Digitizing Vascular Plant Specimens from a Country at War

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Presentation Overview

• Project Background

• Digitization Activities and Workflow

• Project Impacts and Issues
What is a Herbarium?

• Botanical research collection of dried plant (vascular, nonvascular), fungi (macrofungi and lichenized fungi), and algae (freshwater and marine) specimens

• Document taxonomic diversity and distribution of these organismal groups over space and time

• Support range of research activities (alpha taxonomy, phylogenetics, ethnobotany, climate change, invasive species, rare species, etc.)
Plants of Washington

Camassia quamash (Pursh) Greene ssp. quamash (Heller)

Collected by David Gillin, 7 May 2018

 Dee N. Re呼叫.Transferred from FHWA

U.S.A., Washington, Grays Harbor Co.,
Olympic National Forest: West side of Wynoochee Lake. Spar
road off Forest Service Road 2234. Elevation 320 ft.
47.6041° N, 123.6045° W
Uncertainty: 100 m.; Datum: WGS 84; Source: Digital map

Seasonal pond surrounded by Sphagnum plants with adjacent
coaly upland. Common and abundant in wet to moist upland.

Flowers blue.

David Gillin 6079
22 May 2018
Plants of Washington

*Camassia quamash* (Pursh) Greene ssp. *azurea* (Heller)
Gould
Det. by David Giblin, 7 Sep 2018  
Fide: Draft Revised Flora of PNW

(Asparagaceae)

U.S.A., Washington, Grays Harbor County:
Olympic National Forest. West side of Wynooche Lake. Spur road off Forest Service Road 2294. Elevation 320 m.

47.4019° N, 123.60456° W

Uncertainty: 100 m.; Datum: WGS 84; Source: Digital map

Seasonal pond surrounded by *Spiraea douglasii* with adjacent cobbly upland. Common and abundant in wet to moist upland; flowers blue.

David Giblin 6079

22 May 2018
Why Digitize Vascular Plant Specimens from the Russian Far East?

• Long history of plant exploration (from mid-19th century onward)

• Of particular interest to North American and Russian botanists due to floristic (plant species) affinities between eastern Asia/Eurasia and North America

• Extensive contemporary (since 1990s) collecting in Kuril Islands, Sakhalin Island, Kamchatka

• Increased difficulty of doing field work/exchanging specimens by mail – future very uncertain
Collaborative Project

• University of Washington Herbarium, Burke Museum (WTU)

• University of Alaska Herbarium, Museum of the North (ALA)

• Pacific Northwest Herbarium, Western Washington University (WWB)

• Collectively hold historic and contemporary vascular plants specimens from the Russian Far East; goal = digitize 23,000 specimens
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Locating, Digitizing, and Publishing Specimens

• Working list of potential names from skeletal records

• Manually search for specimens and pull for imaging
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• Database specimens from images
Specimen Database Interface
Locating, Digitizing, and Publishing Specimens

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- Georeferencing specimens lacking lat./long. values
Georeferencing Text Localities
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• Publish specimen record and image online through Consortium of Pacific Northwest Herbaria and Global Biodiversity Information Facility (in progress)
Consortium of Pacific Northwest Herbaria
online database
(https://www.pnwherbaria.org/data/search.php)
Consortium of Pacific Northwest Herbaria

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[Image of a plant specimen with labels and details]
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Project Impacts

• Free, worldwide, online access to specimens – already resulted in specimen loans that have supported peer-reviewed publications by Russian scientists

• Liberating and mobilizing specimen data that, without this funding, would remain undiscoverable

• Creating full realization of collaborative Russian-U.S. scientific explorations dating back to 1970s

• Engagement of undergraduate students in digitization process
Project Issues

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Dr. Valentin Yakubov,
Russian Far East Branch of the Russian Academy of Science
(2011, Washington)
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• Underscores importance of digitizing content because cannot anticipate world events that may compromise access to content
Acknowledgments

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• Far Eastern Branch of the Russian Academy of Sciences
• Hundreds of collectors who deposited specimens at WTU, ALA, and WWB.