

<b>NAME OF SPECIES:</b> <i>Centaurea nigrescens</i>	
<b>Synonyms:</b> <i>Centaures vochinensis</i> and <i>C. dubia tansalpina</i> ; <i>Centaurea pratensis</i> nom. illeg.	
<b>Common Name:</b> Tyrol Knapweed, Alpine Knapweed, Wocheiner Knapweed, Vochin Knapweed, and Short-fringed Knapweed	<b>Cultivars?</b> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
<b>A. CURRENT STATUS AND DISTRIBUTION</b>	
I. In Wisconsin?	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	2. <u>Abundance:</u> Low
	3. <u>Geographic Range:</u> Bayfield, Waukesha, Milwaukee, and Dane counties (1)
	4. <u>Habitat Invaded:</u> Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input checked="" type="checkbox"/>
	5. <u>Historical Status and Rate of Spread in Wisconsin:</u> scattered small populations only at this time.
	6. <u>Proportion of potential range occupied:</u> Low
II. Invasive in Similar Climate Zones	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	<u>Where (include trends):</u> CA, CT, DC, ID, IL, IN, MA, MD, ME, MI, MO, MT, NE, NH, NJ, NY, OH, OR, PA, RI, VA, VT, WA, WI, WV, and WY (1)
III. Invasive in Which Habitat Types	1. Upland <input type="checkbox"/> Wetland <input type="checkbox"/> Dune <input type="checkbox"/> Prairie <input type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Grassland <input checked="" type="checkbox"/> Bog <input type="checkbox"/> Fen <input type="checkbox"/> Swamp <input type="checkbox"/> Marsh <input type="checkbox"/> Lake <input type="checkbox"/> Stream <input type="checkbox"/> Other:
IV. Habitat Affected	1. <u>Soil types favored or tolerated:</u> Requires a pH from 6.1 to 7.8 (7)
	2. <u>Conservation significance of threatened habitats:</u> Invades pastures and natural areas threatening native species and the fauna that depends on them (2)
V. Native Range and Habitat	1. <u>List countries and native habitat types:</u> South Central and Eastern Europe (6)
VI. Legal Classification	1. <u>Listed by government entities?</u> Colorado, Washington, Idaho, and Oregon
	2. <u>Illegal to sell?</u> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Notes:
<b>B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS</b>	
I. Life History	1. <u>Type of plant:</u> Annual <input type="checkbox"/> Biennial <input type="checkbox"/> Monocarpic Perennial <input type="checkbox"/> Herbaceous Perennial <input checked="" type="checkbox"/> Vine <input type="checkbox"/> Shrub <input type="checkbox"/> Tree <input type="checkbox"/>
	2. <u>Time to Maturity:</u> Blooms in May, June, July, August, September, October (7)
	3. <u>Length of Seed Viability:</u> Seeds can remain viable for over 1 year (4)
	4. <u>Methods of Reproduction:</u> Asexual <input type="checkbox"/> Sexual <input checked="" type="checkbox"/> <u>Notes:</u> Can produce hundreds or up to a thousand seeds on a single plant (4).
	5. <u>Hybridization potential:</u> <i>Centaurea jacea</i> x <i>nigra</i> (Meadow knapweed,) (5)
II. Climate	1. <u>Climate restrictions:</u> Requires an altitude of 0 to 1,931 meters (0 to 6,335 feet), full sun,(7) and survives in USDA Zone's 2a through 11. (7)

