

Birds!

Are they canaries in a Cowichan Coal Mine?

David Aldcroft
Cowichan Watershed Board
VIU Speaker Series
January 2015



For Discussion Tonight



- **Who are you guys?**
- **Population trends**
- **New technology aiding bird research**
- **Why these trends?**
- **What we can do?**

Acknowledgements

- Cowichan Tribes
 - VIU
 - Barry Hetschko
 - Dan Buffett,
Ducks Unlimited
Canada
- All the bird
counters.

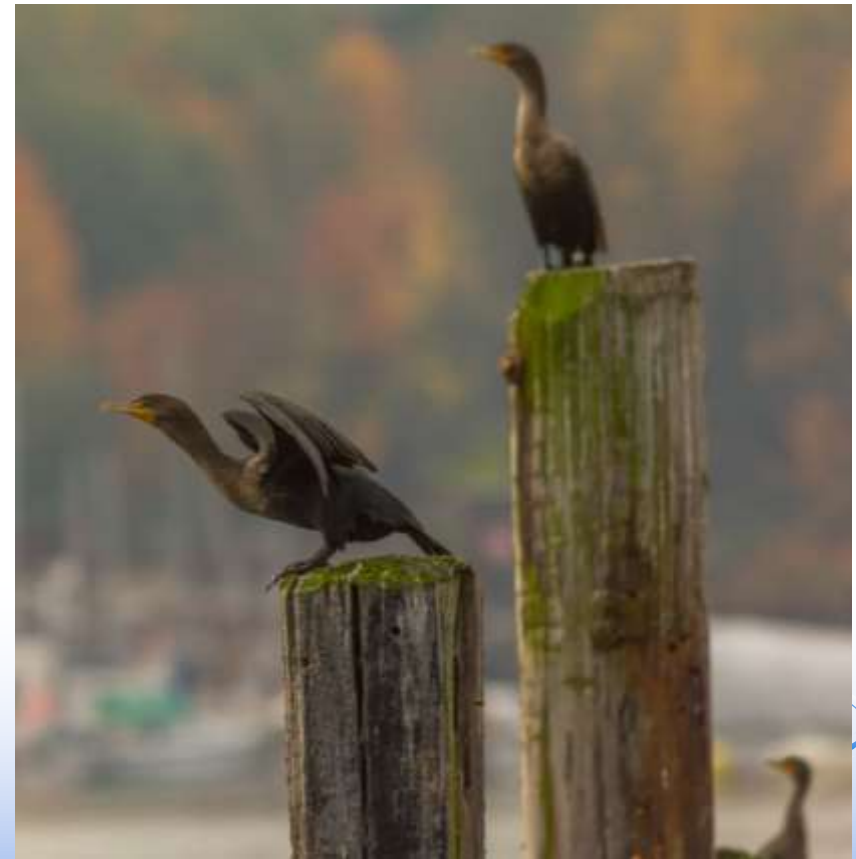


Photo by Barry Hetschko

Who are you guys?



- Scientists?
- Naturalists?
- Concerned citizens?

Population Trends

**Geese, Swans,
Dabbling Ducks**
...a few examples

Trumpeter swan



Duncan Christmas Bird Count

| | Trumpeter Swan | Canada Goose | American Wigeon | Mallard |
|------------|----------------|--------------|-----------------|-------------|
| 2014 | 941 | 1865 | 2409 | 1813 |
| 2013 | 589 | 1385 | 1282 | 1566 |
| 2012 | 827 | 3125 | 2706 | 1678 |
| 2011 | 485 | 2567 | 2973 | 2542 |
| 2010 | 845 | 3123 | 2117 | 1912 |
| 2009 | 1767 | 2654 | 1621 | 2632 |
| 2008 | 496 | 922 | 1022 | 1811 |
| 2007 | 990 | 3756 | 2564 | 2700 |
| 2006 | 839 | 1225 | 3677 | 4848 |
| 2005 | 1104 | 1212 | 2771 | 1929 |
| 2004 | 951 | 1829 | 1639 | 1649 |
| 2003 | 659 | 1535 | 916 | 891 |
| 2002 | 883 | 2219 | 1965 | 1831 |
| 2001 | 1189 | 2634 | 1125 | 1684 |
| 2000 | 996 | 1688 | 1512 | 1415 |
| 1999 | 1021 | 1356 | 2652 | 1549 |
| 1998 | 941 | 1709 | 2581 | 1793 |
| 1997 | 679 | 1070 | 3201 | 1894 |
| 1996 | 828 | 1169 | 2418 | 3021 |
| 1995 | 690 | 1713 | 2438 | 3754 |
| 1994 | 730 | 1252 | 2727 | 2571 |
| 1993 | 527 | 689 | 1862 | 2463 |
| 1992 | 677 | 918 | 1287 | 1850 |
| 1991 | 414 | 1657 | 3098 | 3698 |
| 1990 | 465 | 970 | 1716 | 5553 |
| 1989 | 320 | 556 | 3960 | 1828 |
| 1988 | 221 | 892 | 2078 | 1255 |
| 1987 | 163 | 620 | 2928 | 2170 |
| 1986 | 191 | 634 | 2007 | 1895 |
| 1985 | 185 | 445 | 1233 | 1100 |
| 1984 | 112 | 337 | 557 | 613 |
| 1983 | 66 | 312 | 987 | 562 |
| 1982 | 52 | 411 | 3111 | 1514 |
| 1981 | 43 | 468 | 2634 | 1411 |
| 1980 | 28 | 252 | 4537 | 2331 |
| 21/01/2015 | | | | |



Mute swan



© Barry Hetschko

Canada goose



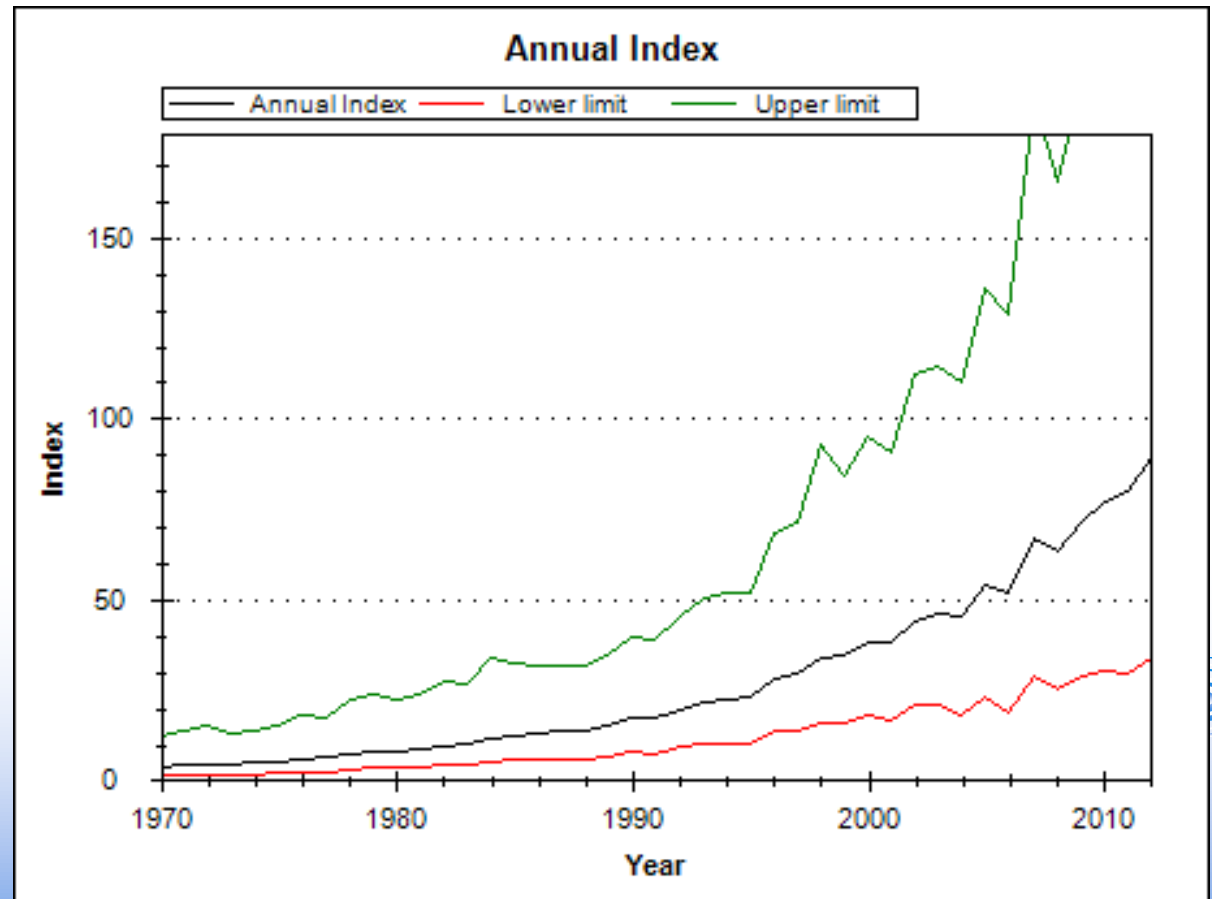
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Canada goose



Environment Canada,
2014. North American
Breeding Bird Survey -
Canadian Trends
Website, Data-version
2012. Thanks to all
BBS volunteers!



Canada goose

Impacts of resident Canada geese



Little Qualicum River estuarine marsh - 1978 (left) and 2005 (right).
Photos: Neil K. Dawe. Journal of the British Columbia Field Ornithologists. Volume 21, 2011.

Mallard

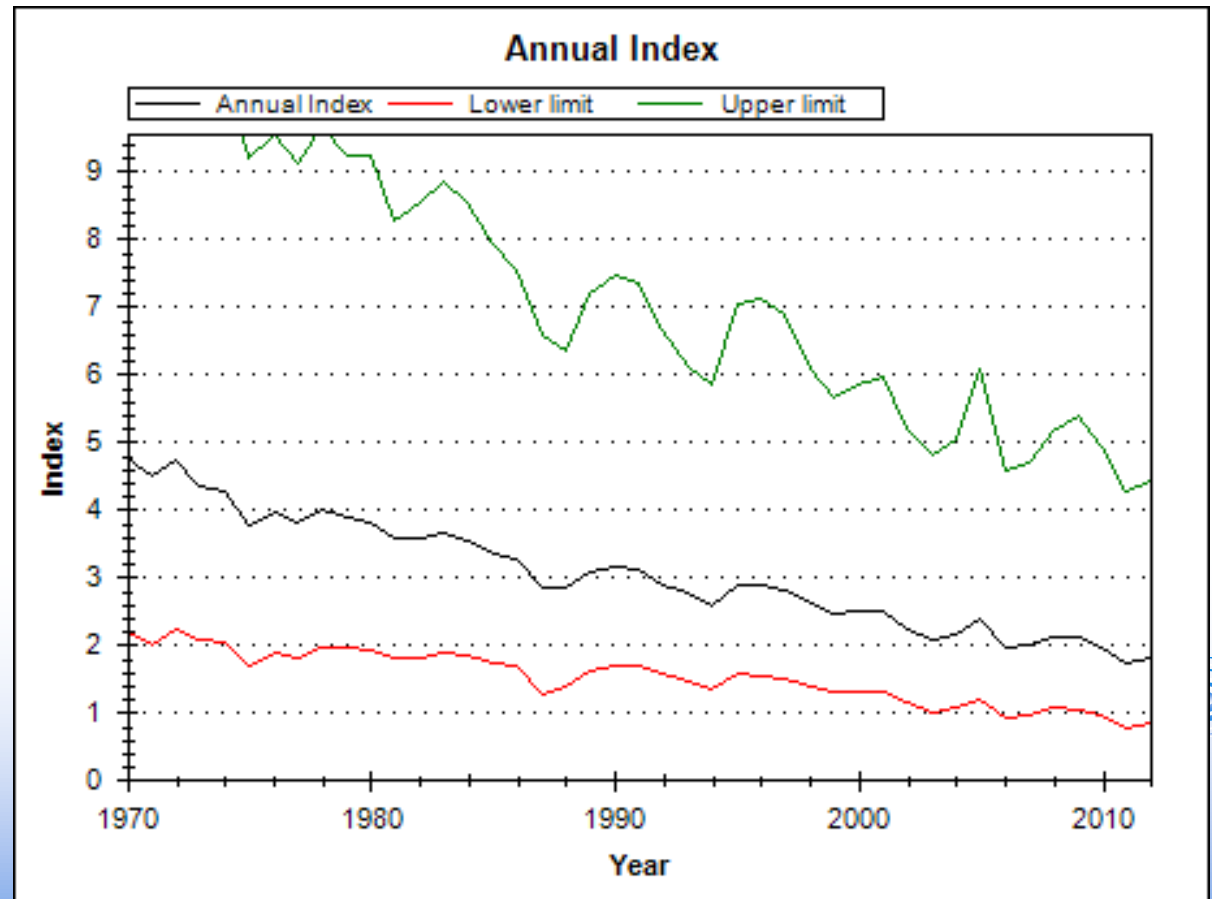


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Mallard



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Northern Shoveller



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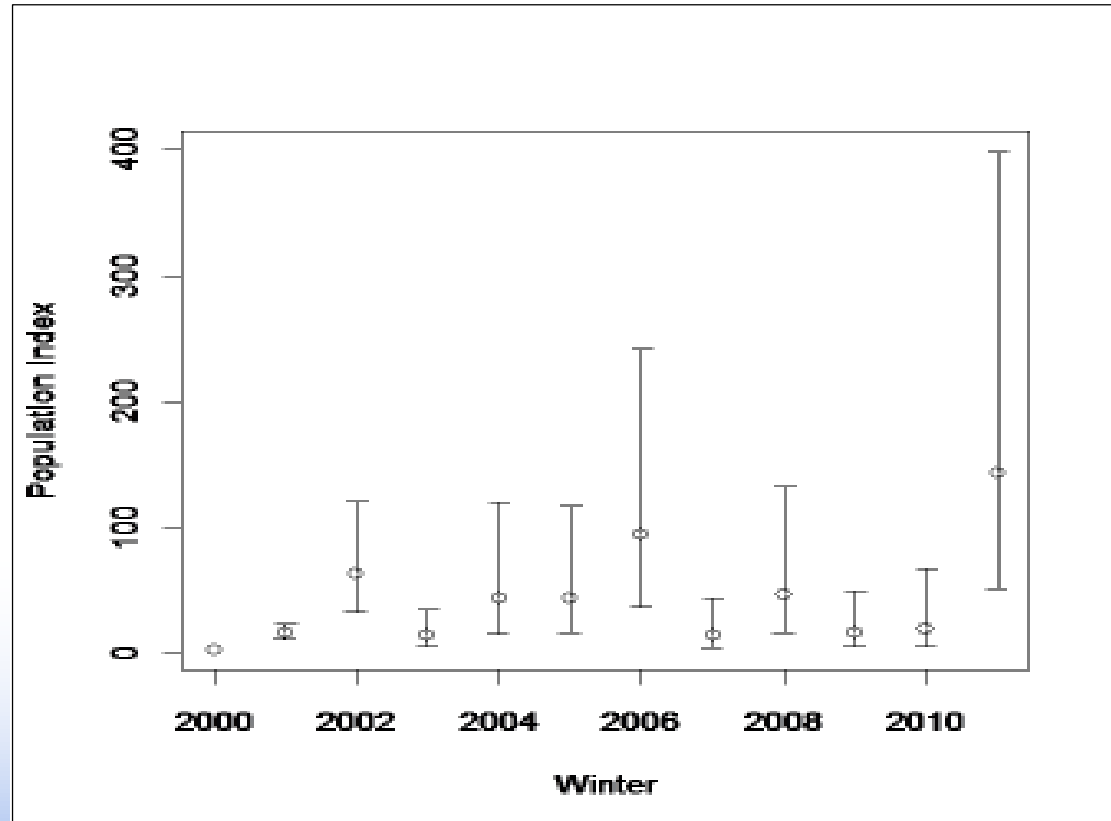
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Northern Shoveller



