

Bulletin of the
**Oregon
Entomological
Society**

Got Clearance? The 2012 *Aeshna* Blitz at Three Forks, Oregon *Jim Johnson*



Jim Johnson

Unforeseen circumstances and competing engagements left this year's *Aeshna* Blitz with a skeleton crew of four intrepid odonatists to explore the rugged and remote Three Forks area of the Owyhee River. Cary Kerst, Steve Berliner, Sherry Daubert and I met at the Rome BLM station the morning of 27 July, synchronized our watches to make sure we were all on Mountain Daylight Time, then caravanned the 17 miles of highway and 36 miles of dirt and gravel to Three Forks.

It felt like an oven down in the canyon when we arrived later that morning, but odonates were readily apparent in the sagebrush as we picked out a camping area. It didn't take us long to hydrate, get our gear together and wander down to the river.

Why is it called Three Forks, you ask? This is where the North Fork Owyhee River meets the main Owyhee River—that's two forks; the Middle Fork Owyhee River joins the North Fork a short distance to the east, which makes three forks. And the setting is simply spectacular. Look up at the slope known as Military Grade on the west side of the canyon (to the right in the

photo above) and you should be able to pick out the remnants of a road which switchbacks up to the rim. According to a BLM law enforcement officer, that road was part of a route between Silver City, Idaho, and Winnemucca, Nevada, built by the army in the 1870s. Apparently, the road was used only once when a wagon was hauled up by rope, after which it was abandoned. That would have been a hair-raising trip!

The most abundant dragonfly seemed to be *Erpetogomphus compositus* (White-belted Ringtail). They were conspicuous as they cruised over the river and they also littered the sagebrush where most of them assumed the thermoregulating "obelisk position"—pointing their abdomen sunward to minimize the amount of body surface area receiving direct sunlight. While on the river, they are especially fond of the riffles and you could easily observe a dozen of them perching on the adjacent gravel bars or chasing each other over the water.

There were enough of the big, fast-flying *Macromia magnifica* (Western River Cruiser) patrolling the dirt tracks to offer many

Feel free to distribute this newsletter to others.

Submit content to **Ron Lyons** (pondhawk@uci.net). To be included on the distribution list contact **Jim Johnson** (jt_johnson@comcast.net).



The view down (north) the Owyhee River near our campsite at Three Forks. Photo by Jim Johnson.

capture opportunities and several were flushed while they hung on the shady side of sagebrush for relief from the hot sun. The brilliant orangey-red *Libellula saturata* (Flame Skimmer)—one of my favorites, were conspicuous as they patrolled the slow-flowing stretches of the river.

Judging from the exuviae found along the river, quite a few *Aeshna umbrosa* (Shadow Darner), *Anax junius* (Common Green Darner) and *Sympetrum corruptum* (Variegated Meadowhawk) had emerged relatively recently, but adults were not so apparent. A few *Anax* were patrolling the river, but only one adult *S. corruptum* and one adult *Aeshna umbrosa* were seen. The *Anax* and *Sympetrum* are migratory species and it is likely that most of them simply left the area after emerging; the *Aeshna* will be back soon after they have matured.

Of the damselflies, *Argia emma* (Emma's Dancer) and *A. agrioides* (California Dancer) were both very common. *Enallagma* were quite common too, as a genus, and a sampling indicated that most were *E. annexum* (Northern Bluet) and *E. clausum* (Alkali Bluet). The latter species was unexpected since it is not typical of lotic habitats; perhaps they came from somewhere else, but that seems unlikely considering how many were on the river and the lack of lakes in the vicinity. It will be interesting to see if that species turns up again on future visits.

A late afternoon stroll over to the Middle Fork Owyhee River resulted in the best find of the visit. While trying to net *Macromia* at the little stream's ford, I noticed a patrolling male aeshnid which intrigued me. It did not have the blue eyes and face of *Rhionaeschna multicolor* (Blue-eyed Darner) and the blue spots on the abdomen were too conspicuous for *Aeshna umbrosa* (Shadow Darner). This first male made a loop around a small pool above the ford then disappeared upstream which could not be explored easily because of debris. I instead wandered the more open downstream stretch toward its confluence with the North Fork.

