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APPENDIX S1. Additional information on the species and sources used to build the NSC database.

TABLE S1. Characteristics of the species considered in this study and list of references used to build the NSC database.

Species	Family	Group	Functional type	References
Abies alba	Pinaceae	Gymnosperm	Conifer	Hoch et al. 2003
Abies lasiocarpa	Pinaceae	Gymnosperm	Conifer	Bansal and Germino 2009, Hu et al. 2009
Acacia furcatispina	Fabaceae	Angiosperm	Drought deciduous	Casenave et al. 1998
Acer campestre	Sapindaceae	Angiosperm	Winter deciduous	Hoch et al. 2003
Acer rubrum	Sapindaceae	Angiosperm	Winter deciduous	Richardson et al. 2013
Acer saccharum	Sapindaceae	Angiosperm	Winter deciduous	Wong et al. 2003, 2009, Liu et al. 1994
Achnatherum lettermanii	Poaceae	Angiosperm	Herbaceous	Donart 1969, Donart and Cook 1970
Adenostoma fasciculatum	Rosaceae	Angiosperm	Evergreen	Jones et al. 1960, Shaver 1981
Albizia adinocephala	Fabaceae	Angiosperm	Drought deciduous	Würth et al. 2005
Alhagi sparsifolia	Fabaceae	Angiosperm	Herbaceous	Arndt et al. 2004
Alnus rubra	Betulaceae	Angiosperm	Winter deciduous	Matson et al. 1994
Anacardium excelsum	Anacardiaceae	Angiosperm	Evergreen	Newell et al. 2002, Würth et al. 2005
Andropogon hallii	Poaceae	Angiosperm	Herbaceous	Northup and Nichols 1998
Annona spraguei	Annonaceae	Angiosperm	Drought deciduous	Würth et al. 2005
Arbutus unedo	Ericaceae	Angiosperm	Evergreen	Meletiou-Christou et al. 1994

Arctostaphylos glauca	Ericaceae	Angiosperm	Evergreen	Shaver 1981
Astronium graveolens	Anacardiaceae	Angiosperm	Drought deciduous	Würth et al. 2005
Atamisquea emarginata	Capparaceae	Angiosperm	Evergreen	Casenave et al. 1998
Aucuba japonica	Garryaceae	Angiosperm	Evergreen	Ino et al. 2003
Baikiaea plurijuga	Fabaceae	Angiosperm	Drought deciduous	Richer 2008
Bergenia crassifolia	Saxifragaceae	Angiosperm	Herbaceous	Ivanova et al. 1998
Betula papyrifera	Betulaceae	Angiosperm	Winter deciduous	Richardson et al. 2013
Betula pendula	Betulaceae	Angiosperm	Winter deciduous	Oleksyn et al. 2000
Bothriochloa saccharoides	Poaceae	Angiosperm	Herbaceous	Nofal et al. 2004
Bouteloua gracilis	Poaceae	Angiosperm	Herbaceous	Nofal et al. 2004
Burkea africana	Caesalpiniaceae	Angiosperm	Drought deciduous	Richer 2008
Calamagrostis canadensis	Poaceae	Angiosperm	Herbaceous	Hogg and Lieffers 1991
Calamagrostis epigeios	Poaceae	Angiosperm	Herbaceous	Dusek 2002
Calamagrostis villosa	Poaceae	Angiosperm	Herbaceous	Zeider et al. 2008
Calamovilfa longifolia	Poaceae	Angiosperm	Herbaceous	Northup and Nichols 1998
Calligonum caput-medusae	Polygonaceae	Angiosperm	Evergreen	Arndt et al. 2004
Camellia japonica	Theaceae	Angiosperm	Evergreen	Ino et al. 2003
Carapa guianensis	Meliaceae	Angiosperm	Evergreen	Dunisch and Puls 2003
Carpinus betulus	Betulaceae	Angiosperm	Winter deciduous	Hoch et al. 2003, Schadel et al. 2009
Castilla elastica	Moraceae	Angiosperm	Drought deciduous	Würth et al. 2005
Ceanothus greggii	Rhamnaceae	Angiosperm	Evergreen	Shaver 1981
Cecropia schreberiana	Urticaceae	Angiosperm	Evergreen	Newell et al. 2002, Würth et al. 2005
Cecropia schreberiana ssp. antillarum	Urticaceae	Angiosperm	Evergreen	Würth et al. 2005
Cedrela odorata	Meliaceae	Angiosperm	Drought deciduous	Dunisch and Puls 2003
Chrysothamnus viscidiflorus	Asteraceae	Angiosperm	Evergreen	Donart 1969
Cistus laurifolius	Cistaceae	Angiosperm	Evergreen	Milla et al. 2007
Colchicum autumnale	Colchicaceae	Angiosperm	Herbaceous	Frankova et al. 2004
Colliguaya odorifera	Euphorbiaceae	Angiosperm	Evergreen	Shaver 1981