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Northern Shoveller within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



Pintail

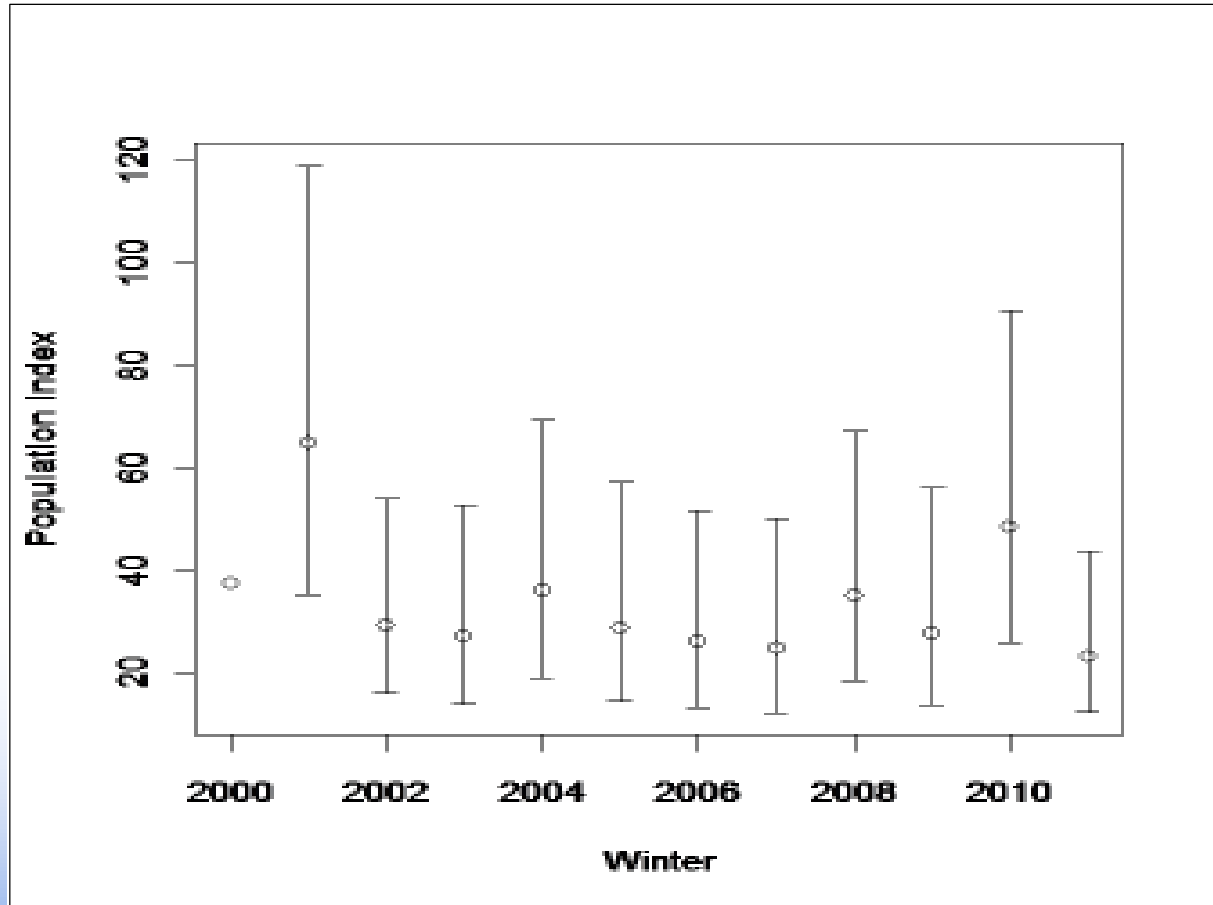


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Northern Pintail



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Northern Pintail within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



Ruddy Duck



Photo by Steve Zamek



Long tailed Duck



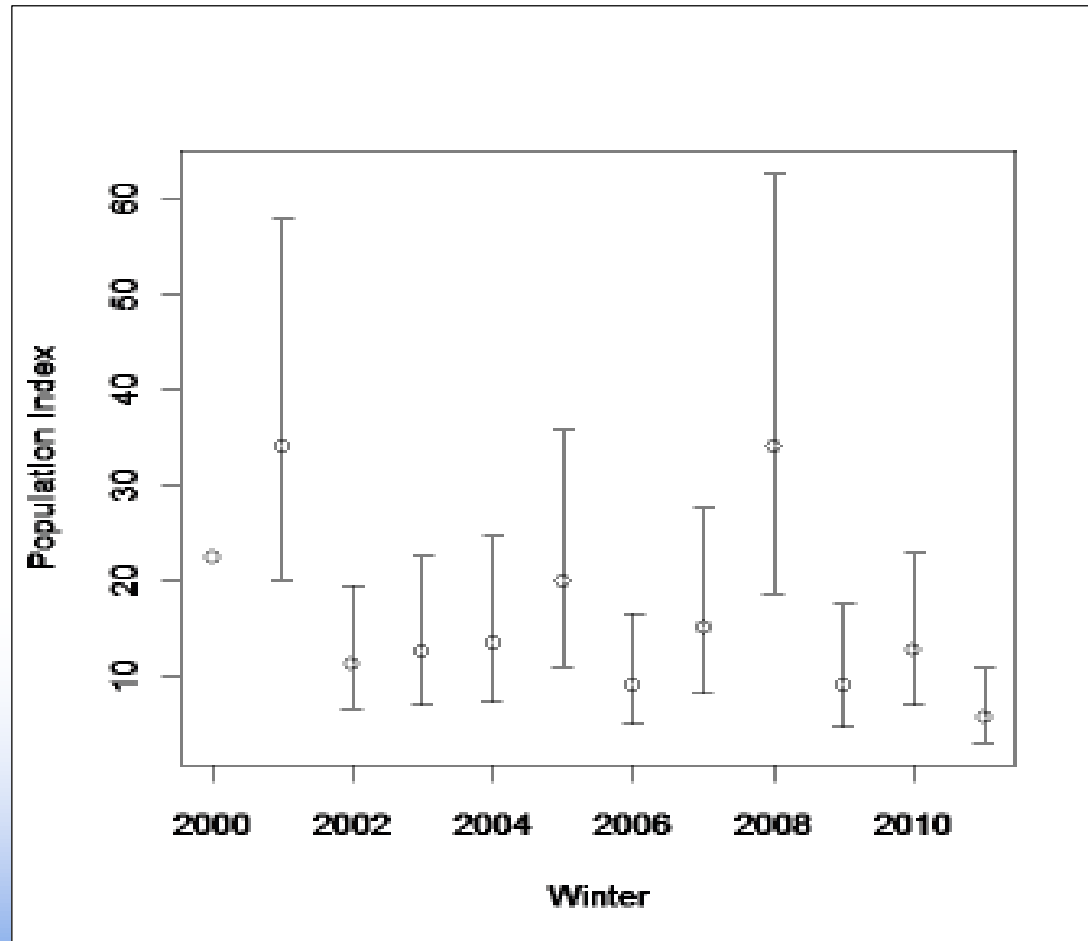
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Long tailed Duck



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Long tailed Duck within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



Wood duck

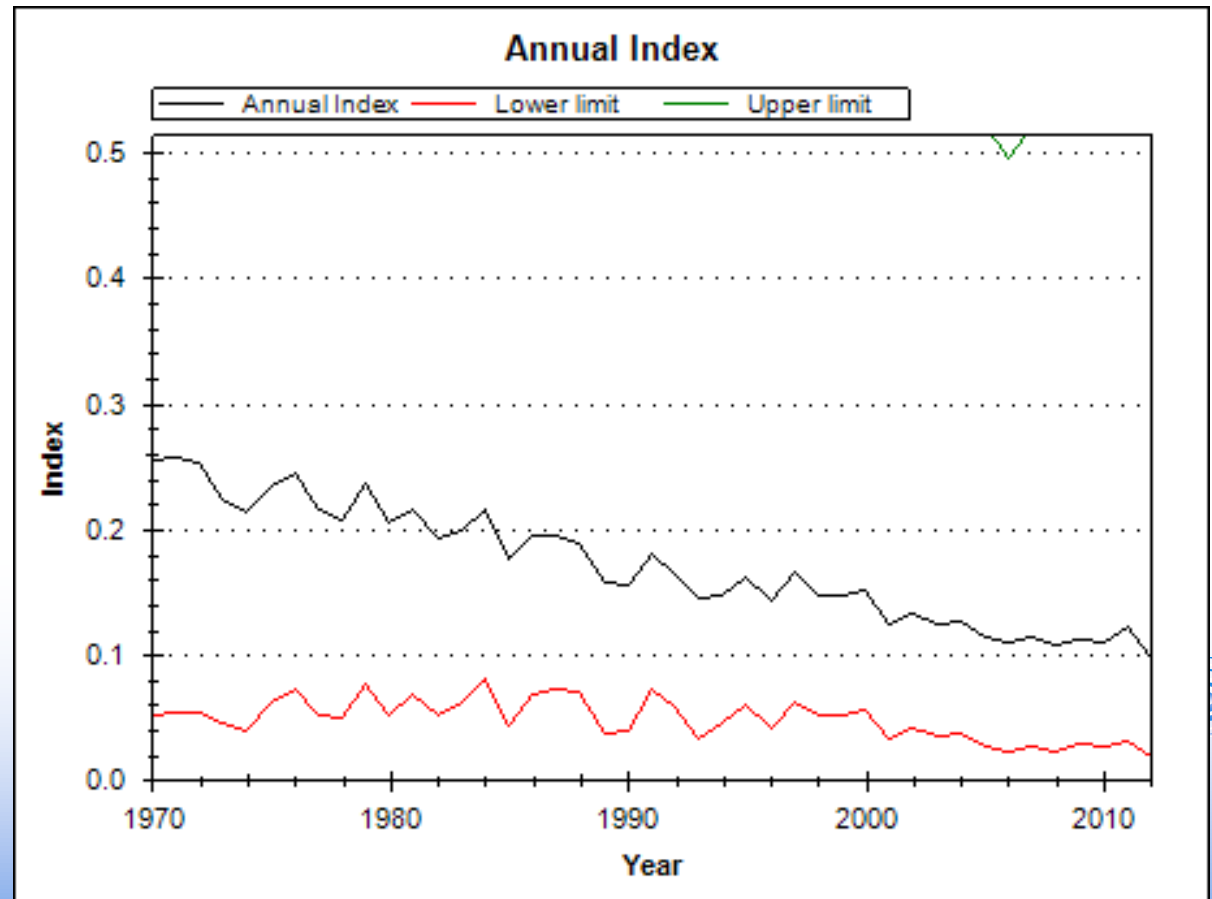


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Wood Duck



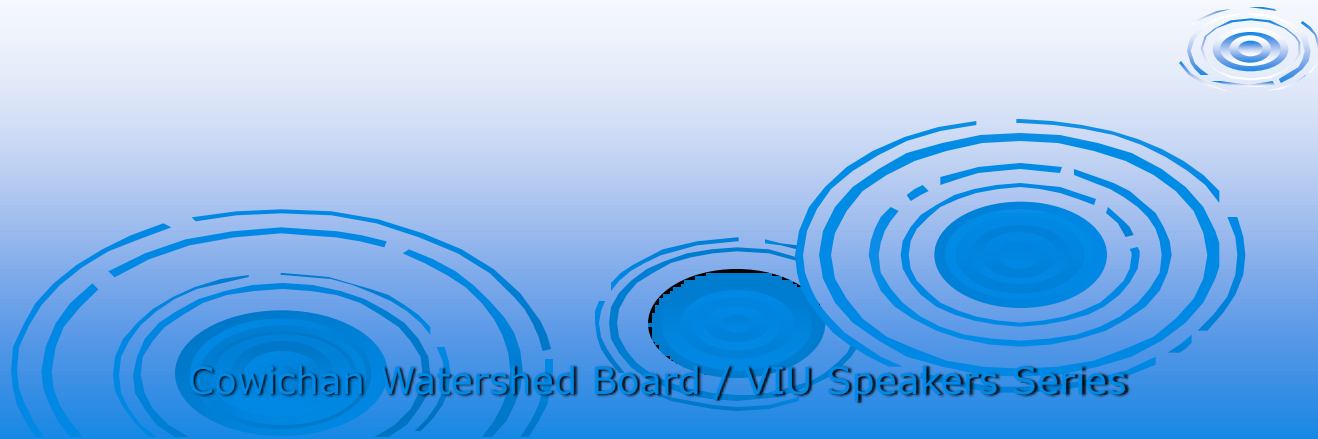
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2014. North American
Breeding Bird Survey -
Canadian Trends
Website, Data-version
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Diving Ducks