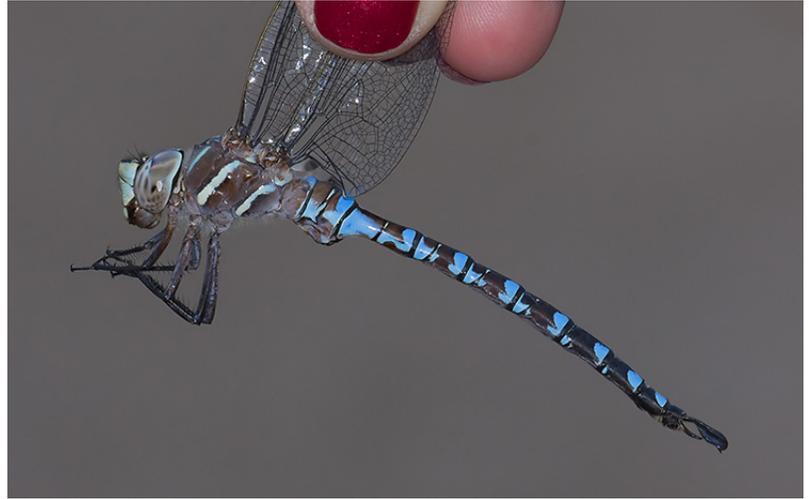
I sighted another male which stayed out of reach, but then I caught one patrolling low near the shore. Once in hand, I was delighted to see that it was *Aeshna walkeri* (Walker's Darner)—a primarily Cali-



The Owyhee River (looking north) with Three Forks Dome on the right; about a mile upstream of Three Forks. Photo by Jim Johnson.



Male *Erpetogomphus compositus* (White-belted Ringtail) at Three Forks. Photo by Jim Johnson.



Left, male *Macromia magnifica* (Western River Cruiser) taking a mid-day break in the shade of sagebrush; right, male *Aeshna walkeri* (Walker's Darner) netted on the Middle Fork Owyhee River for a new Malheur County record, held by Sherry Daubert. Photos by Jim Johnson.

fornian species which reaches southwestern and south-central Oregon (with a couple of isolated north-central Oregon records). This was a new record for Malheur County and the easternmost record in Oregon. The previous easternmost Oregon location for the species was Twentymile Creek south of Adel, Lake County—about 150 miles away. This species is unrecorded in Nevada, but this is another location (along with the Adel site) which suggests that it likely occurs somewhere in the northwest quadrant, at least. This Malheur County site is also tantalizingly close to Idaho (about seven miles away) where *Aeshna walkeri* is unrecorded as well. You can view a map of the species' range at http://odonatacentral.org/index.php/MapAction-distributionViewerPane/location_type/Country/taxon_id/44773/location_id/9/linked/1—the easternmost green dot in Oregon is the *Aeshna* Blitz record.

What you don't find can be just as interesting and noteworthy as what you do find. A notable miss was *Gomphus lynnae* (Colum-

bia Clubtail). Steve Valley and I had seen many of them during a visit on 2 Aug 2002, and I expected to see them this trip too. There were no adults this time, however, and just a couple of exuviae that I found on sheltered banks. I presume their season was over already—perhaps with the help of a streak of very warm, sunny weather. The same was probably true for *Ophiogomphus severus* (Pale Snaketail) which were lacking entirely as adults, but one exuvia was found on the Middle Fork. I expected to see *Enallagma anna* (River Bluet) here since the habitat seems ideal, but so far I have not encountered that species while sampling the bluets.

The next day we all made the trip to Tudor Springs a couple of very rough miles upstream on the main Owyhee River. The road definitely calls for high clearance, and I don't think I could have traversed some stretches without "4WD Low". There are several parts, particularly along a steep slope high above the river, where you pray that no vehicles come along from the opposite direc-



Left, Steve Berliner (on left) and Cary Kerst on the Owyhee River at Tudor Springs; right, one of the Three Forks residents—a Western Rattlesnake. Photos by Jim Johnson.

tion because there is simply no place to pull over. I can't imagine trying to back up along much of that road, but luckily we didn't face that dilemma. We did, however, come across several Chukar and one rather cranky Western Rattlesnake.

