



Scientific study: do exotics increase or decrease diversity?

"I hate the 'exotics are evil' bit, because it's so unscientific," said Dr. Dov Sax in a *New York Times* interview. Will nature find a way to fit exotic species into the balance? Dr. Sax and his colleagues have put this question to the test. They agree that the introduction of exotic *predators* has caused extinctions of native species, but conclude that mere competition from exotic species shows little sign of causing extinctions. The published article hit news-stands on September 8th and can be ac-

cessed online at www.nytimes.com/2008/09/09/science/09inva.html. Dr. Sax notes that native species adapt to exotic competitors in a number of ways: hybridization, natural selection, rapid evolution, and surviving in other ecological niches. For closer scientific inspection please read Dov F. Sax and Steven D. Gaines's report titled *Species invasions and extinction: The future of native biodiversity on islands* www.pnas.org/content/105/suppl.1/11490.full.pdf. Sax and Gaines have

drawn their conclusions from a statistical analysis of current and historical data provided by the International Union for Conservation of Nature's database, which has information on extinctions dating back 500 years. In no case is competition listed as the sole cause for extinction; it is always listed with other pressures such as hunting and disease. Though this report may be unpopular in the scientific community, it is the first to question our current ideas about exotic species.

Weed of the Month



We spotted this Spotted Knapweed

Spotted Knapweed, *Centaurea biebersteinii*, is a biennial or short-lived perennial. It has hairy, deeply cut leaves, and purple or occasionally white flowers on the end of one or more stems. The bracts on the flower-heads have a black-tipped fringe that gives a spotted appearance. It can grow up to 1.5 meters tall. It occurs frequently in BC's southern interior. Thirteen different species of Knapweed exist in BC, none of which are native. They are very competitive with desirable forage in disturbed areas, and will sometimes spread

into undisturbed areas. Individual plants produce up to 140,000 seeds per square meter, which usually stay around the parent plant unless soil is transported elsewhere. NWIPC is attempting to eradicate all knapweeds in our operating area in northern BC. Hand pull, cut, and mow small infestations before they seed. Make sure to remove the entire root so plants can not re-sprout. NWIPC is monitoring reported areas to make sure no plants go to seed. We need your help in reporting this plant! Call 1-866-44WEEDS.

NWIPC Events in September, October, and November

September	28th	-BC Rivers Day - Prince George
October	9th-10th	-Yukon Invasive Species Forum Whitehorse, Yukon
	29th-30th	-Register soon by email Bruce.Bennett@gov.yk.ca
		-Invasive Plant Research in BC forum: Richmond, BC
		-Register soon at www.invasiveplantcouncilbc.ca
November	25th	-NWIPC fall meeting, Fort Fraser
		-RSVP its free to participate and learn

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Bright idea!
Get students
to do a
weed-pull

BC is Hawkweed hot-bed

Linda Wilson, Manager of the Ministry of Agriculture and Lands' invasive plant management program, spoke about invasive Hawkweeds at the Cariboo Chilcotin Coast Invasive Plant Committee Annual General Meeting. She called BC a "hotbed of hawkweeds" because BC is relatively new ground for these weeds. The far reaching effects of this plant are still unknown. Orange hawkweed is one of the most invasive plant species in BC: it has no need for pollination to make seeds; seeds have minute barbs that catch on clothes and fur and thus can travel long distances; seeds can blow in wind; above-ground stolons creep and grow new plants at their tips; hand-pulling breaks below-ground rhizomes, activating new growth from fragments; fibrous roots sprout buds to form new clones; mowing the top-growth makes plants creep more; its pretty flowers look unassuming; it can tolerate many climates, and thrives in nutrient-poor soils, taking advantage of special soil fungi to absorb extra nutrients in the soil, competing with native species.



Linda Wilson holding a Hawkweed

In greenhouse studies a Meadow hawkweed seed was germinated and allowed to grow; after four months the single hawkweed plant had produced 25 stolons which grew 17 clones, 3500 seeds, and 730 root-buds—from which could sprout new clones. Yellow hawkweeds can be either native or invasive. BC has six native hawkweed species, but they are kept in check by nature and don't tend to take over vast areas. Among these native Hawkweed species is the beautiful White hawkweed. A Hawkweed key can be found here: www.for.gov.bc.ca/hfp/publications/00230/Hawkweed%20key_PNW_R3-

June06.pdf The key lists them all and how to discern among them. However, be advised that invasive hawkweeds can hybridize and produce variations in characteristics. Managing hawkweed infestations can be challenging. Hand-pulling is only effective if every piece of this plant is removed from the soil. Hawkweed responds well to herbicide, but will invade again if areas are left idle; Treatment is only effective in conjunction with reintroduction of grasses and native forbs. New infestations of low densities may respond well to fertilization to keep areas hawkweed-free. Fertilization may change the hawkweed-soil fungi relationship to make hawkweed less aggressive to neighboring plants. Tilling the soil is much less effective, and must be done at least three times per growing season for up to four years, combined with seeding competitive plants to take over infested areas. Give the NWIPC a call; we can help you with treatment of your hawkweed. Call 1-866-44WEEDS.

We'd Say



Helga Vulggåreh posing with a Common tansy

Beautiful Swedish actress Helga Vul-

ggåreh was taken to hospital today. Known for her role in the famous TV drama *Milkmaids of the Alps* and countless IKEA commercials, she was fond of making tea from wild herbs and berries. Unknowingly, she drank too much toxic tansy tea and may die of liver failure. But seriously, Tansy does produce a toxic substance called *thujone*. Tansy has been used by herbalists to expel parasites in the digestive tract, and treating a number of other ailments. Tansy should not be taken without consulting a professional herbalist. You can identify tansy by its long-lasting, button-like yellow flowers. Please remove and/or report tansy infestations to the NWIPC.

FINANCIAL STATEMENT AVAILABLE

This notice is to let all NWIPC members know that the 2007 financial statement is available for distribution. The financial review was completed by Deloitte & Touche, Prince George, and has been signed-off by the NWIPC Board of Directors. To obtain a copy, please email info@nwipc.org or call 1-866-4493337 and give us your address.

The Northwest Invasive Plant Council
 Report Invasive Plants
 1-866-44WEEDS (1-866-449-3337)
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Bright Idea!
 Lease unused
 land to a ranch