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Barrow's Goldeneye



M. Peaco. US Nat'l Parks Service

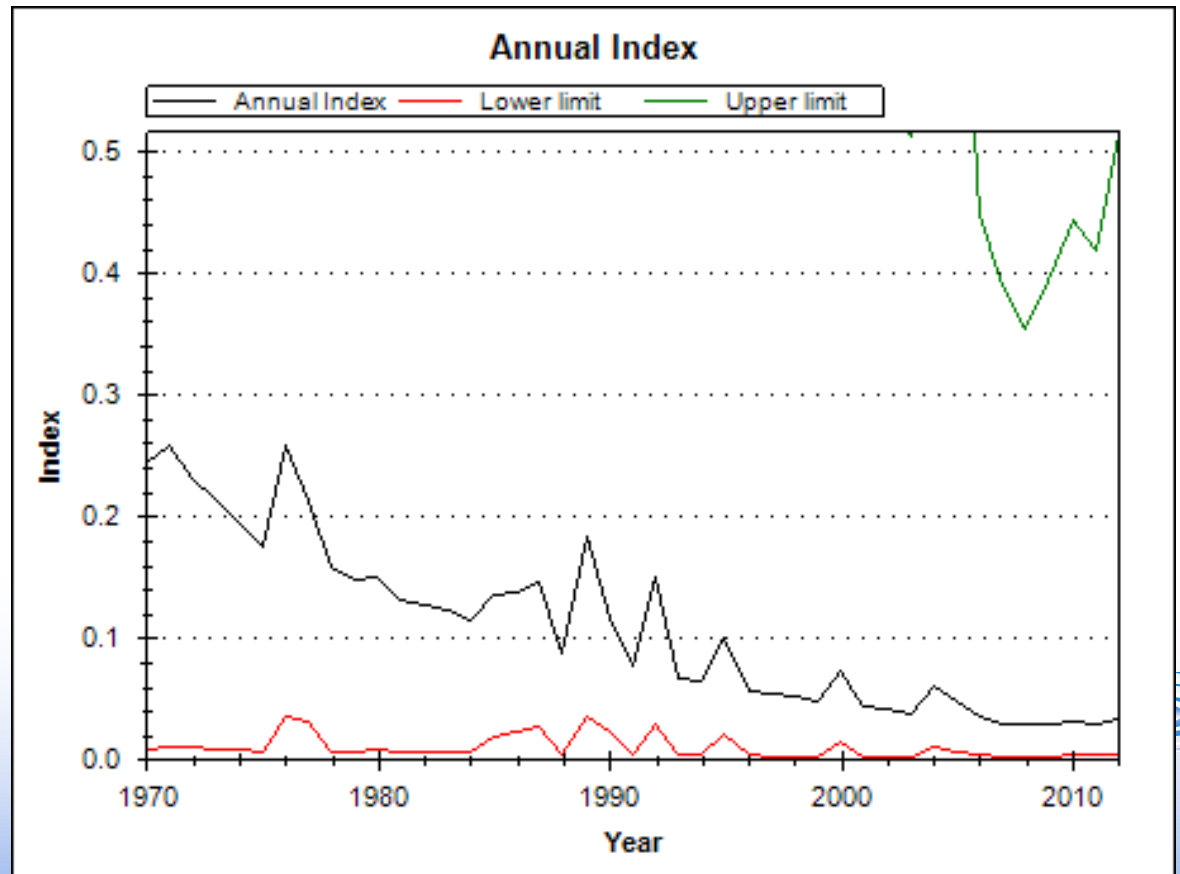
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Barrow's Goldeneye



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White Winged Scoter



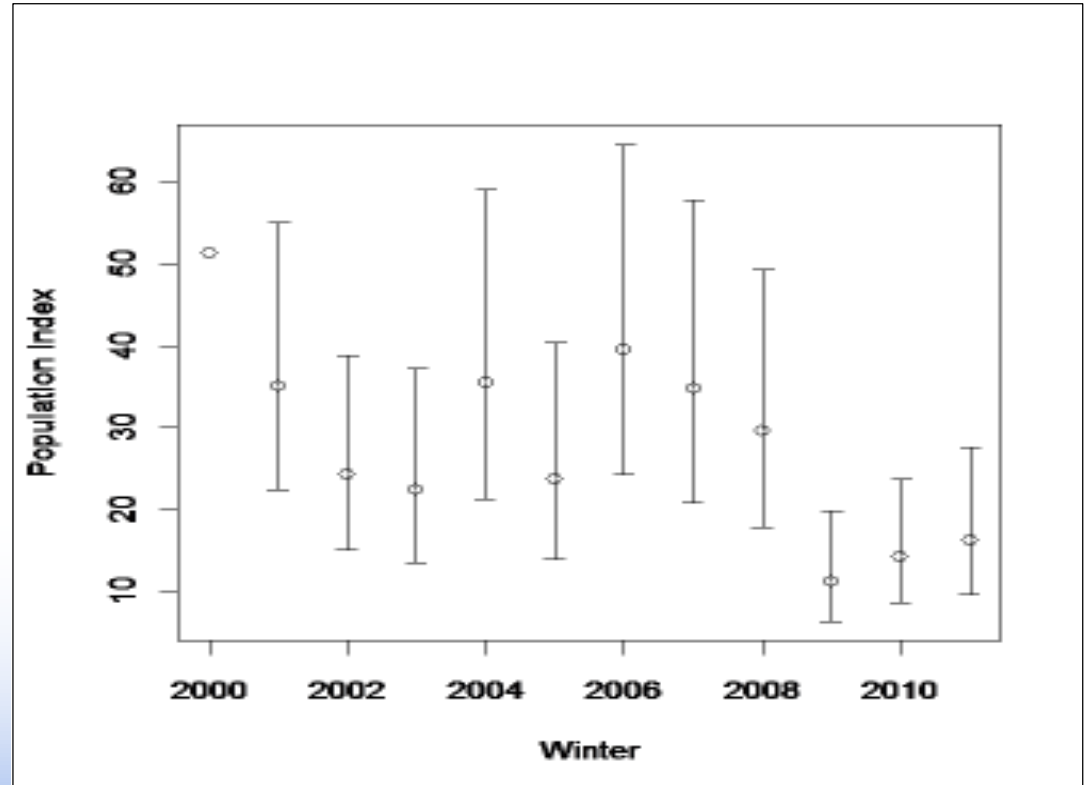
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White Winged Scoter



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for White winged Scoter within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



Surf Scoter



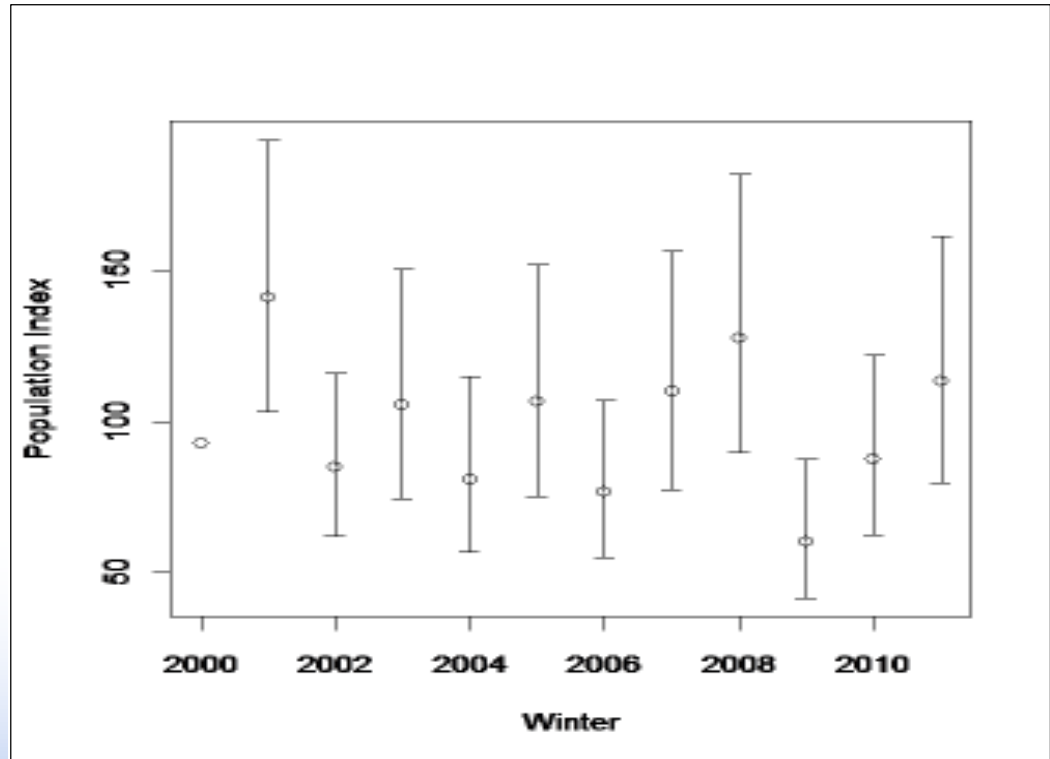
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Surf Scoter



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Surf Scoter within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



Bufflehead

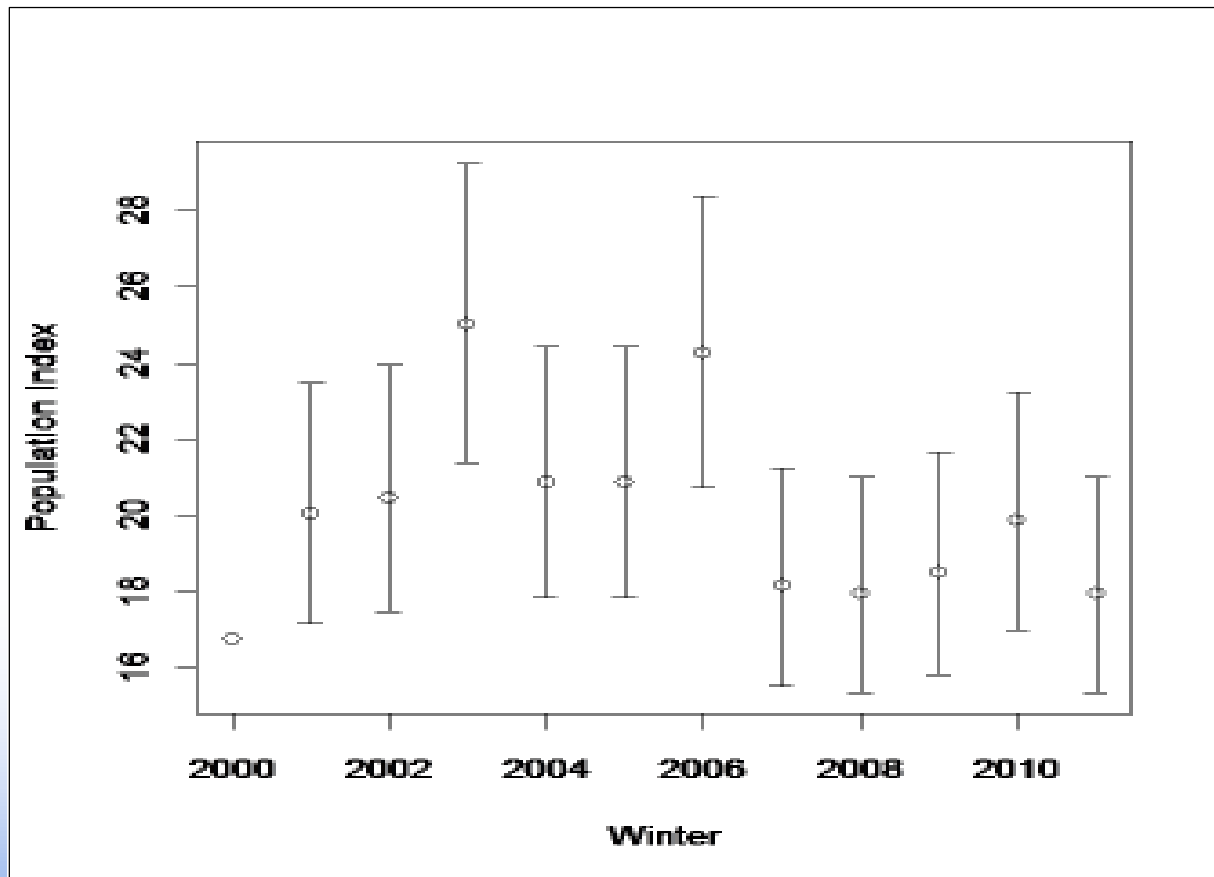


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Bufflehead



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Bufflehead within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



Harlequin Duck



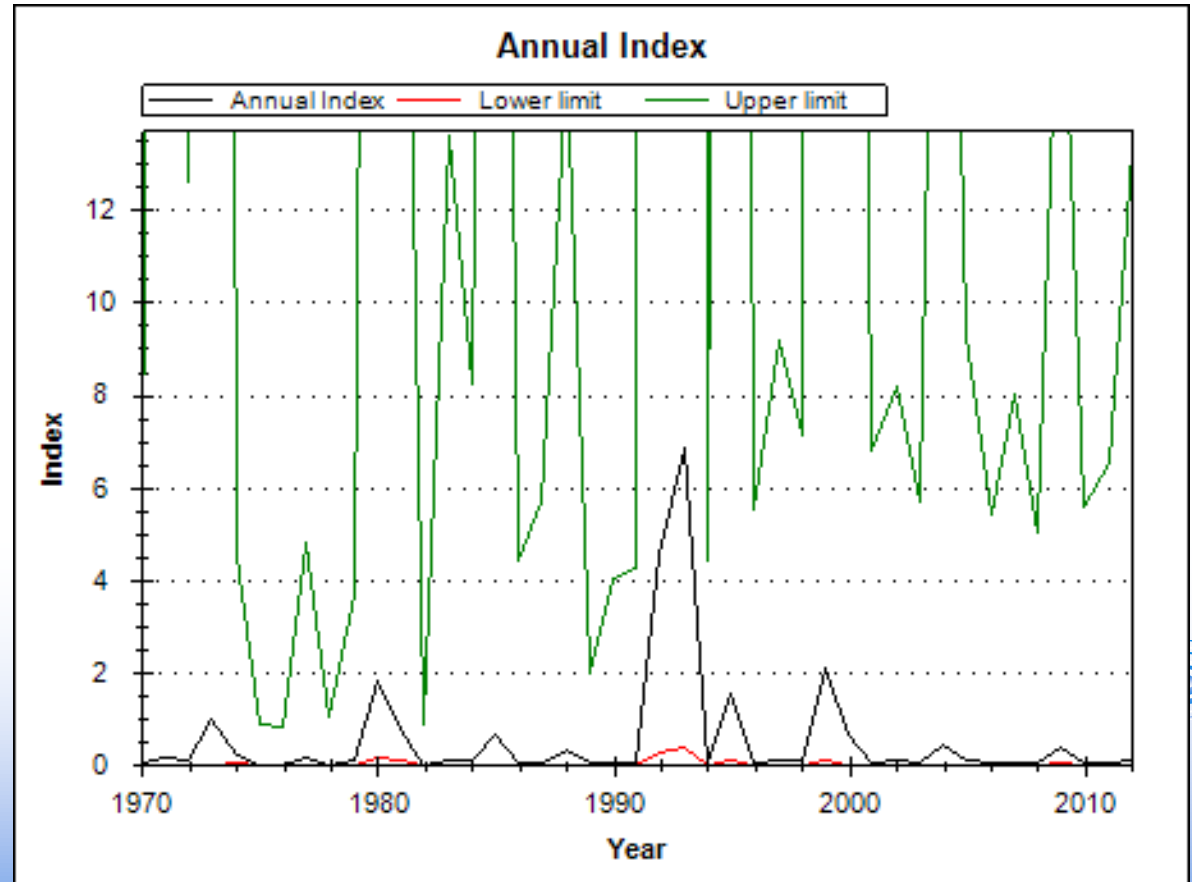
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Harlequin Duck