If you can make the trip, the spring complex is a very interesting place—a natural aquatic park in the desert. Several warm springs gush out of the slopes and form small creeks as they flow to the river, and in places there are small pools amongst lush, tall grasses. If you wade across the river to the west side, you can climb up a modest waterfall where Warm Spring Creek flows out of a little side canyon. At the top of the falls are a couple of soaking pools, if you're into that sort of thing, but I was focused on odonates of course.

Warm springs in this part of Oregon can be interesting places because several primarily southwestern odonates reach their

Odonata recorded at Three Forks, Malheur Co., Oregon, 27 and 28 July 2012.

Anisoptera (dragonflies)

Aeshnidae

- Aeshna umbrosa*, Shadow Darner
- Aeshna walker*, Walker's Darner
- Anax junius*, Common Green Darner
- Rhionaeschna multicolor*, Blue-eyed Darner

Gomphidae

- Erpetogomphus compositus*, White-belted Ringtail
- Gomphus lynnae*, Columbia Clubtail (2 exuviae only)
- Ophiogomphus severus*, Pale Snaketail (1 exuvia only)

Macromiidae

- Macromia magnifica*, Western River Cruiser

Libellulidae

- Erythemis collocata*, Western Pondhawk
- Libellula forensis*, Eight-spotted Skimmer
- Libellula pulchella*, Twelve-spotted Skimmer
- Libellula saturata*, Flame Skimmer
- Plathemis lydia*, Common Whitetail
- Sympetrum corruptum*, Variegated Meadowhawk
- Sympetrum semicinctum*, Band-winged Meadowhawk

Zygoptera (damselflies)

Coenagrionidae

- Argia agrioides*, California Dancer
- Argia alberta*, Paiute Dancer
- Argia emma*, Emma's Dancer
- Argia vivida*, Vivid Dancer
- Enallagma annexum*, Northern Bluet
- Enallagma boreale*, Boreal Bluet
- Enallagma carunculatum*, Tule Bluet
- Enallagma clausum*, Alkali Bluet
- Ischnura cervula*, Pacific Forktail
- Ischnura denticollis*, Black-fronted Forktail
- Ischnura perparva*, Western Forktail

northern limit at such places. *Argia alberta* (Paiute Dancer) and *Ischnura denticollis* (Black-fronted Forktail) fit that description at Tudor Springs, but we did not see anything else that we didn't see at Three Forks. Even so, it's still a very fun place to visit, if you have the vehicle to make the trip.

If you haven't been to Three Forks, but have the opportunity to do so, I highly recommend it. The entrance road that drops into the canyon is a bit rough, but you don't need a lot of clearance for that—just take it slow and easy. Continuing on to Tudor Springs definitely requires good clearance, and I highly recommend doing it in a vehicle with 4WD. And remember that the only amenity at Three Forks is a pit toilet; you will find no drinking water, no electricity, no mini-marts, no gasoline, no cell reception, no picnic tables, and no mid-day shade. You will, however, find the luxury of awesome scenery and lots of odonates.



Cary Kerst waiting for them to fly into his net at the end of a tiring day. Photo by Jim Johnson.

Tessellana tessellata in Oregon (Orthoptera: Tettigoniidae) *Ron Lyons*

Tessellana tessellata (Charpentier, 1825), formerly *Platycleis tessellata*, is a small, fully winged katydid, native to Europe and northern Africa. (For a discussion of the genus classification see Massa & Fontana, 2011.) In size and behavior it can easily be mistaken for a small grasshopper, especially from a distance. In the late summer and fall, its olive-brown coloration blends in well with the dried grass and weedy vegetation in which it is found. Rentz (1963) indicated that the elongate black eggs are laid in grass stems and pointed out that the species is “active during the day, but appears to be most active at night”.

