Some Changes in the Washington Flora

San Juan Co.

Peter Zika
4 March 2021
WTU Herbarium
2:55-3:25
Resident populations are non-migratory, recently introduced from e N AM, non-native, & vegetarian

First breeding record in San Juans 1986

Small islands of San Juans now with multiple nests

Canada Goose

\textit{(Branta canadensis)}
• Rapid expansion of introd. geese in region began in 1980s
• In 2010, examined 39 of the Gulf Islands, BC
• Local trends: ↑ geese, ↓ native spp., ↑ introduced grasses
• Authors suggest studying goose removal before problems expand

Effects of Introduced Canada Geese (Branta canadensis) on Native Plant Communities of the Southern Gulf Islands, British Columbia

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Abstract

Recent experiments suggest that introduced, non-migratory Canada geese (Branta canadensis) may be facilitating the spread of exotic grasses and decline of native plant species abundance on small islets in the Georgia Basin, British Columbia, which otherwise harbour outstanding examples of threatened maritime meadow ecosystems. We examined this idea by testing if the presence of geese predicted the abundance of exotic grasses and native competitors at 2 spatial scales on 39 islands distributed throughout the Southern Gulf and San Juan Islands of Canada and the United States, respectively. At the plot level, we found significant positive relationships between the percent cover of goose feces and exotic annual grasses. However, this trend was absent at the scale of whole islands. Because rapid population expansion of introduced geese in the region only began in the 1980s, our results are consistent with the hypothesis that the deleterious effects of geese on the cover of exotic annual grasses have yet to proceed beyond the local scale, and that a window of opportunity now exists in which to implement management strategies to curtail this emerging threat to native ecosystems. Research is now needed to test if the removal of geese results in the decline of exotic annual grasses.

Non-migratory Canada goose nest in San Juan Islands
San Juan Islands
wildflower meadow
San Juan Islands
Goose barrens
Conflicts

- National Park Service, BLM, protecting intact ecosystems on 75 small islands
- US Fish & Wildlife Service, protecting geese on 83 small islands
- Cute goslings vs pretty wildflower meadows, rare native plants
- An opportunity for agencies, land managers, ecologists, botanists, Native Plant Societies & other non-profits to work together
Name changes

- **Maples** back to **Aceraceae** from **Sapindaceae**
- **Lamiastrum** back to **Lamium**
- **Sarcocornia** back to **Salicornia**

See on-line Washington Flora Checklist for refs
Name change for Apple

Malus domestica (Suckow) Borkh. (1803) nomen conservandum

2010: Proposal to conserve the name, against

- Malus pumila Mill. (1768)
- Malus frutescens Medik. (1793)
- Malus communis Desf. (1798)

2017: Proposal accepted by the Nomenclature Section at Shenzhen China Botanical Congress (Taxon 66: 1238. 2017)

Now *Malus pumila* Mill. is a rejected name

Rosaceae
Rose Family
Name change for large bindweed

**Calystegia × lucana** (Ten.) G. Don

= *Calystegia sepium × silvatica*

= *Calystegia silvatica* subsp. *disjuncta*

*C. × lucana*
Calyx ± hidden
Larger flowers
Longer stamens
European intro

*C. sepium*; calyx ± exposed native

Species lost

Water-lettuce *Pistia stratiodes*

Cauca Valley, Colombia
Native to Tropical America

Aquarium release?
Renton, Lake Washington
Found by Patrick Sowers
Regional Noxious Weed Specialist
King County

Araceae
Arum Family
Species lost

New Zealand spinach (*Tetragonia tetragonoides*)

Photos: Madiera
Species lost

New Zealand spinach (*Tetragonia tetragonoides*)

Native Oz + NZ

Aizoaceae
Fig-marigold Family

Photo: Clallam Co.
Species lost

New Zealand spinach (*Tetragonia tetragonoides*)

Control efforts October 2020
Thanks to Janet Coles
Olympic National Park
Species lost
Small non-native urban populations lost to construction around Lake Washington in Seattle

*Cotoneaster conspicuus*

*Photo: Wales Howardian Local Nature Reserve*

*Cotoneaster transens*

*Cotoneaster vestitus*

*Lower 3 photos: Seattle*

Rosaceae
Rose Family

Thanks to Jeanette Fryer for dets
Species gained

- Gossamer grass (*Anemanthele lessoniana*)
- New Zealand endemic
Species gained
Gossamer grass (Anemanthele lessoniana)

Det. by Cindy Talbot Roché, 1st author of:
Field Guide to Grasses of OR & WA
Identification confirmed by Dr. Janice Lord (OTA, Otago Herbarium, New Zealand)

Poaceae
Grass Family

Photos: Seattle
Also gained

Giant green foxtail
*Setaria viridis var. major*

Recently collected
Benton Co., WA

1920 record Portland

Photo: Morrow Co., OR
Species gained

*Parietaria judaica* (Spreading pellitory)

Croatia
Limestone wall
Parietaria judaica

Seattle
Concrete wall

Urticaceae
Nettle Family
Parietaria judaica (Urticaceae)

♀ flowers

Perfect flowers

Achenes

♂ flowers
Species gained
*Parthenocissus inserta*

Virginia creeper

Native eastern North America

Photo: Cape Cod, Massachusetts

Vitaceae
Grape Family
Parthenocissus inserta

Now present in 10 WA counties

Photos: Benton Co., WA
Species/Genus/Family gained

Acer platanoides
Maple Family
(Norway maple)
(Aceraceae)

Platanus × hispanica
Sycamore Family
(London plane tree)
(Platanaceae)

Photos: Seattle
Acer platanoides (Norway maple)
Maple Family (Aceraceae)

Platanus × hispanica (London plane tree)
Platanus hispanica × occidentalis

Sycamore Family Platanaceae

Photos: Seattle
*Platanus × hispanica*
Adventive Benton Co., WA
Deeply lobed leaves

*Riparian zones include several genera naturalized from eastern N Am, such as:*

*Acer, Catalpa, Fraxinus, Juglans, Parthenocissus, Platanus, Ulmus, Vitis*
Platanus occidentalis

Platanus $\times$ hispanica
Species gained Alpine Cinquefoils

Potentilla villosa
Marine bluffs
Aleutians to Tatoosh Island

Potentilla villosula det. B. Ertter
Alpine with us

Rosaceae
Rose Family

Kiska, Aleutians, AK
Mt. Baker, WA
Species gained Luzula sp. nov.

- Subalpine meadows of Cascades
- WA will have 10 native spp
Species gained
Toadflax (*Nuttallanthus*)

*N. texanus*  
*N. canadensis*

Plantaginaceae  
Plantain Family