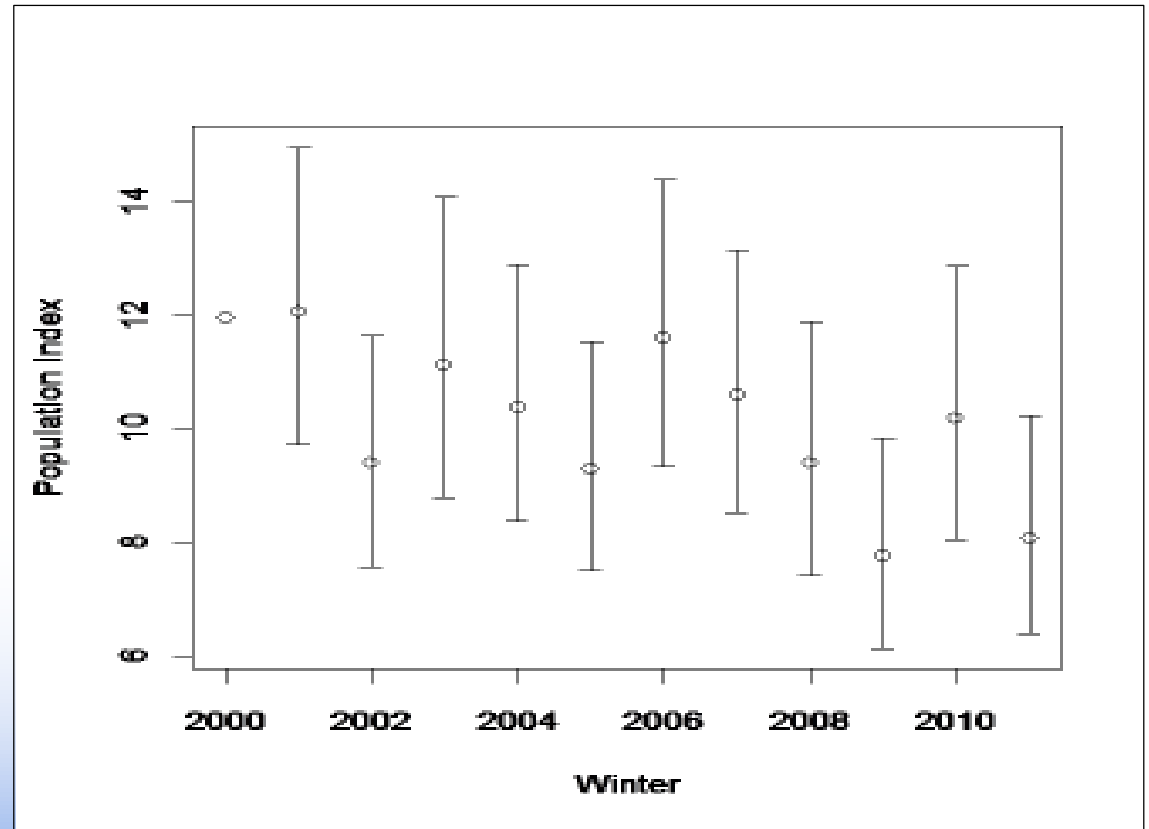
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Breeding Bird Survey -
Canadian Trends
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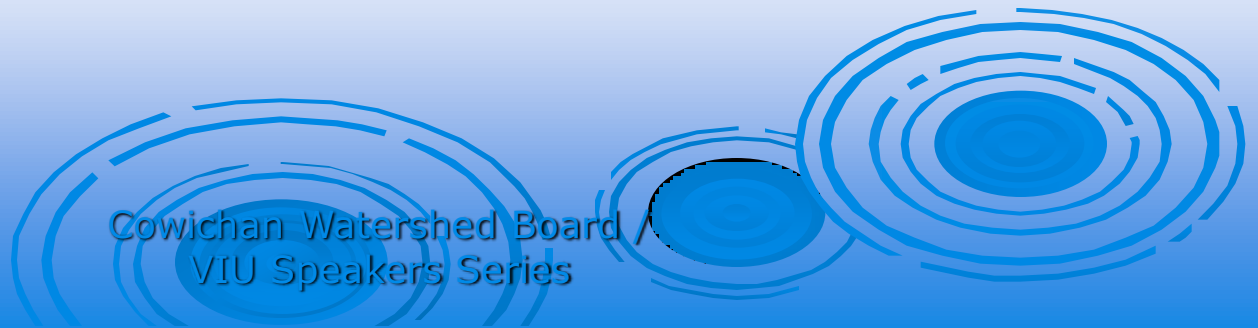
Harlequin Duck



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Harlequin Duck within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



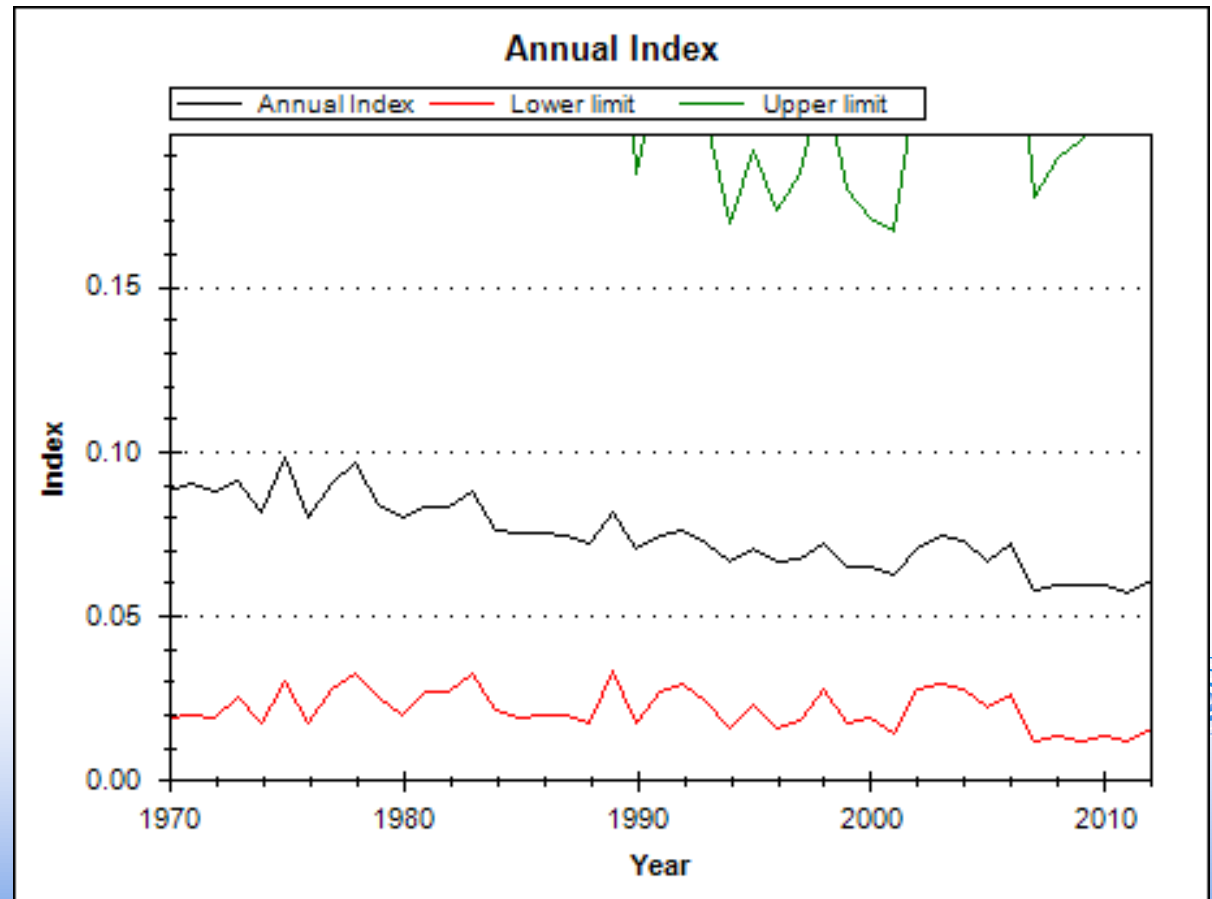
Mergansers



Hooded Merganser



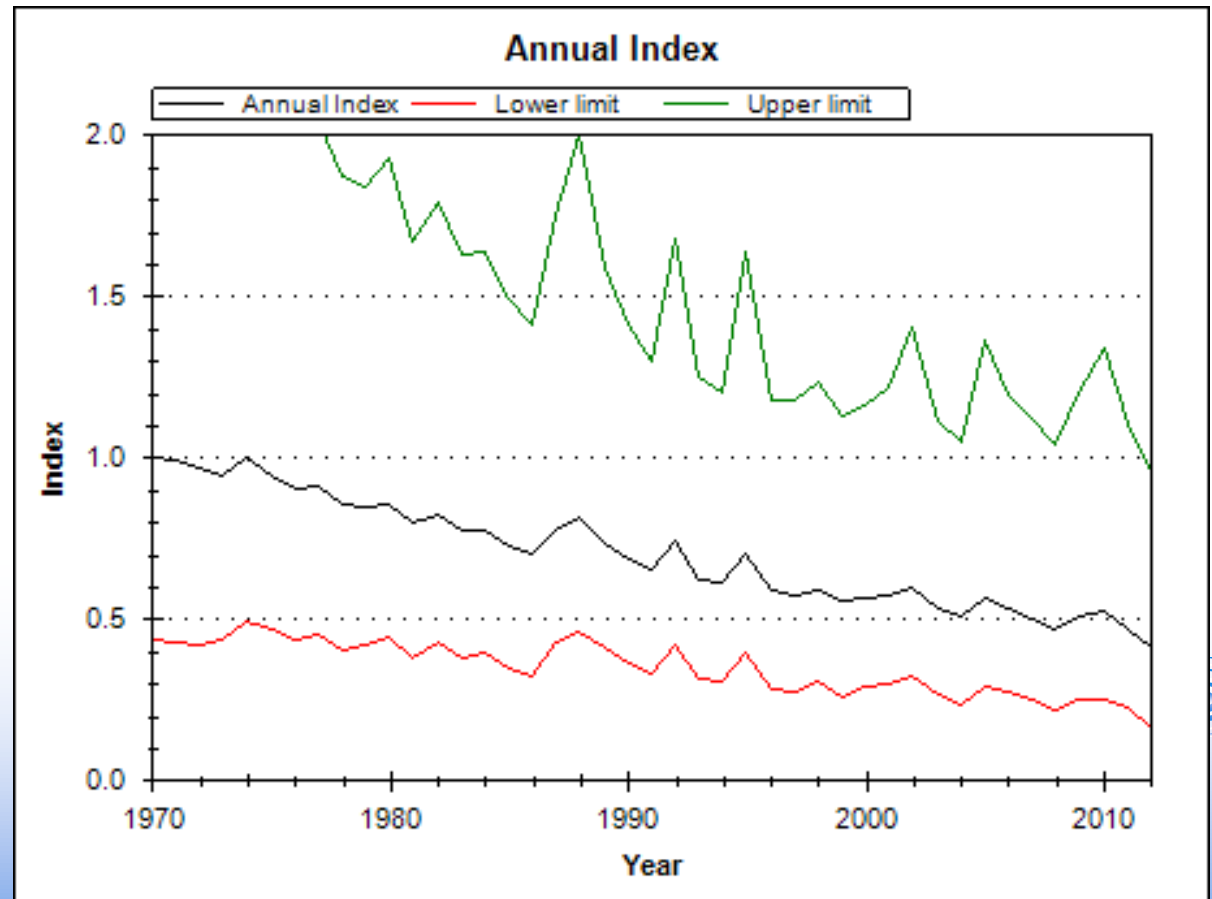
Environment Canada,
2014. North American
Breeding Bird Survey -
Canadian Trends
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Common Merganser



Environment Canada,
2014. North American
Breeding Bird Survey -
Canadian Trends
Website, Data-version
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BBS volunteers!