The common name Tessellated Shieldback is used by Walker (2012), but you will find others using some variation on the name Brown-spotted Bush Cricket which is in use in Europe. The tessellations or spots referred to are the brownish-black areas on the front wings separated by light-colored cross veins. The wings are noticeably longer in some individuals than others.

Tessellana tessellata was first reported in North America from Placerville, California by Strohecker (1955). He noted that the collector, Mr. R.O. Schuster, speculated that it might have been introduced with pines brought into the area by the Forest Service. Rentz (1963) provided additional records, also from central California. Rentz and Birchim (1968) added no additional locality records but noted that the species seemed to be expanding its range rapidly. Commenting on a photo posted online, Rentz (2010) indicated that *tessellata* “is now much more widespread and can be found in Golden Gate Park, San Francisco”. Some photos from California posted on BugGuide.net were taken as far south as San Diego County. I have encountered this species on the road after dark in Siskiyou County, California along the Ager-Beswick Road and near Montague.

Here in Oregon, I photographed a female in a small meadow south of Dutton Creek along the Pacific Crest Trail in Crater Lake National Park, Klamath County, on 29 July 2004. Later that year, the photos were posted on the Singing Insects of North America website (Walker, 2012). To my knowledge this was the

first public record of this species outside of central California. In 2008, Dana Ross collected it in the Chasm Creek and Jackson Creek drainages of the North Bank Habitat Management Area near Wilbur in Douglas County. The collection at the Oregon Department of Agriculture (ODA) contains four specimens taken from pitfall traps in 2009, two collected south of Grants Pass (Josephine County) and the two others south of Ruch (Jackson County).

In the last few years, *tessellata* has also shown up in ODA invasive species collections in the Portland area and Rice Hill in Douglas County (Jim LaBonte pers. comm., 2010). Several pictures from other Oregon locations have been posted online (c.f. <<http://bugguide.net/node/view/87105/bgimage>>). While there have been a flurry of reports from Oregon in the last decade, this species has apparently been present here for some time. The collection at Southern Oregon University contains a specimen collected by R. Gordon from Lookingglass, Douglas County in October 1994, the earliest record I have found.

On the afternoon of 29 August 2012, I visited the Oak Flat Campground along the Illinois River in Curry County near Agness. I encountered several *tessellata* individuals in a weedy grass area bordering the mixed woodland just before the descent to the riverside campground. Later, another individual was found quickly a short way up Forest Road 23 (Bear Camp Road from Agness to Grants Pass). Searches later the same day and on 4 September at various points along the Agness Road from MP 25 (west of Agness) as far west as MP 9 (just west of Lobster Creek) turned up other individuals in short order. (The Agness Road begins as Jerry’s Flat Road [County Road 595] and becomes Forest Road 33, with the mileage measured east from Highway 101 in Gold Beach.) I heard lots of insects singing just west of MP 9 at Orchard Bar, but I did not see the insects involved. I have not searched for *tessellata* west of Orchard Bar. To my knowledge this is the first report of this insect near the Oregon coast and the first report for Curry County.



Left, dorsal view; female with long wings taken 29 July 2004 at Crater Lake National Park, Klamath County, Oregon; middle, profile; female with short wings 29 August 2012 at Oak Flat Campground, Curry County, Oregon; right, profile; male with long wings 29 August 2012 at Oak Flat Campground, Curry County, Oregon. Photos by Ron Lyons.

Farther north, *tessellata* has been reported from Pierce County, Washington, and there would appear to be no reason it will not eventually extend its range at least into southern British Columbia.

Another European katydid, *Meconema thalassinum*, the Drumming Katydid or Oak Bush Cricket, is also established in the Pacific Northwest. A picture taken in Corvallis in 2009 by David Lightfoot is posted on the Singing Insects of North America website (Walker, 2012). The ODA Annual Report (2010) indicated that this species was widespread in the Portland area. Images from Washington can be found on the internet (c.f. <<http://bugguide.net/node/view/8022/bgimage>>). It has also been found in southern British Columbia. Cannings et al. (2007) reported that specimens had been collected from the Vancouver area as far back as 1991.

