitist attitude. As an outside user, you cannot even search their catalog without a username and password. (At the libraries that I have encountered this problem, the search screen came up but as soon as I initiated a search, I was asked for a username and password.) I assume, in these cases, that the problem only exists when accessing the catalog from outside the university. In general, library services and publications that are available by subscription (e.g. magazines, journals, databases) are not available to outside users without a username and password. They can be accessed from terminals in the library and perhaps elsewhere on campus. I don't know how widespread the ability to download recent theses is at the moment.

Errata—Through The Net

I (Ron) made a couple of unfortunate errors in the Spring 2011 Bulletin requiring correction.

1) In the article on "Changes At Oregon State Arthropod Collection (OSAC)" on page 7:

> Dr. Stevan Arnold should have been listed as a Professor in the Zoology Department not its Head. The Head/Chair of the Zoology Department is in fact Dr. Bruce Menge.
>
> Dr. Christopher Marshall's correct title is "Curator-Collections Manager".

I apologize to those concerned and for any confusion/embarrassment that my errors may have caused.

2) OES archive files held at the Oregon Department of Agriculture have five additional issues of the Bulletin beyond those held in the bound volumes in the OSU Library. The last issue of the Bulletin was published 2003 not 1997 as stated on page 1.

Wanted: Observations of *Capnobotes* (Orthoptera: Tettigoniidae) in Oregon

Ron Lyons, pondhawk @ uci.net

I am interested in updating our knowledge about the distribution of the shield-backed katydids in the genus *Capnobotes* in Oregon.

Rentz and Birchim (1968) revised the shield-backed katydids, describing several new species of *Capnobotes*, some from only a few specimens. At the present time there are eight recognized species: *arizonensis*, *attenuatus*, *bruneri*, *fulginosus*, *granti*, *occidentalis*, *spatulatus*, and *unodontus*. At the time of their revision, none of the species were known to be in Oregon.

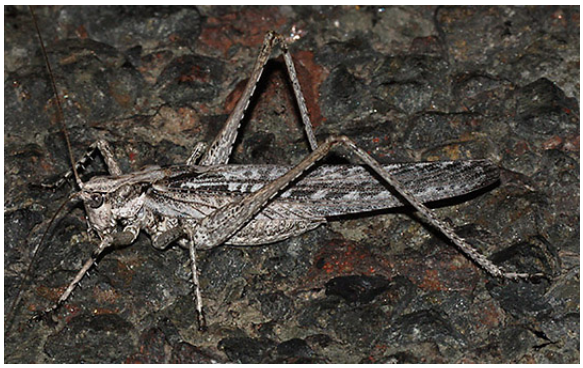
Members in this genus are fairly large (>2˝ long when the wings are included), fully winged grasshopper-like individuals. They have long filamentary antennae. Females have a long sword-like ovipositor. A number of species come in more than one color form (green and gray being the common ones, with some in brown too). The two species that I have seen, *occidentalis* and *unodontus*, look very similar (see included pictures). Rentz and Birchim point out that "individuals can inflict a painful bite and readily accept live grasshoppers as food". I had a pair in a large terrarium in which I placed another somewhat smaller *Idiostatus* female katydid that I had collected. The following day this smaller female was missing; the only evidence for its existence a small puddle on the floor of the terrarium. The *Capnobotes* pair, acting alone or together, killed and ate the smaller katydid.

While these species may have certain vegetation requirements, all the individuals I have found have been on the road—after dark, mainly before midnight on warmer evenings. Males and females feed on dead and dying insects found on the road, sometimes other *Capnobotes*. Females are more common on the road than males. For some reason, some females attempt to oviposit on paved roads. A couple of males I have found are missing the ends of their wings (from mating?). Adults can be found from July through September, maybe a bit earlier in some years, certainly later in the fall under the right conditions. While these species are fully winged, I can't recall seeing any actually fly. Individuals occupied eating or attempting to oviposit are generally more tolerant of disturbance than those not so occupied.

In 1968, *Capnobotes occidentalis*, or the Western Longwing, a wide-ranging species, was known from California, Nevada, Idaho, Utah, Colorado and New Mexico. In 1972, Rentz and Lightfoot (1976) collected *occidentalis* from the Alvord Desert, the first time it had been reported from Oregon. Since then, *occidentalis* has been found near Adel and at the north end of Lake Abert. In 2009, I found last instar nymphs on Highway 395 at the north end of Lake Abert on the first weekend in July and adults by mid-July. *Occidentalis* comes in gray, green and brown color forms and these can all occur in the same area. So far, I have only encountered the gray and green forms.

In late September 2010, I found a gray female in a wooded area on Pine Creek Road east of Burns. The female, which I suspect is *occidentalis*, was only photographed. In 2009, a gray male was collected from sticky traps in juniper trees north of Bend (Richard Worth, private communication). This male is housed in the ODA collection. I initially thought it was an *occidentalis*, but after examining its cerci more closely, I am less certain of that and would like to have further material (in any condition).

Capnobotes unodontus, or the One-toothed Longwing, is only known from California. It has been collected within a few miles of the Oregon border in



Capnobotes occidentalis, gray male; 2009 VII 16; OR: Lake Co.: Hwy 395, north end of Lake Abert

Capnobotes occidentalis, green female (feeding); 2009 VII 22; OR: Lake Co.: Hwy 395, north end of Lake Abert

Capnobotes unodontus, green male; 2009 IX 08; CA: Siskiyou Co.: A12 road near Hwy 97

Capnobotes unodontus, gray female; 2009 IX 24; CA: Siskiyou Co.: Military Road near Hwy 97

the Yreka area and near the junction of the A12 road and Hwy 97, north of Weed. In 2010, I found *Capnobotes* individuals at Lava Beds National Monument in Siskiyou County, California. I suspect that they were *Capnobotes unodontus* but my photographs are not definitive. *C. unodontus* comes in gray and green forms. The other shield-backed katydid species I found on the same roads in Lava Beds occur in Oregon.

It is clear that *Capnobotes* individuals are present in Oregon well north of the distribution currently known for any of the described species. It also seems likely that *Capnobotes unodontus* is present in Oregon at least around the edges of the Klamath Valley. Reports in the form of pictures, specimens (whole or in pieces), or verbal records would be appreciated.

References

Rentz, D.C. and J.D. Birchim. 1968. Revisionary Studies in the Nearctic Decticinae. Memoirs of the Pacific Coast Entomological Society 3: 1–173.

Rentz, D.C. and D.C. Lightfoot. 1976. Notes on the Distribution of Oregon Shield-backed Katydids with the Description of a New Species of *Idiostatus* (Orthoptera: Tettigoniidae: Decticinae). Entomological News 87(5 & 6): 145–158.

Aeshna Blitz at Diamond Lake This Year

The Aeshna Blitz is an informal gathering of odonatists at some Oregon location each summer to see what can be discovered. This year it will be in the Diamond Lake area the weekend of 26 August. All are welcome even if your interest is in non-odonates. For details, contact Jim Johnson at `jt_johnson @ comcast.net`.

Snaketail Emergence *Jim Johnson*

Below is a series of shots depicting an emerging female Pale Snaketail (*Ophiogomphus severus*) on the Burnt River in Baker County, Oregon, on 3 July 2011. About 20 minutes elapsed between the first and last photos.