1. **Type of event:** Afternoon Symposium (9 speakers)

2. **Title of event:** From fungi to fledglings: cavity-nesting bird ecology and conservation across North America.

3. **Organizers:** Amy Barry, Oregon State University (amy.barry@oregonstate.edu) and James Rivers, Oregon State University (jim.rivers@oregonstate.edu).

4. **Name, affiliation, and tentative talks:**

   We have confirmed the following 9 speakers (+2 back-up speakers not listed):

   Michelle Jusino (United States Forest Service Northern Research Station, Center for Forest Mycology Research, michellejusino@gmail.com) – *Heart Rot Hotel 2, the next generation of tree cavities and fungi*

   Morgan Tingley (Ecology & Evolutionary Biology, University of Connecticut, Storrs, CT, morgan.tingley@uconn.edu) – *Short- and long-term management impacts on Black-backed Woodpeckers in California forests*

   Kathy Martin (Department of Forest and Conservation Sciences and Environmental and Climate Change Canada, Vancouver, Canada, kathy.martin@ubc.ca) - *Resource value of freshly excavated and older cavities to support complex cavity-nesting vertebrate communities*

   Jeff Walters (Department of Biological Sciences, Virginia Tech, jrwalt@vt.edu) – *Cavity-nesting bird communities of southern pine ecosystems: dynamics and management*

   Amy Barry (Oregon State University, amy.barry@oregonstate.edu) –*Influence of created snags on cavity-nesting bird communities over 25 years in Western Oregon*

   Theresa Lorenz (United States Forest Service, Pacific Northwest Research Station, tlorenz@fs.fed.us) – *Variation in juvenile survival and dispersal of two woodpecker species as revealed by radio telemetry*

   Jaime Stephens (Klamath Bird Observatory, jlh@klamathbird.org) - *Black-backed woodpecker density in unburned forests of the Oregon Cascade Mountains*

   Joan Hagar (USGS Forest and Rangeland Ecosystem Science Center, joan_hagar@usgs.gov) – *Snag-nesting Purple Martins in upland forests of the Pacific Northwest*

   Karen Wiebe (Department of Biology, University of Saskatchewan, karen.wiebe@usask.ca) - *Behavioral and population level responses of Northern Flickers to wildlife*

5. **Preferred duration:** afternoon session, regular format (9 talks of 15 min each)

6. **Objectives and topics covered:**

Primary cavity-nesting birds play a crucial role in maintaining the health and diversity of our forest ecosystems throughout the world. In particular, this group creates cavities in standing trees, which is especially valuable because cavity creation provides critical habitat features upon which a host of wildlife species depend on throughout the annual cycle for nesting, denning, and roosting. Cavity-nesting birds have been strongly influenced by anthropogenic activities, such as wildfire and timber harvest, and snag creation, and therefore a strong understanding of their ecology and conservation is important because it has downstream effects on a range of taxa (e.g. invertebrates, non-excavating birds, mammals). In this symposium, we bring together some of the world's experts who study cavity-nesting birds to share new information regarding the ecology and conservation of this unique group. Our symposium highlights habitat requirements and current management strategies to inform future research and management of cavity-nesting birds; presentations range from illustrating the nexus between the fungi that promote decay and the cavity-nesting species that serve to disperse them, to new information about post-fledging movements of species of heightened conservation concern. As indicated by the titles we have provided, presentation topics will be wide ranging and encompass not only a diversity of cavity-nesting bird species, but also a diversity of ecosystem types across North America. Our speakers exhibit diversity through their connection with different scientific agencies and communities, as well as different genders and backgrounds.

7. **Rationale:**

Standing dead trees, also known as snags, are important features of the landscape that provide vertical structure, promote biodiversity, and play critical roles in carbon budgets and nutrient cycling. Despite their ecological importance, snags are often removed for safety concerns or salvaged for commercial value in managed forests, and low rates of snag recruitment have led to reductions in snag density in many areas. Through their use of snags and their creation of nesting and roosting cavities, primary cavity-nesting birds exert a disproportionate effect on the ecological communities in which they are embedded. Nevertheless, large gaps in our knowledge remain about how cavities are created, how long snags provide suitable habitat for cavity-dependent species, and suitable approaches to conserve critical habitat features for cavity-nesting species, some of whom are listed as threatened at state and national levels. Given the anthropogenic drivers that drive the loss of critical habitat for cavity-nesting species (i.e. snags), and the management tools that have been developed to counter these changes (e.g. human-mediate snag creation), our symposium dovetails nicely within the conference theme of ***Birds in the Anthropocene***. Moreover, our symposium's goal is to provide new information on cutting-edge research topics to enhance our understanding of the ecological importance of and the diverse requirements required by species in this group. As such, presentations will be of interest to a diverse audience, including scientists and

managers whose interests focus on life-history theory, population and community ecology, and conservation and management of cavity-nesting birds.