References

- Cannings, R.A., J.W. Miskelly, C.A.H. Schiffer, K.L.A. Lau and K.M. Needham. 2007. *Meconema thalassinum* (Orthoptera: Tettigoniidae), a foreign katydid established in British Columbia. *Journal of the Entomological Society of British Columbia* 104: 91–92. (online at <http://www.sfu.ca/biology/esbc/Journal/journal2007/JESBC_2007_91-92_Cannings.pdf>)
- Massa, B. and P. Fontana. 2011. Supraspecific taxonomy of Palaearctic Platycleidini with unarmed prosternum: a morphological approach (Orthoptera: Tettigoniidae, Tettigoniinae). *Zootaxa* 2837: 1–47. (online at <<http://www.mapress.com/zootaxa/2011/ftz02837p047.pdf>>)
- Rentz, D.C. 1963. Additional Records of *Platycleis tessellata* (Charpentier) in California with Biological Notes (Orthoptera: Tettigoniidae). *The Pan-Pacific Entomologist* 39(4): 252–254.
- 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. 2010. <<http://www.flickr.com/photos/randomtruth/5024157164/>>.
- Strohecker, H.F. 1955. A Palaearctic Dectidid Captured in California (Orthoptera). *The Pan-Pacific Entomologist* 31(4): 203.
- Oregon Department of Agriculture. 2010. Plant Division Annual Report. 58 pp. (online at <http://cms.oregon.gov/oda/plant/docs/pdf/plant_annual_report_2010.pdf>)
- Walker, T.J. 2012. North American Katydid. In Walker, T.J., and T.E. Moore. 2012. Singing Insects of North America. <<http://entnemdept.ifas.ufl.edu/walker/Buzz/>>.

2012 Invertebrates in Education and Conservation Conference

July 31–August 5, 2012

Hosted and Organized by the Sonoran Arthropod Studies Institute, Tucson, Arizona

The abstracts for the three papers presented by participants from the Pacific Northwest are included below. Written papers were submitted and will be published in the proceedings from the conference (see the SASI website <<http://www.sasionline.org>> for ordering details).

Butterfly Containment—A Follow Up

Sarah Moore, Pacific Science Center (Seattle, Washington)

Abstract: Two years ago, Pacific Science Center underwent a self-auditing process to improve containment of butterflies in our exhibit. We look at what steps we have taken since that time, and what we have found to be more and less effective. Our findings have as much to do with how to keep butterflies happy as they do with vigilance or surveillance as containment tools.

Navigating *Wolbachia* in Captive Rearing Programs for Insects

Amy Truitt and Catherine de Rivera, Portland State University, Environmental Science and Management

Abstract: The endosymbiotic bacteria, *Wolbachia*, can affect population dynamics in its host species because, for many insect taxa, it can cause cytoplasmic incompatibility between its hosts and uninfected conspecifics. Such an effect could greatly reduce reproductive output and population size, especially at intermediate levels of infection in a population. Here, we examine whether *Wolbachia* served as a stressor to the imperiled Oregon silverspot butterfly (*Speyeria zerene hippolyta*, OSB). Despite management that includes population supplementation, the few remaining populations of this species have not been increasing in numbers. Therefore, we set out to determine if this species is infected with *Wolbachia* and whether infection affects population growth of this butterfly.

The Arthropods of Crater Lake National Park: An Historical Perspective

Ronald W. Lyons

Abstract: An ongoing project to consolidate the arthropod information relevant to Crater Lake National Park in Oregon will be discussed. [see next page for a summary of this paper]

The Arthropods of Crater Lake National Park *Ron Lyons*

During this past summer, I presented a paper at the 2012 Invertebrates in Education and Conservation Conference in Tucson, Arizona. In it, I outlined the current status of a project initiated in 2003 to consolidate the available information on the arthropods in Crater Lake National Park in Oregon. The written paper, which formed the basis for the following write-up, will be published in the conference proceedings.