Cordia alliodora	Boraginaceae	Angiosperm	Winter deciduous	Würth et al. 2005
Cornus sericea subsp. sericea	Cornaceae	Angiosperm	Winter deciduous	Landhäusser and Lieffers 1997
Cornus sericea	Cornaceae	Angiosperm	Winter deciduous	Ashworth et al. 1993
Corylus cornuta	Betulaceae	Angiosperm	Winter deciduous	Landhäusser and Lieffers 1997
Cotinus coggygria	Anacardiaceae	Angiosperm	Winter deciduous	Diamantoglou et al. 1989
Dactyladenia barteri	Chrysobalanaceae	Angiosperm	Evergreen	Latt et al. 2001
Dactylis glomerata	Poaceae	Angiosperm	Herbaceous	Moriyama et al. 2003
Daphniphyllum macropodum	Daphniphyllaceae	Angiosperm	Evergreen	Ino et al. 2003
Dimerandra emarginata	Orchidaceae	Angiosperm	Herbaceous	Zotz 1999
Dittrichia viscosa	Asteraceae	Angiosperm	Herbaceous	Meletiou-Christou et al. 1998
Dryobalanops aromatica	Dipterocarpaceae	Angiosperm	Evergreen	Ichie et al. 2005
Echinolaena inflexa	Poaceae	Angiosperm	Herbaceous	Souza et al. 2010
Echinospartum horridum	Fabaceae	Angiosperm	Winter deciduous	Palacio et al. 2007b
Enterolobium cyclocarpum	Fabaceae	Angiosperm	Drought deciduous	Würth et al. 2005
Epilobium angustifolium	Onagraceae	Angiosperm	Herbaceous	Landhäusser and Lieffers 1997
Erica australis	Ericaceae	Angiosperm	Evergreen	Cruz and Moreno 2001
Erythrophleum africanum	Myrtaceae	Angiosperm	Evergreen	Richer 2008
Eucalyptus astringens	Myrtaceae	Angiosperm	Evergreen	Arndt et al. 2008
Eucalyptus globulus	Myrtaceae	Angiosperm	Evergreen	O'Grady et al. 2010
Euphorbia acanthothamnos	Euphorbiaceae	Angiosperm	Evergreen	Meletiou-Christou et al. 1992
Euphorbia esula	Euphorbiaceae	Angiosperm	Herbaceous	Gesch et al. 2007
Fagus grandifolia	Fagaceae	Angiosperm	Winter deciduous	Richardson et al. 2013
Fagus sylvatica	Fagaceae	Angiosperm	Winter deciduous	Barbaroux and Bréda 2002, Hoch et al. 2003, Damesin and Lelarge 2003, Schadel et al. 2009, Goicoechea et al. 2009, El Zein et al. 2011
Fauria crista-galli	Menyanthaceae	Angiosperm	Herbaceous	Shibata and Nishida