Western Grebes



www.conservator.ca

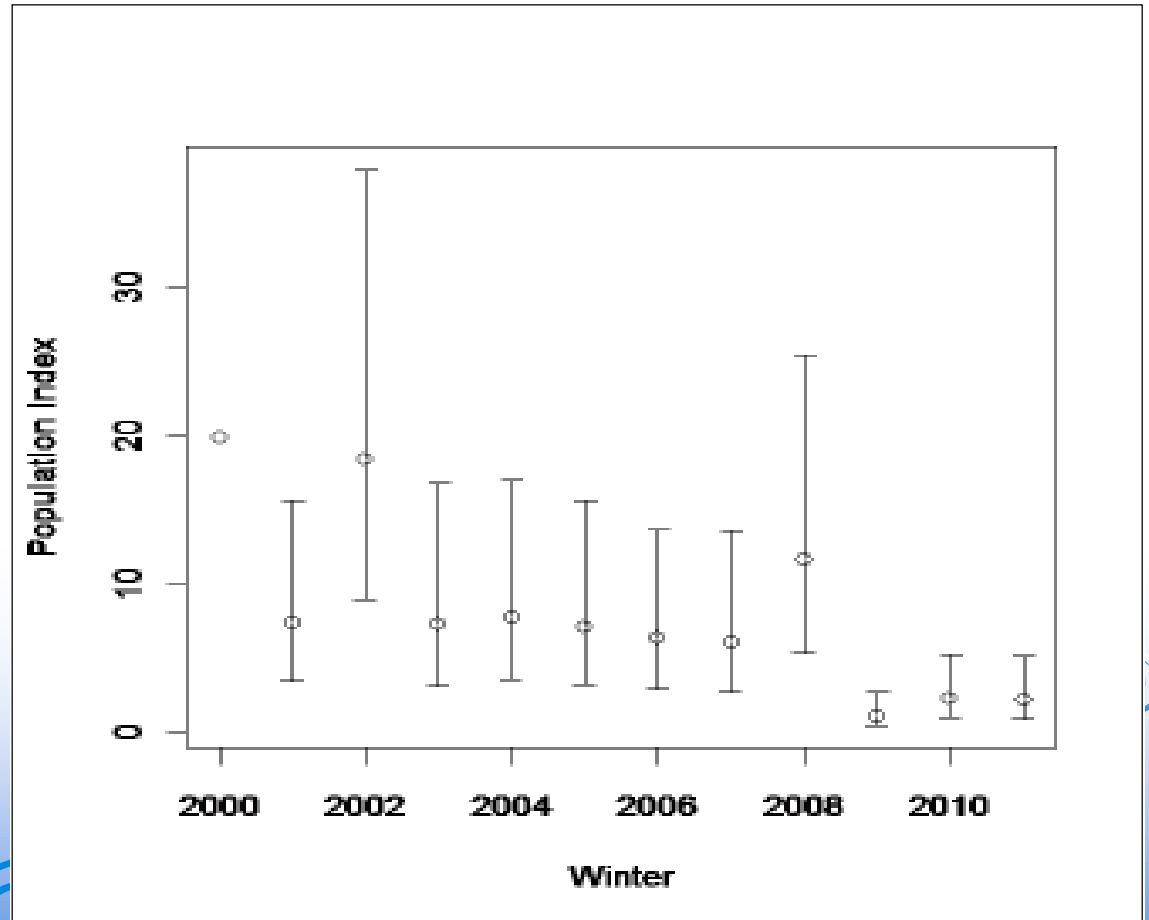
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Western Grebe



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Western Grebe within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



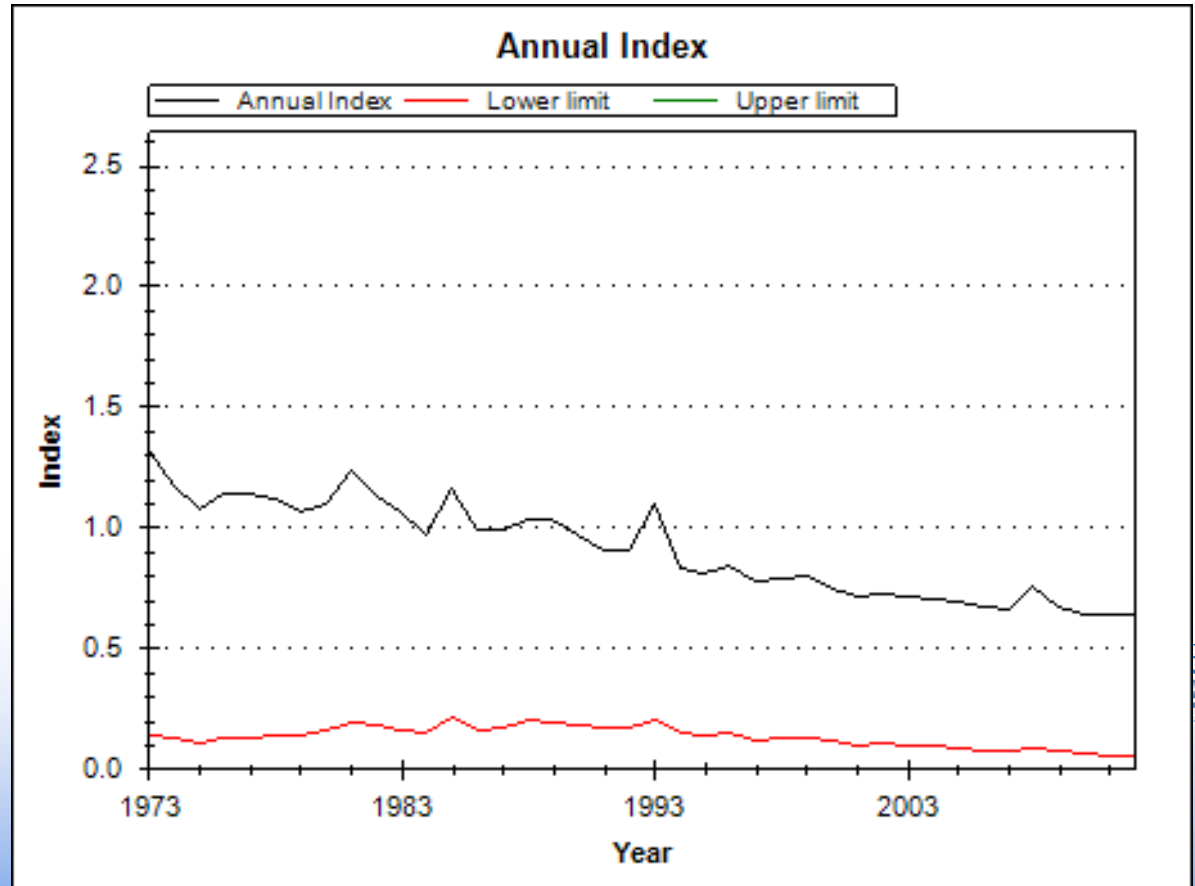
Double-Crested Cormorant



Double-crested Cormorant



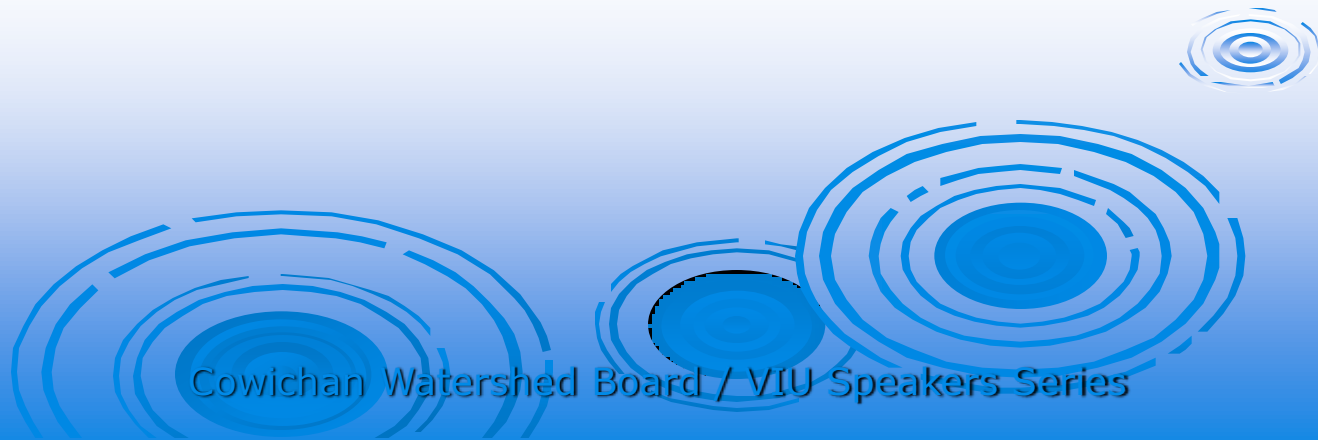
Environment Canada,
2014. North American
Breeding Bird Survey -
Canadian Trends
Website, Data-version
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Other Waterbirds

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Great Blue Heron

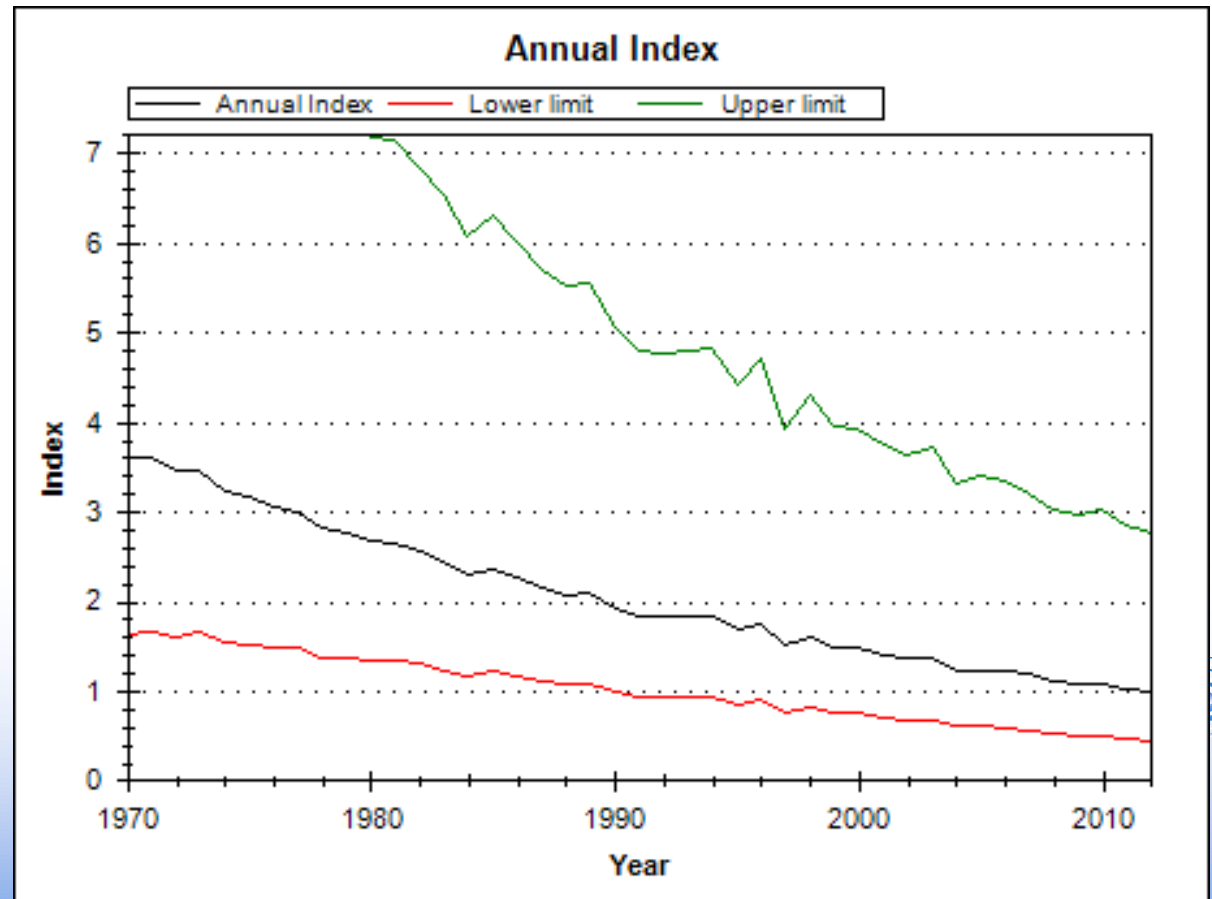


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Great Blue Heron



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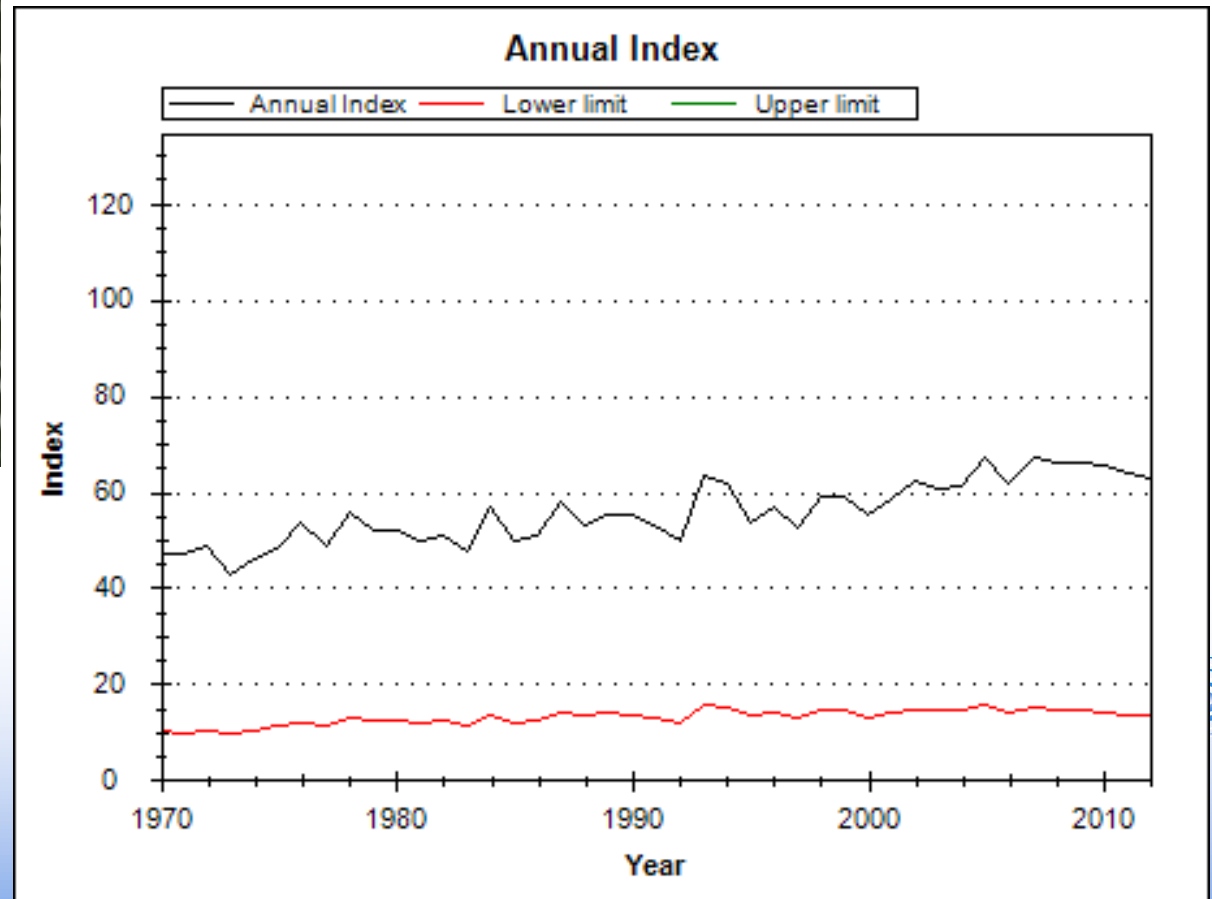
Glaucous-winged Gull