This project is divided into two essentially separate and seasonal parts:

- 1) winter indoor project
 - document species and specimens from the Park in collections in Oregon
 - document and consolidate literature references to arthropods of the Park
- 2) summer outdoor field project
 - document, through photography, representative species found in the Park.

Only the first part of the project is discussed in this paper.

Literature Search Results: At this point in time I have over 230 references to scientific publications with information on Crater Lake arthropods. Most of these references deal with original species descriptions or revisionary studies, not simply Crater Lake material. In these papers, Crater Lake often appears only as a collection locality in the list of specimens, often just for one species. In addition, I have 13 references to theses which use some Crater Lake material. In the Park Library, I found additional arthropod information in a few publications and project reports. References to arthropods, mostly general ones, are present in the Crater Lake National Park Nature Notes (available online at <http://www.craterlakeinstitute.com/online-library/nature-notes/index-nature-notes.htm>). No archival records or photographs from the Park have been examined.

The Internet was useful in the literature search but only as a starting point or something I could do from home. The bulk of the search took place in the basement of the Valley Library at Oregon State University where I poured over bound journals. This search is far from complete. Based on the literature, material from Crater Lake is (or, at least, was at the time) held in a number of personal collections and over 30 institutional ones. Over 70 species have type material from Crater Lake. The earliest specimens referenced in this literature were collected in 1915.

The butterflies are the only insects for which a comprehensive species list for the Park has been published. Tilden and Huntzinger (1977) listed 78 species, based on specimens collected and observed between 1957 and 1962, and the incorporation of Lowrie's (1951) list which had 18 species. Based on the dataset for the Oregon butterfly atlas (Hinchcliff, 1994), two more species are present—the Mormon Fritillary and the Acmon Blue. In addition I have photographic evidence that Johnson's Hairstreak is also in the Park, so the current total stands at 81.

(A preliminary unpublished list of the dragonflies and damselflies, based mainly on photographs taken in the Park as part of the summer outdoor field project, contains 27 species.)

Collection Search Results: Specimen data from three collections—the Crater Lake National Park Collection (CLNP) housed at the Park, the collection at the Oregon Department of Agriculture (ODAC) in Salem, and the pinned specimens (excluding the butterflies) in the Oregon State Arthropod Collection (OSAC) at Oregon State University in Corvallis—have been compiled. (The collection at Southern Oregon University in Ashland has no Crater Lake material.) The collection results are as follows:

- 1) CLNP 1578 specimens 478 spp. in 17 orders
- 2) ODAC 190 specimens 46 spp. in 5 orders
- 3) OSAC 4663 specimens 596 spp. in 14 orders (excl. butterflies)

When the species lists from these collections are combined, there are 977 identified species in 21 orders (specimens identified only to genus are not included in the species totals). In the literature examined so far, there are records for 244 species not represented in these three collections, bringing the total number of identified species to 1221. (No systematic attempt has been made to bring the names of the species in line with current taxonomy or remove synonymies, so some species may be counted more than once.)

The earliest specimen record came from the OSAC—some *Pithyothorus* specimens (Coleoptera: Scolytidae) collected 28 July 1915. A number of people have collected specimens in the Park / Park area, but three people stand out: H.A. Scullen, D.H. Huntzinger and M.H. Hatch.

The locality information for a number of specimens at the OSAC and in the literature merely indicate that the specimens were collected at Crater Lake. At the OSAC, this problem is particularly serious with the beetles, since most of the specimens collected by Hatch (almost 800) and some fellow collectors fall into this category. While these specimens cannot definitely be assigned to the Park, they have been included in the totals above.

Conclusions: While a lot of information on Crater Lake arthropods has been uncovered and gathered together here, a lot of work remains to be done.

References

- Hinchcliff, J. 1994. An Atlas of Oregon Butterflies: The Distribution of the Butterflies of Oregon. The Evergreen Aurelians, The Oregon State University Bookstore, Inc., Corvallis. vi + 176 pp.
- Lowrie, D.C. 1951. Butterflies of Crater Lake National Park. Crater Lake National Park Nature Notes 17: 10–11.
- Tilden, J.W. and D.H. Huntzinger. 1977. The Butterflies of Crater Lake National Park, Oregon. Journal of Research on the Lepidoptera 16(3): 176–192.