				1993
Ficus insipida	Moraceae	Angiosperm	Evergreen	Würth et al. 2005
Galanthus nivalis	Amaryllidaceae	Angiosperm	Herbaceous	Orthen and Wehrmeyer 2004
Geranium caespitosum	Geraniaceae	Angiosperm	Herbaceous	Donart 1969, Donart and Cook 1970
Gliricidia sepium	Fabaceae	Angiosperm	Evergreen	Erdmann et al. 1993, Latt et al. 2000, 2001
Guibourtia coleosperma	Fabaceae	Angiosperm	Evergreen	Richer 2008
Hedera helix	Araliaceae	Angiosperm	Evergreen	Zotz et al. 2006, Bandurska et al. 2009
Hevea brasiliensis	Euphorbiaceae	Angiosperm	Drought deciduous	Chantuma et al. 2009
Holcus lanatus	Poaceae	Angiosperm	Herbaceous	Scheirs et al. 2002
Ilex crenata	Aquifoliaceae	Angiosperm	Evergreen	Ino et al. 2003
Jacaratia mexicana	Caricaceae	Angiosperm	Drought deciduous	Bullock 1992
Julbernardia globiflora	Fabaceae	Angiosperm	Drought deciduous	Richer 2008
Juniperus occidentalis	Cupressaceae	Gymnosperm	Conifer	Matson et al. 1994
Kageneckia angustifolia	Rosaceae	Angiosperm	Evergreen	Piper et al. 2006
Larix decidua	Pinaceae	Gymnosperm	Conifer	Hoch et al. 2003
Larrea tridentata	Zygophyllaceae	Angiosperm	Evergreen	Casenave et al. 1998
Lepidium latifolium	Brassicaceae	Angiosperm	Herbaceous	Renz and DiTomaso 2004
Lepidium subulatum	Brassicaceae	Angiosperm	Drought deciduous	Palacio et al. 2007a
Leucaena leucocephala	Fabaceae	Angiosperm	Evergreen	Latt et al. 2000, 2001
Limonium gmelini	Plumbaginaceae	Angiosperm	Herbaceous	Murakeözy et al. 2002
Linum suffruticosum	Linaceae	Angiosperm	Evergreen	Palacio et al. 2007a
Liquidambar styraciflua	Altingiaceae	Angiosperm	Winter deciduous	Sholtis et al. 2004
Lithraea caustica	Anacardiaceae	Angiosperm	Evergreen	Shaver 1981
Lolium perenne	Poaceae	Angiosperm	Herbaceous	Moriyama et al. 2003
Luehea seemannii	Malvaceae	Angiosperm	Evergreen	Lovelock et al. 1999, Newell et al. 2002, Würth et al. 2005
Lythrum salicaria	Lythraceae	Angiosperm	Herbaceous	Katovich et al. 1999
Melinis minutiflora	Poaceae	Angiosperm	Herbaceous	Souza et al. 2010
Nectandra gentlei	Lauraceae	Angiosperm	Evergreen	Würth et al. 2005

Nyssa sylvatica	Nyssaceae	Angiosperm	Winter deciduous	Cipollini and Stiles 1991
Olea europaea	Oleaceae	Angiosperm	Evergreen	Meletiou-Christou et al. 1994
Ononis fruticosa	Fabaceae	Angiosperm	Winter deciduous	Palacio et al. 2007b
Oxytropis sericea	Fabaceae	Angiosperm	Herbaceous	Wyka and Galen 2000
Phleum pratense	Poaceae	Angiosperm	Herbaceous	Moriyama et al. 2003
Phlomis fruticosa	Lamiaceae	Angiosperm	Evergreen	Meletiou-Christou et al. 1992
Phoebe cinnamomifolia	Lauraceae	Angiosperm	Evergreen	Würth et al. 2005
Phragmites australis	Poaceae	Angiosperm	Herbaceous	Koppitz 2004, Tursun et al. 2011
Picea abies	Pinaceae	Gymnosperm	Conifer	Hoch et al. 2003, Hoch 2008, Schädel et al. 2009, Repo et al. 2011 Stockfors and Linder 1998, Jaggi et al. 2002
Picea engelmanii	Pinaceae	Gymnosperm	Conifer	Hu et al. 2009
Picea glauca	Pinaceae	Gymnosperm	Conifer	Sveinbjörnsson et al. 2010
Picea rubens	Pinaceae	Gymnosperm	Conifer	Amundson et al. 1992, Richardson et al. 2013
Picea sitchensis	Pinaceae	Gymnosperm	Conifer	Matson et al. 1994
Pinus banksia	Pinaceae	Gymnosperm	Conifer	Tjoelker et al. 2008
Pinus cembra	Pinaceae	Gymnosperm	Conifer	Hoch et al. 2002, Hoch and Körner 2003, Gruber et al. 2011b, Li et al. 2001, 2002
Pinus contorta	Pinaceae	Gymnosperm	Conifer	Hu et al. 2009
Pinus elliottii	Pinaceae	Gymnosperm	Conifer	Gholz and Cropper 1991
Pinus hartwegii	Pinaceae	Gymnosperm	Conifer	Hoch and Körner 2003
Pinus palustris	Pinaceae	Gymnosperm	Conifer	Sayer and Haywood 2006
Pinus ponderosa	Pinaceae	Gymnosperm	Conifer	Matson et al. 1994
Pinus radiata	Pinaceae	Gymnosperm	Conifer	Ow et al. 2010