Glaucous-winged Gull



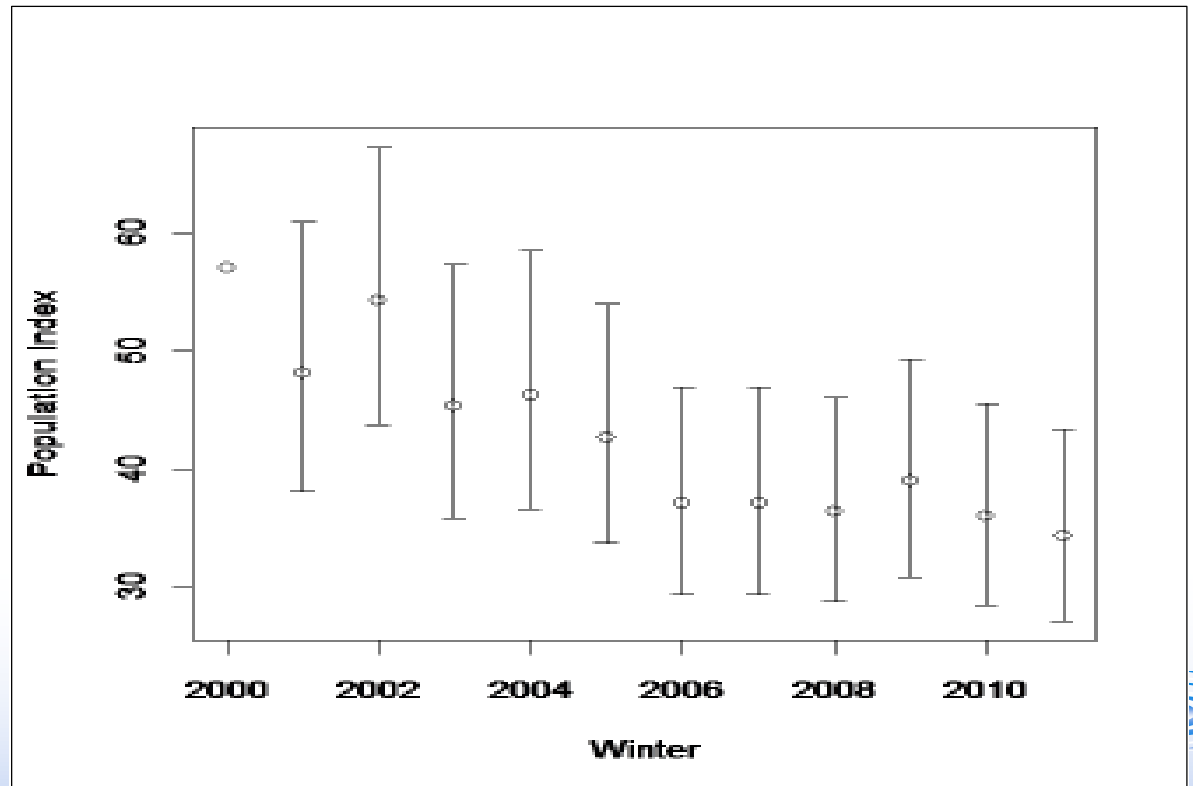
Environment Canada,
2014. North American
Breeding Bird Survey -
Canadian Trends
Website, Data-version
2012. Thanks to all
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Glaucous-winged Gull



BC Coastal Waterbird Survey. Mean annual site-counts (Dec-Feb) for Glaucous-winged gull within the Strait of Georgia 1999-2011. Thanks to all BCCWS volunteers!



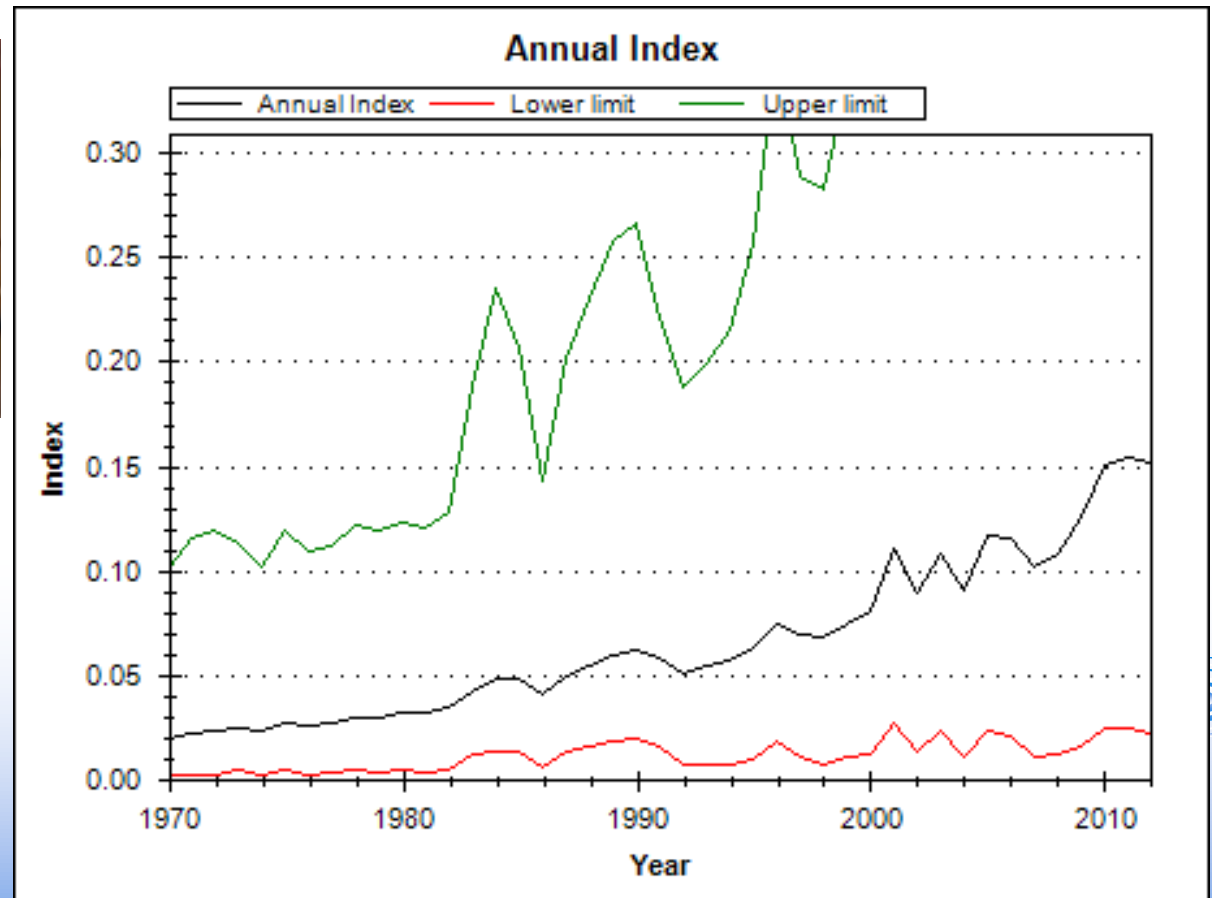
Marsh Wren & Red-winged Blackbird



Marsh Wren



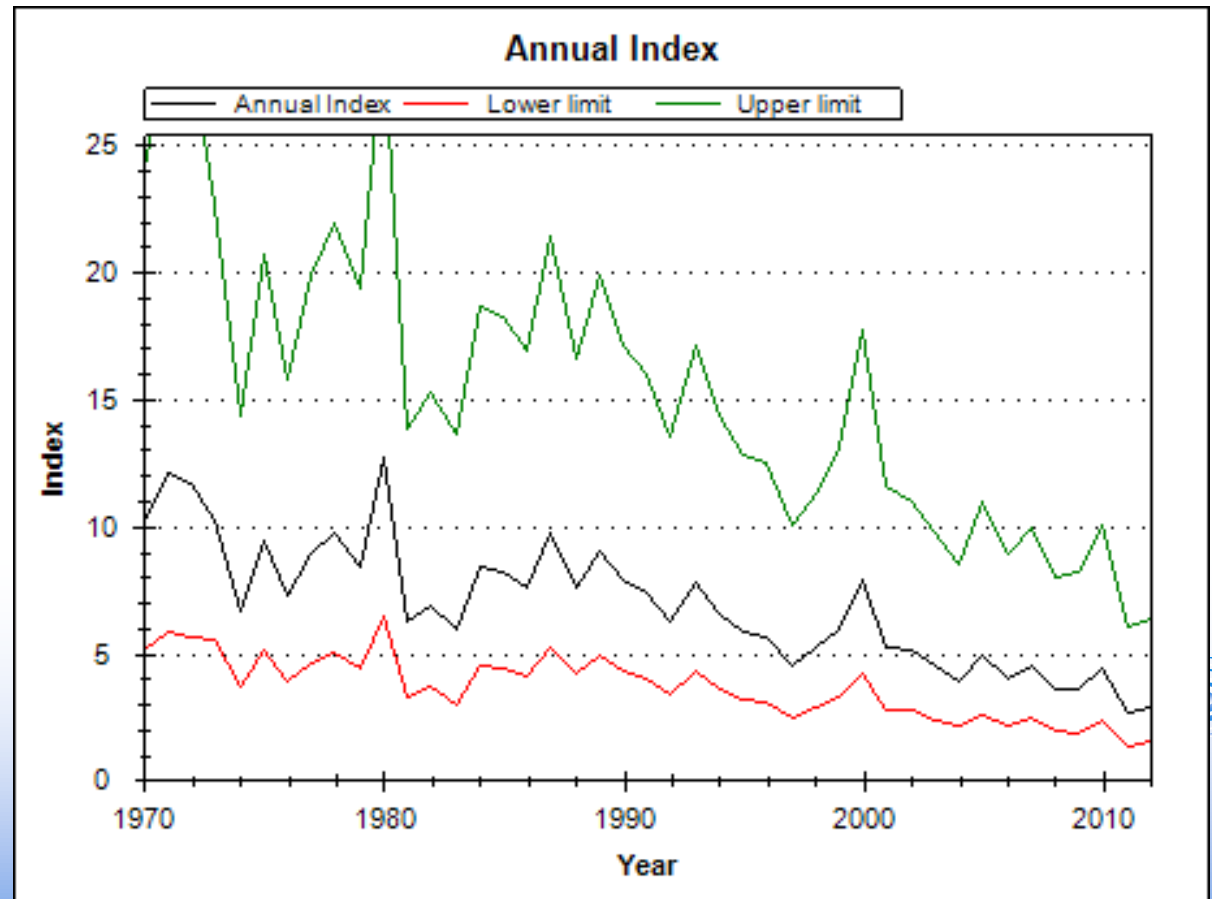
Environment
Canada, 2014.
North American
Breeding Bird
Survey - Canadian
Trends Website,
Data-version 2012.
Thanks to all BBS
volunteers!



Red-winged Blackbird



Environment
Canada, 2014.
North American
Breeding Bird
Survey - Canadian
Trends Website,
Data-version 2012.
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Northern Harrier



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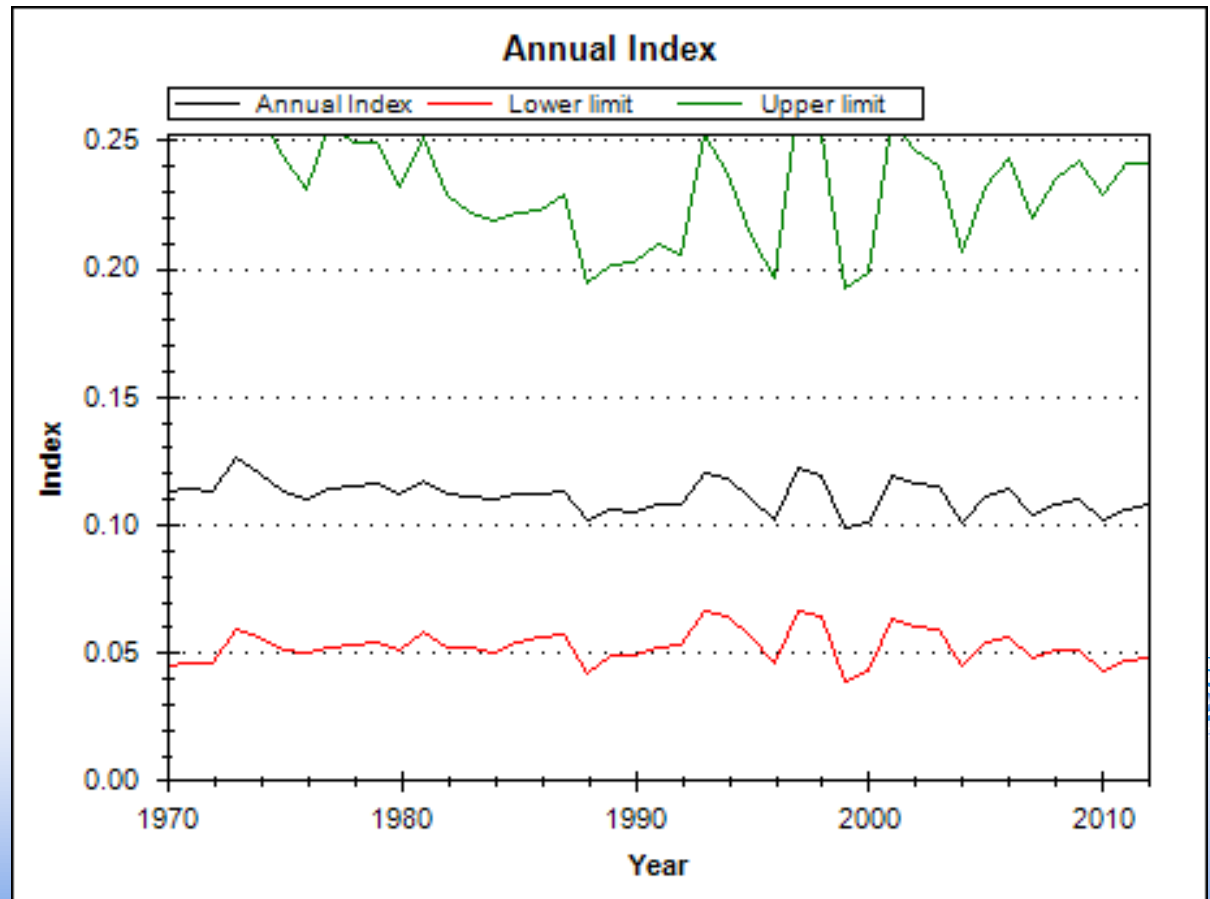
Osprey