34th NW Lepidopterists' Workshop

When: Saturday and Sunday, 27 and 28 October 2012

Where: Cordley Hall, Oregon State University, Corvallis, Oregon

Hosts: Drs. Paul Hammond and David McCorkle

Sponsored by the Zoology Department and Arthropod Collection, Oregon State University

Saturday Program, 27 October

- 9:00 AM Register at Cordley Hall, room 2113 (east wing). No fee.
Workshop Preview: Arrange study specimens, etc. Cordley Hall room 1070 (west wing)
- 10:00 Welcome and announcements, Cordley Hall room 2113 (east wing)
Welcome remarks by Dr. David R. Maddison (Oregon State University)
- 10:30 Dr. Lars Crabo (Co-Principal Investigator) and Jon Shepard (Principal Databaser)
—The Pacific Northwest Macromoth Online Database
- 11:30 Activity reports: New state and county records, Lepidopterists' Society meeting reports,
book announcements, etc.
- 12:30 PM Group picture. Location to be announced.
- 12:45 Lunch at local restaurants
- 2:00 Workshop session: Cordley Hall room 1070, 1064 (west wing) (Preceded by a brief
orientation to this year's groups if requested.)
- Groups of emphasis for this year:
Butterflies: Hairstreaks and Coppers, Anglewings
Moths: general moths, especially Arctiidae
Also specimens of any Lepidoptera from recent field trips or of special interest
Information exchange and specimen gift exchange is encouraged.
- 3:00 Parallel Session in Cordley 1064 (west wing): public education/outreach (informal
discussion)
- 5:00 Workshop session conclusion
- 5:30 Buffet dinner at Izzy's Restaurant, Corvallis
- 7:15 Ag 4001: Brief planning session followed by the evening lecture:
Beyond Leona: Lepidoptera and other insects of the Sand Creek area, presented by
Dana Ross
- 9:30 Meeting recessed.

* Please bring your NW collecting records with you in written form. Dana Ross will put them into the "master file" and send any significant county records to Jon Shepard for inclusion in the Lepidopterists' Society Season Summary. (Include the state, county, location and date, and if available, range and township or longitude, latitude coordinates and altitude.) Ann Potter is also soliciting Washington state records.

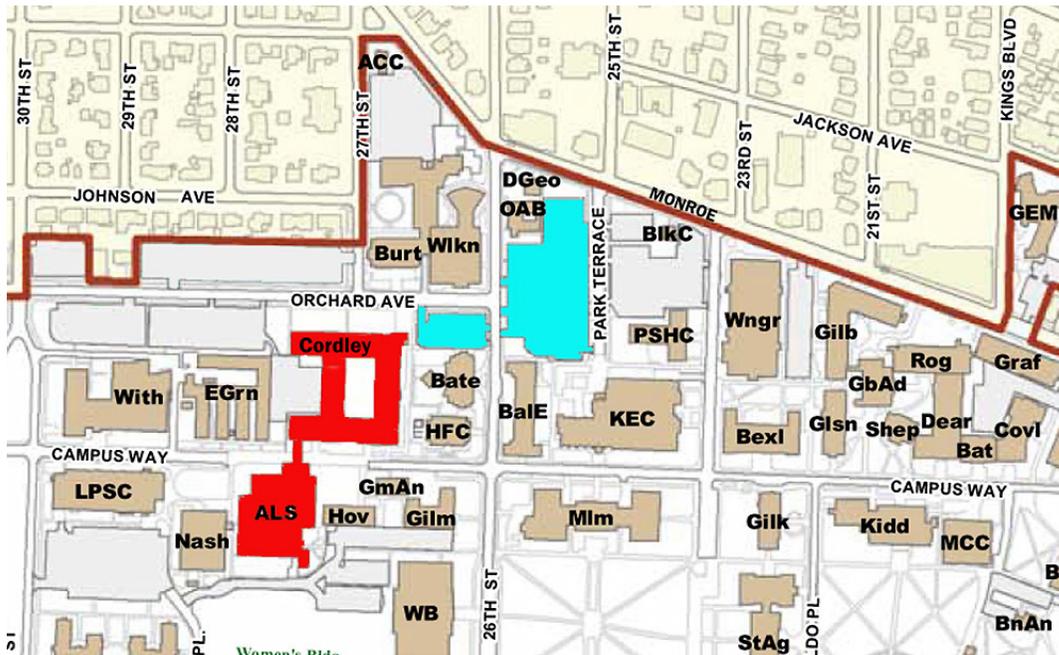
Program continued next page...