Pinus sylvestris	Pinaceae	Gymnosperm	Conifer	Ericsson 1979, Ericsson et al. 1980, 1985, Fischer and Höll 1991, Hoch and Körner 2003, Hoch et al. 2003, Kaipiainen and Sofronova 2003, Schädel et al. 2009, Susiluoto et al. 2010, Gruber et al. 2011a, Oberhuber et al. 2011
Pinus taeda	Pinaceae	Gymnosperm	Conifer	Adams et al. 1986, Birk and Matson 1986, Ludovici et al. 2002, Rogers and Ellsworth 2002
Piper arieianum	Piperaceae	Angiosperm	Evergreen	Marquis et al. 1997
Pistacea lentiscus	Anacardiaceae	Angiosperm	Evergreen	Meletiou-Christou et al. 1994
Pistacea terebinthus	Anacardiaceae	Angiosperm	Winter deciduous	Diamantoglou et al. 1989
Pittoniotis trichantha	Rubiaceae	Angiosperm	Evergreen	Würth et al. 2005
Platanus x acerifolia	Platanaceae	Angiosperm	Winter deciduous	Haddad et al. 1995
Poa fawcettiae	Poaceae	Angiosperm	Herbaceous	Tolsma et al. 2010
Populus canadensis	Salicaceae	Angiosperm	Winter deciduous	Kosola et al. 2001
Populus deltoides	Salicaceae	Angiosperm	Winter deciduous	Ow et al. 2010
Populus euphratica	Salicaceae	Angiosperm	Winter deciduous	Arndt et al. 2004
Populus grandidentata	Salicaceae	Angiosperm	Winter deciduous	Gough et al. 2009
Populus tremuloides	Salicaceae	Angiosperm	Winter deciduous	Landhäusser and Lieffers 2003 Landhäusser and Lieffers 2012
Primula cuneifolia	Primulaceae	Angiosperm	Herbaceous	Shibata and Nishida 1993
Prosopis glandulosa	Fabaceae	Angiosperm	Evergreen	Fick and Sosebee 1981
Prunus avium	Rosaceae	Angiosperm	Winter deciduous	Hoch et al. 2003
Prunus laurocerasus	Rosaceae	Angiosperm	Evergreen	Bandurska et al. 2009
Pseudobombax septenatum	Malvaceae	Angiosperm	Drought	Würth et al. 2005