Osprey



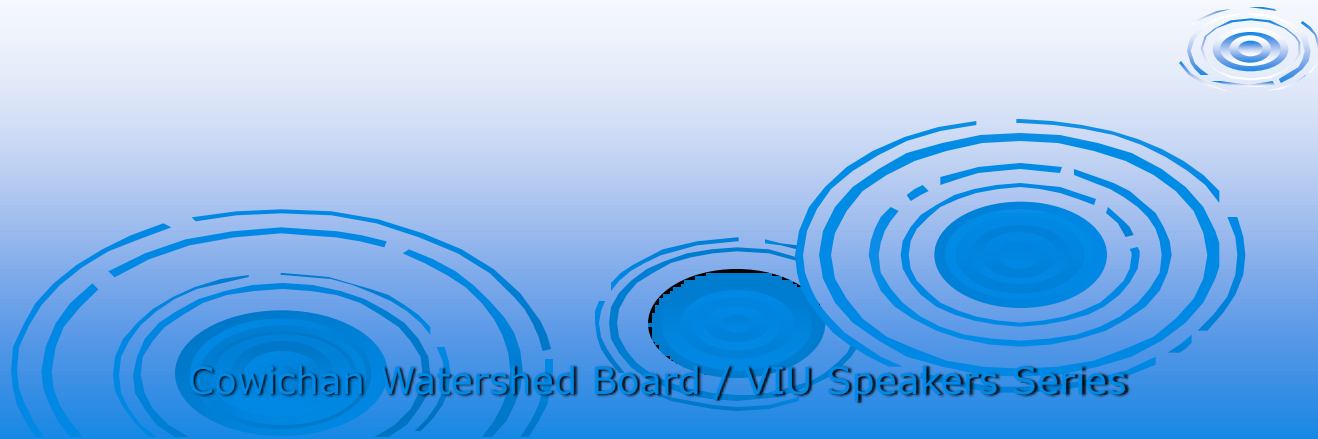
Environment Canada,
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Other Species

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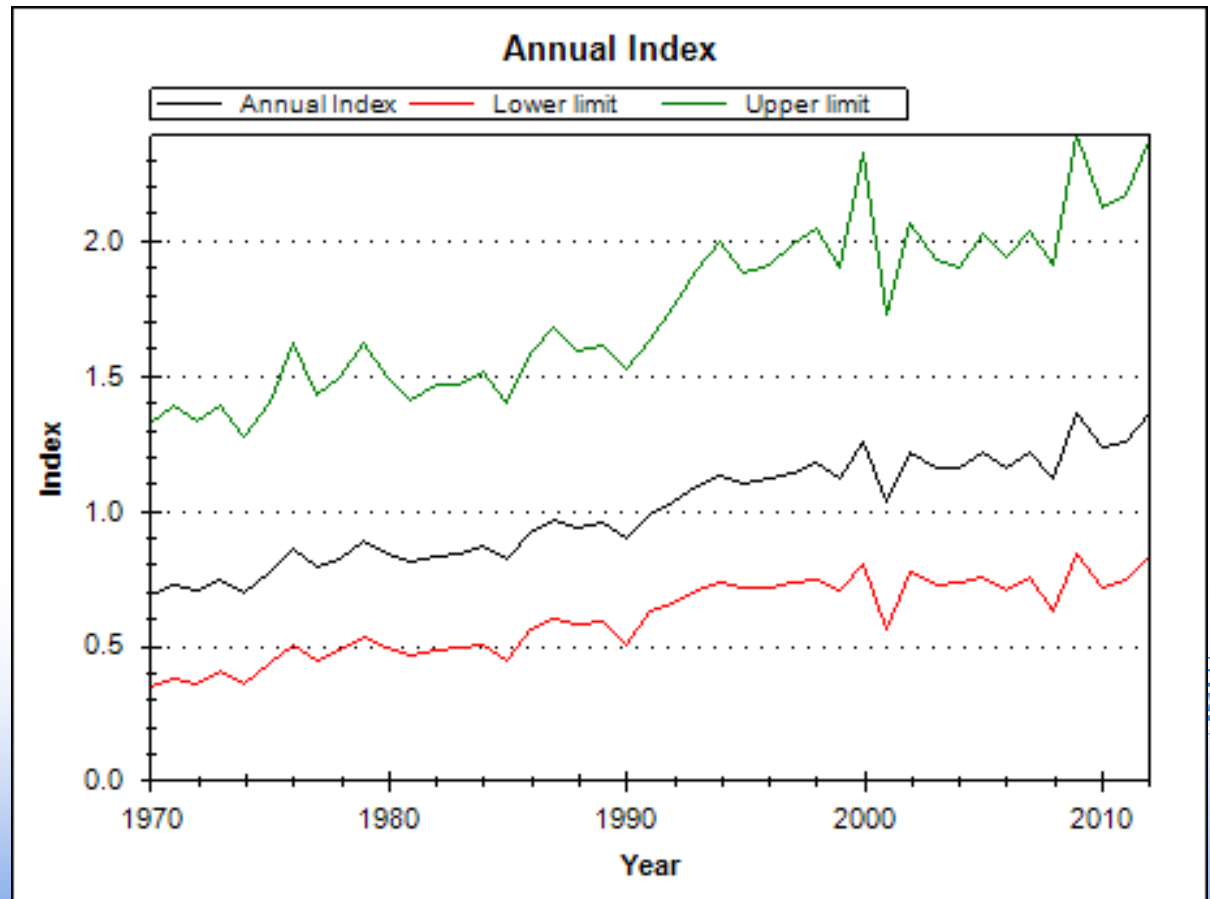
Bald Eagle



Bald Eagle



Environment Canada, 2014. North American Breeding Bird Survey - Canadian Trends Website, Data-version 2012. Thanks to all BBS volunteers!



Bald Eagle



To all our members

The winged tagged Bald Eagle No. 44 seen by the swan counters on Jan 7th 2015 has been identified, big thank you to Gillian Radcliffe at Pacific Northwest Raptors for all her help. Here is the information she received:



Hi, Orange K-44 (see attached photo) would be a male that hatched at our Pinnacle Rock nest on Santa Catalina Island, CA in 2014. This would be the first reported sighting of it since it left its natal territory. We have had reports of at least 3 other birds from 2014 in the Oregon and Washington area in the past couple of months, including two (from two different islands) photographed together west of Seattle. If anyone gets a photo, I'd love to see it.

Thanks.

K44

Peter Sharpe, Ph.D.

Institute for Wildlife Studies

P.O. Box 2500

Avalon, CA 90704

310-510-2728

www.iws.org

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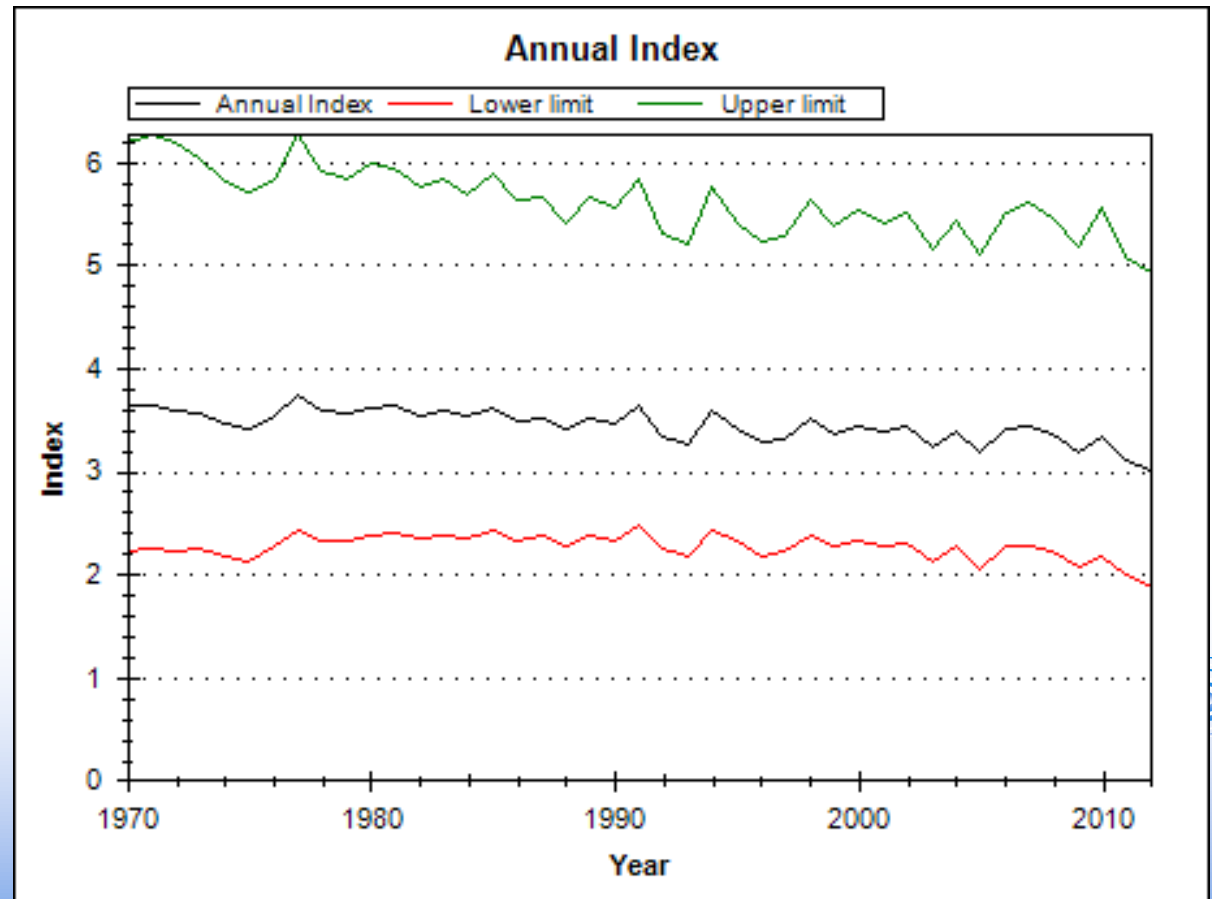
Stellars Jay



Stellars Jay



Environment Canada, 2014. North American Breeding Bird Survey - Canadian Trends Website, Data-version 2012. Thanks to all BBS volunteers!



Owls

Barred



Great Horned



Owls

Western Screech



Source: <http://www.sararegistry.gc.ca>



American Robin



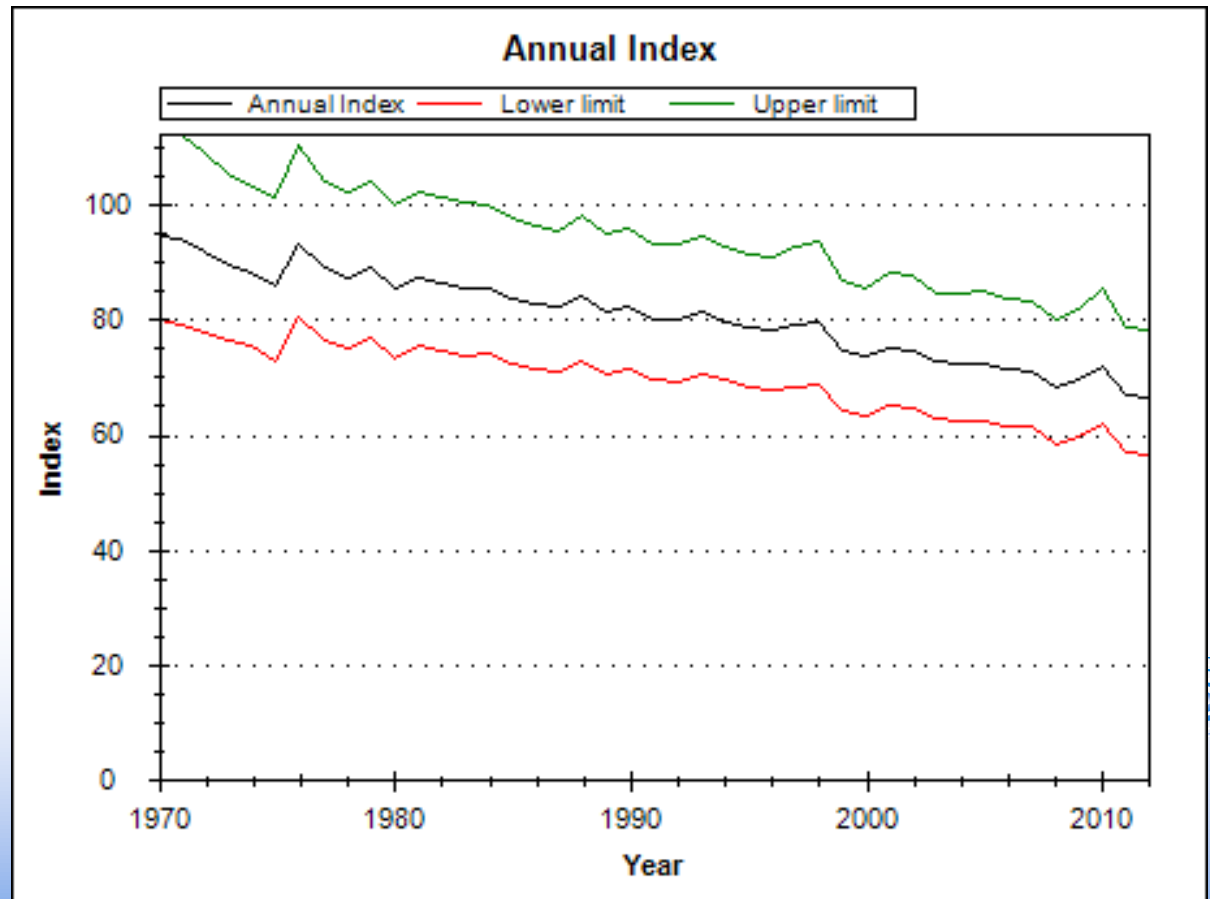
Source: Pinterest

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American Robin



Environment Canada, 2014. North American Breeding Bird Survey - Canadian Trends Website, Data-version 2012. Thanks to all BBS volunteers!