Program continued...

Sunday Program, 28 October

- 8:30 AM Workshop session resumed, Cordley Hall room 1070 (west wing)
- 10:00 Field trip reports, power point and other contributions, Cordley Hall room 2113 (east wing)
This is your opportunity to contribute a presentation on or related to Lepidoptera.
Please notify Paul Hammond prior to the meeting if you are likely to need more than 10 minutes .
- “12:00” Meeting concluded

The map below shows Cordley Hall and the ALS Building in red. Most of the meeting takes place in Cordley Hall. The Saturday evening presentation in Ag 4001 is on the 4th floor of the ALS building, reached from the 3rd floor of Cordley via a sky bridge.



The smaller of the two parking areas colored in turquoise is the one favored by participants as it is the one closest to the weekend entrance for Cordley Hall. Access this lot via Orchard Ave or Park Terrace and through the larger parking lot. Street parking is also available along Orchard Ave.

For a full campus map, visit <<http://oregonstate.edu/campusmap/>> and click on PDF Map at the bottom of the page.



Pacific Northwest Macromoth Online Database Now Available

The Pacific Northwest Macromoth Online Database, a significant collaborative project involving a large number of people previously reported on in the Bulletin (see page 5 of the Spring 2011 issue and page 10 of the Winter 2011–2012 issue), is now up and running.

Visit <http://pnwmoths.biol.wvu.edu/> to check it out.

If you have data you would like to contribute, check out the contact page.

Congratulations and thanks to all the people and organizations involved in creating this valuable resource!

Note: Dr. Lars Crabo (Co-Principal Investigator) and Jon Shepard (Principal Databaser) will speak about the project and answer questions on Saturday, 27 October at the Pacific Northwest Lepidopterists' Meeting.

New Spider Described from Caves in Oregon

Griswold, Audisio and Ledford (2012) recently described *Trogloaptor marchingtoni* as the type species for a new family of spiders, Trogloraptoridae. So far, this species is known only from caves in Oregon in the Klamath–Siskiyou region of Josephine County. The authors mention a possible second species known only, so far, from juveniles in the Klamath–Siskiyou region of Del Norte County, California.

In their conclusions the authors say: “Western North America, especially the Klamath–Siskiyou region of northern California and southern Oregon is rich in biodiversity, particularly with respect to its endemic plants and invertebrates (Myers et al., 2000). This area is particularly notable for relicts, i.e., primitive relatives of otherwise widespread taxa If such a large and bizarre spider could have gone undetected for so long, who knows what else may lurk undiscovered in this remarkable part of the world.”

References

- Griswold C.E., T. Audisio, and J.M. Ledford. 2012. An extraordinary new family of spiders from caves in the Pacific Northwest (Araneae, Trogloraptoridae, new family). *ZooKeys* 215: 77–102. doi: 10.3897/zookeys.215.3547 (available at http://www.pensoft.net/J_FILES/1/articles/3547/3547-6-3-layout.pdf).
- Myers N., R.A. Mittermeier, C.G. Mittermeier, G.A.B. da Fonseca, and J. Kent. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403: 853–858. doi: 10.1038/35002501.



Ron Lyons

2013 Dragonflies Of North America Calendar

Produced by the The Xerces Society, this 9" × 12" calendar features stunning photography of these dramatic insects, accompanied by brief notes about their natural history, behaviors, and conservation needs. Calendars cost \$15 each. For more information or to order visit <http://www.xerces.org>.