			deciduous	
Pseudoroegneria spicata	Poaceae	Angiosperm	Herbaceous	Donart 1969, Donart and Cook 1970
Pseudotsuga menziesii	Pinaceae	Gymnosperm	Conifer	Webb and Kilpatrick 1993, Billow et al. 1994, Matson et al. 1994, Bansal and Germino 2009, Woodruff and Meinzer 2011
Psychotria furcata	Rubiaceae	Angiosperm	Evergreen	Tissue and Wright 1995
Psychotria limonensis	Rubiaceae	Angiosperm	Evergreen	Tissue and Wright 1995
Psychotria marginata	Rubiaceae	Angiosperm	Evergreen	Tissue and Wright 1995
Pterocarpus angolensis	Fabaceae	Angiosperm	Drought deciduous	Richer 2008
Pterocarpus soyauxii	Fabaceae	Angiosperm	Drought deciduous	Latt et al. 2001
Quercus aquifolioides	Fagaceae	Angiosperm	Evergreen	Zhu et al. 2012
Quercus coccifera	Fagaceae	Angiosperm	Evergreen	Meletiou-Christou et al. 1994
Quercus ilex	Fagaceae	Angiosperm	Evergreen	Fleck et al. 1996
Quercus petraea	Fagaceae	Angiosperm	Winter deciduous	Barbaroux and Bréda 2002, Hoch et al. 2003, El Zein et al. 2011
Quercus rubra	Fagaceae	Angiosperm	Winter deciduous	Gough et al. 2009, Richardson et al. 2013
Quillaja saponaria	Fagaceae	Angiosperm	Evergreen	Shaver 1981
Rhus ovata	Anacardiaceae	Angiosperm	Evergreen	Shaver 1981
Rosa acicularis	Rosaceae	Angiosperm	Winter deciduous	Landhäusser and Lieffers 1997
Rubus spectabilis	Rosaceae	Angiosperm	Winter deciduous	Zasada et al. 1994
Salvia lavandulifolia	Lamiaceae	Angiosperm	Evergreen	Palacio et al. 2007b
Satureja montana	Lamiaceae	Angiosperm	Evergreen	Palacio et al. 2007b
Schefflera morototoni	Araliaceae	Angiosperm	Evergreen	Würth et al. 2005
Schizachyrium condensatum	Poaceae	Angiosperm	Herbaceous	Northup and Nichols

				1998
Senecio integerrimus	Asteraceae	Angiosperm	Herbaceous	Donart 1969
Senna siamea	Fabaceae	Angiosperm	Evergreen	Latt et al. 2001
Solanum carolinense	Solanaceae	Angiosperm	Herbaceous	Nichols et al. 1991
Solanum elaeagnifolium	Solanaceae	Angiosperm	Herbaceous	Bouhache et al. 1993
Sphaeralcea munroana	Malvaceae	Angiosperm	Herbaceous	Pendery et al. 1993
Spondias mombin	Anacardiaceae	Angiosperm	Drought deciduous	Würth et al. 2005
Spondias purpurea	Anacardiaceae	Angiosperm	Drought deciduous	Bullock 1992
Swietenia macrophylla	Meliaceae	Angiosperm	Evergreen	Dunisch and Puls 2003
Symphoricarpos oreophilus	Caprifoliaceae	Angiosperm	Winter deciduous	George and McKell 1978
Symphoricarpos vaccinioides	Caprifoliaceae	Angiosperm	Winter deciduous	Donart 1969, Donart and Cook 1970
Tamarix ramosissima	Tamaricaceae	Angiosperm	Winter deciduous	Arndt et al. 2004
Tectona grandis	Lamiaceae	Angiosperm	Drought deciduous	Singh and Srivastana 1986
Thymelaea tartonraira	Thymelaeaceae	Angiosperm	Evergreen	Meletiou-Christou et al. 1994
Tilia platyphyllos	Malvaceae	Angiosperm	Winter deciduous	Hoch et al. 2003
Trevoa trinervis	Rhamnaceae	Angiosperm	Drought deciduous	Shaver 1981
Trillium erectum	Melanthiaceae	Angiosperm	Herbaceous	Lapointe 1998
Tsuga canadensis	Pinaceae	Gymnosperm	Conifer	Richardson et al. 2013
Tsuga heterophylla	Pinaceae	Gymnosperm	Conifer	Billow et al. 1994, Matson et al. 1994
Tsuga mertensiana	Pinaceae	Gymnosperm	Conifer	Matson et al. 1994
Typha angustifolia	Typhaceae	Angiosperm	Herbaceous	Sharma et al. 2008, Asaeda et al. 2008
Typha latifolia	Typhaceae	Angiosperm	Herbaceous	Tursun et al. 2011
Urera caracasana	Urticaceae	Angiosperm	Drought deciduous	Newell et al. 2002
Vaccinium myrtillus	Ericaceae	Angiosperm	Winter deciduous	Pakonen et al. 1991
Veratrum album	Melanthiaceae	Angiosperm	Herbaceous	Kleijn et al. 2005
Viburnum edule	Adoxaceae	Angiosperm	Winter deciduous	Landhäusser and Lieffers 1997
Werauhia sanguinolenta	Bromeliaceae	Angiosperm	Herbaceous	Zotz 2006

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