Hummingbirds

Anna's



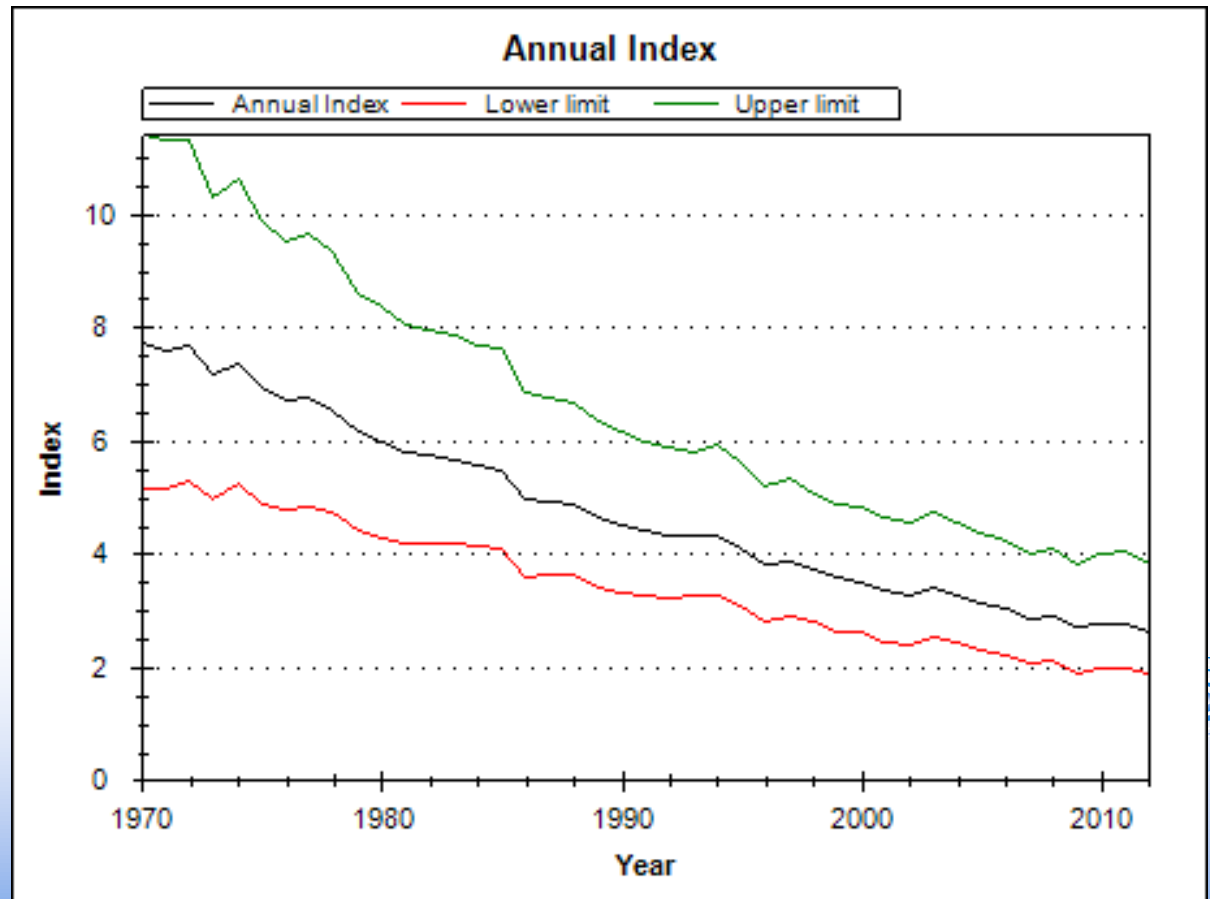
Rufous



Rufous Hummingbird



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Breeding Bird Survey -
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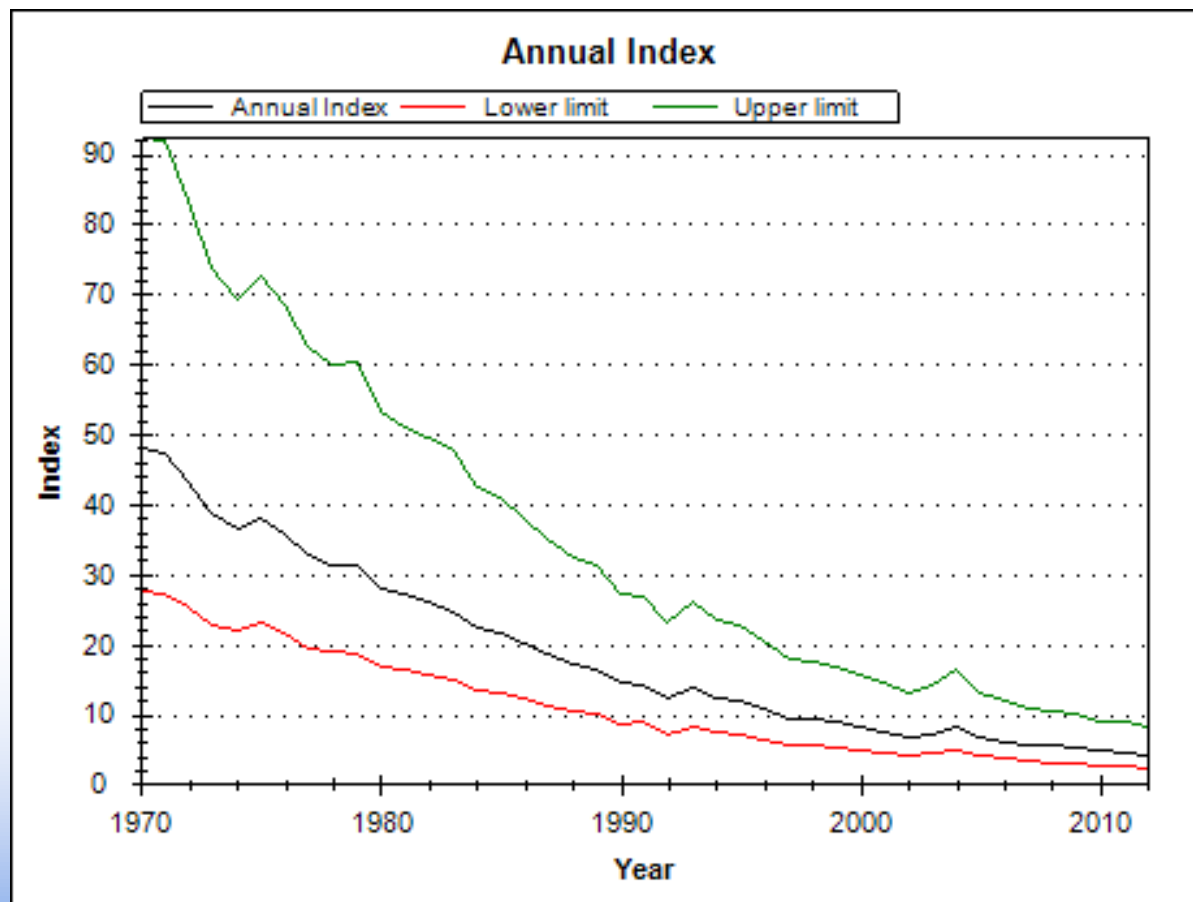
Swallows



Barn Swallows



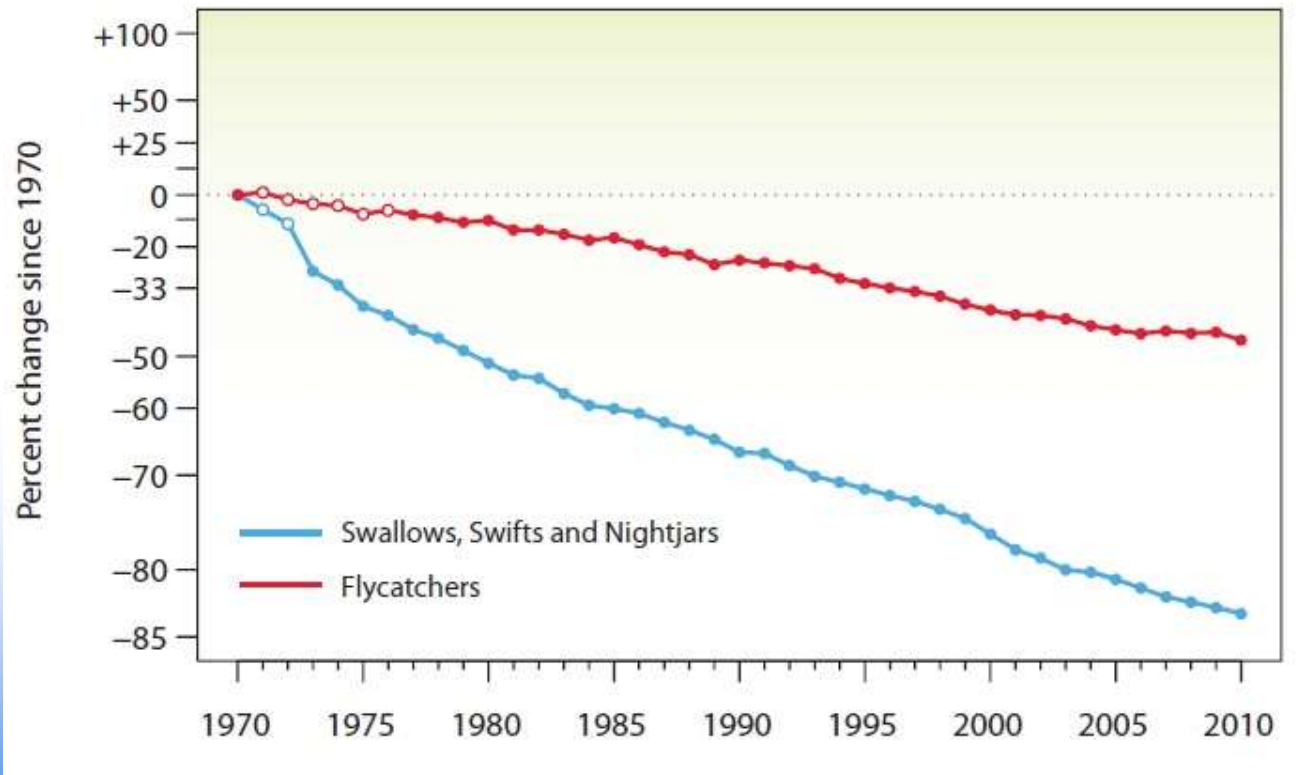
Environment Canada,
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2012. Thanks to all
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Swallows



Indicators of the average population status of two groups of aerial insectivores. (State of Canada's Birds 2012)



State of Canada's
Birds 2012 –
nabci Canada

Summary of Factors Affecting Population Trends

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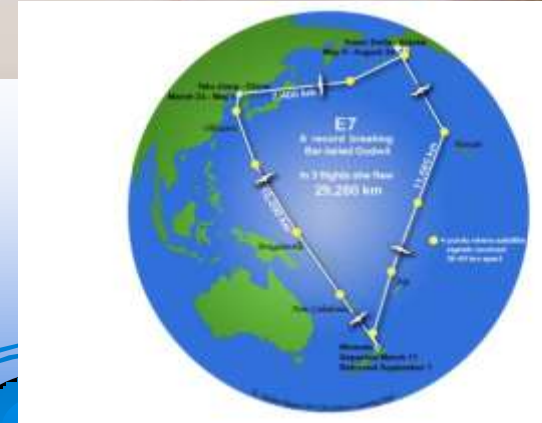


Global Factors

➤ Migration

➤ Global Habitat

- Loss of tropical rainforest
- Loss of wetlands
- Climate change
- Human population
- Industrial pesticides

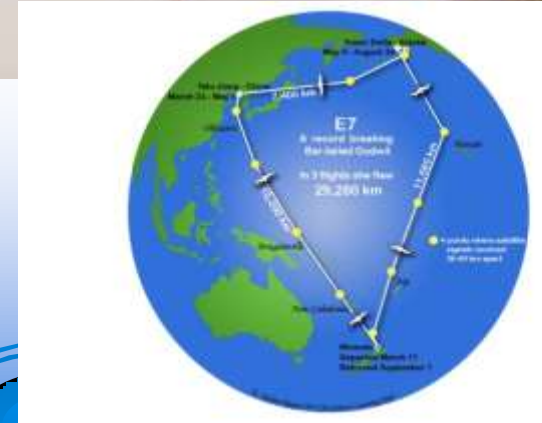


Global Factors

➤ Science-based Environmental Assessment Processes

- Local
- BC
- Federal

Examples: pipelines, Roberts Bank, siting wind farms



Local Factors

- Climate
- Water quality
- Water quantity
- Habitat protection –
e.g. Somenos
Marsh, Cowichan
estuary, riparian



Cowichan Estuary



Household Factors

- Invasive species
- Cats
- Pesticides
- Plastics
- Toxic products



Area D - Garbage Free Challenge!

What Can We Do?

Community Level

(i.e. Cowichan Watershed Board and Friends)

- protect habitat
- restore riparian and estuary ecosystems
- restore water quality and quantity
- protect fish and other food sources



Citizen Stewardship in action!
Cowichan River Cleanup 2012

What Can YOU Do?

In the Home

- Cats – neuter and keep indoors
- Recycling
- Use less toxic products including pesticides
- Keep part of your garden wild
- Put up bird nest boxes.
- Leave wild nests in peace.
- Use water wisely
- Buy shade-grown coffee.



What Can YOU Do?

Be a Bird Champion

- **Protect habitat! Join a Stewardship group** – Cowichan Valley Naturalists, Somenos Marsh Society, Cowichan Land Trust, Cowichan Lake and Stream Stewardship Society, etc. – volunteer, donate, or both.
- **Citizen Science!** Take a streamkeepers course, help with bird surveys (even beginners) E-bird, Project Feeder Watch, Nocturnal Owl Survey, Breeding Bird Surveys, Coastal Waterbird Surveys, eel grass planting, forage fish surveys, etc.
- **Write letters** – all 3 levels of gov't, newspapers.

What Can YOU Do?

Reasons for Optimism

1. International cooperation

- **nabci - The North American Bird Conservation Initiative:** Canada, the United States and Mexico to coordinate bird conservation throughout the continent.
- **WHSRN - Western Hemisphere Shorebird Reserve Network:** Identified and helped conserve over 80 vital stop over, breeding and over wintering sites for shorebirds.
- **Bird Life International:** Birdlife International is a worldwide partnership of conservation organisations working to protect the worlds birds and their habitats



What Can YOU Do?

Reasons for Optimism

2. Modern technology

- Miniaturization of tracking devices
- Feather isotope analysis
- Bird banding
- E-bird – easier access for citizen scientists (<http://ebird.org>)
- Apps for bird education



<http://www.whsrn.org/news>

Thank you