	2. <u>Effects of potential climate change:</u> N/a
III. Dispersal Potential	<p>1. <u>Pathways - Please check all that apply:</u></p> <p><u>Unintentional:</u> Bird <input type="checkbox"/> Animal <input checked="" type="checkbox"/> Vehicles/Human <input checked="" type="checkbox"/>  Wind <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Other: Can be spread in contaminated hay or seed mixes, also by mowing equipment (4).</p> <p><u>Intentional:</u> Ornamental <input checked="" type="checkbox"/> Forage/Erosion control <input type="checkbox"/>  Medicine/Food: Other:</p> <p>2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control:</u> Can produce hundreds or up to a thousand seeds on a single plant. Able to grow on poor soil(4)</p>
IV. Ability to go Undetected	<p>1. HIGH <input type="checkbox"/> MEDIUM <input checked="" type="checkbox"/> LOW <input type="checkbox"/>  Most people do not look closely at knapweed species</p>
<b>C. DAMAGE POTENTIAL</b>	
I. Competitive Ability	<p>1. <u>Presence of Natural Enemies:</u> No</p> <p>2. <u>Competition with native species</u> Invades pastures and natural areas threatening native species and the fauna that depends on them (2)</p> <p>2. Rate of Spread:  -changes in relative dominance over time:  -change in acreage over time:  HIGH(1-3 yrs) <input checked="" type="checkbox"/> MEDIUM (4-6 yrs) <input type="checkbox"/> LOW (7-10 yrs) <input type="checkbox"/>  Notes:</p>
II. Environmental Effects	<p>1. <u>Alteration of ecosystem/community composition?</u>  YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Notes: Larger stands clearly reduce the number of individuals of native species. No evidence of significant or major alteration in community structure (4).</p> <p>2. <u>Alteration of ecosystem/community structure?</u>  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  Notes: Can increase density in herb layer; no evidence of significant impacts or major alteration of structure. (4)</p> <p>3. <u>Alteration of ecosystem/community functions and processes?</u>  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  Notes:</p> <p>4. <u>Allelopathic properties?</u> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  Notes:</p>
<b>D. SOCIO-ECONOMIC EFFECTS</b>	
I. Positive aspects of the species to the economy/society:	Notes: None reported
II. Potential Socio-Economic Effects of Requiring Controls:	Positive: Negative:
III. Direct and indirect Socio-Economic Effects of Plant :	Notes:
IV. Increased Costs to Sectors Caused by the Plant::	Notes:

V. Effects on human health:	Notes:
VI. Potential socio-economic effects of restricting use:	Positive: Would protect pastures, hayfields and recreation areas Negative:
<b>E. CONTROL AND PREVENTION</b>	
I. Costs of Prevention :	Notes:
II. Responsiveness to prevention:	Notes:
III. Effective Control tactics: (provide only basic info)	Mechanical <input checked="" type="checkbox"/> Biological <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Times and uses: Mechanical is effective but requires repeated digging. For big patches tilling is effective.
IV. Costs of Control:	Notes: Difficult to pull or dig up. Control methods for large stands will in many cases require multiple herbicide treatments. (4) Management requires a major investment: e.g. more than 100 person-hours/year of manual effort or more than 10 person hours/year using mechanical equipment, or the use of herbicide, grazing animals, fire, etc. for more than 5 years to suppress a 1 acre infestation. Eradication may be impossible. (4)
V. Cost of prevention vs. Cost of allowing invasion to occur:	Notes:
VI. Non-Target Effects of Control:	Notes:
VII. Efficacy of monitoring:	Notes:
VIII. Legal and landowner issues:	Notes:
<b>F. HYBRIDS AND CULTIVARS AND VARIETIES</b>	
I. Known hybrids? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Name of hybrid: <i>Centaurea jacea</i> x <i>nigra</i> (Meadow knapweed,) (5) Names of hybrid cultivars: NA
II. Species cultivars and varieties	Names of cultivars, varieties and any information about the invasive behaviors of each:
	Notes:

**G. REFERENCES USED:**

- UW Herbarium (Madison or Stevens Point)
- WI DNR
- Bugwood (Element Stewardship Abstracts)
- Native Plant Conservation Alliance
- IPANE
- USDA Plants

Number	Reference
1	<a href="http://plants.usda.gov/java/nameSearch">http://plants.usda.gov/java/nameSearch</a>
2	<a href="http://www.nwcb.wa.gov">http://www.nwcb.wa.gov</a>
3	<a href="http://www.westerninvasivesnetwork.org">http://www.westerninvasivesnetwork.org</a>
4	Jordan, M.J., G. Moore and T.W. Weldy. 2008. Invasiveness ranking system for non-native plants of New York. Unpublished. The Nature Conservancy, Cold Spring Harbor, NY; Brooklyn Botanic Garden, Brooklyn, NY; The Nature Conservancy, Albany, NY. <a href="http://nyis.info/PlantAssessments/Centaurea.jacea.NYS.pdf">http://nyis.info/PlantAssessments/Centaurea.jacea.NYS.pdf</a>
5	<a href="http://www.nwcb.wa.gov/weed_list/Class_B_weeds.htm">http://www.nwcb.wa.gov/weed_list/Class_B_weeds.htm</a>
6	<a href="http://www.nwcb.wa.gov/weed_info/Centaurea_nigrescens.html">http://www.nwcb.wa.gov/weed_info/Centaurea_nigrescens.html</a>
7	<a href="http://zipcodezoo.com/Plants/C/Centaurea_nigrescens/">http://zipcodezoo.com/Plants/C/Centaurea_nigrescens/</a>

Author(s), Draft number, and date completed: Stephanie Lind, 1, 5-24-11

Reviewer(s) and date reviewed: Kelly Kearns, 10/18/2011

Approved and Completed Date: 12/20/2011