

APPENDIX C
PLANTS USED FOR NECTAR BY ADULTS
(Karner Blue Butterfly Recovery Plan, August 2003)

Table C1 provides a list of all of the nectar plants reported to be used by Karner blue adults. Some of these records may be based on single observations of one individual, while others represent hundreds of observed uses. These records are based on observing at least one adult to probe a flower with its mouth parts. In the majority of cases, feeding was further confirmed by observing the adult to remain with its mouth parts in a single flower or floret for some period of time after initial probing.

Table C1. Nectar plant species reported to be used by the Karner blue butterfly. Scientific names follow Ownby and Morley (1991), Gleason and Cronquist (1991) or Swink and Wilhelm (1994).

Scientific name	Common name	Location	Reference
-----First brood adult nectar sources-----			
-----Herbaceous species-----			
<i>Achillea millefolium</i> L.	Common yarrow	WI, IN	2,7,14,15
<i>Anemone cylindrica</i> Gray	Thimbleweed	WI,IN	7,15
<i>Arabis lyrata</i> L.	Sand-cress	IN,MN,ON,WI	2,5,7,8,10,9,14,15
<i>Arenaria serpyllifolia</i> L.	Thyme-leaved sandwort	ON	10
<i>Baptisia bracteata</i> var. <i>glabrescens</i> (Larisey) Isely (<i>leucophaea</i>)	Prairie wild indigo	WI	2,14
<i>Berteroa incana</i> (L.) DC.	Hoary alyssum	WI	2,7
<i>Centaurea biebersteinii</i> (<i>maculosa</i>) DC.	Spotted knapweed	WI	7
<i>Cerastium</i> sp.	Chickweed	WI	7
<i>Chrysanthemum leucanthemum</i> L.	Ox-eye daisy	WI	7
<i>Commandra umbellata</i> (L.) Nutt.	Bastard toadflax	MI	11,13
<i>Coreopsis lanceolata</i> L.	Lance-leafed coreopsis	IN	8,15
<i>Coreopsis tripteris</i> L.	Tall coreopsis	IN	15
<i>Erigeron strigosus</i> Muhl.	Daisy fleabane	WI	2
<i>Euphorbia corollata</i> L.	Flowering spurge	WI,IN	9,15
<i>Euphorbia podperae</i> (<i>esula</i>) Croizat	Leafy spurge	WI	7,9
<i>Fragaria virginiana</i> Duchesne	Strawberry	NY,WI,IN	3,7,15
<i>Gaylussacia baccata</i> (Wang.) K. Koch	Huckleberry	IN	15
<i>Geranium maculatum</i> L.	Wild geranium	ON	10
<i>Hedyotis</i> (<i>Houstonia</i>) <i>longifolia</i> (Gaetrn.) Hook.	Longleaved houstonia	MN,WI	5,7,9,14
<i>Helianthemum canadense</i> (L.) Michx.	Frostweed	NH,IN	1,15
<i>Hieracium aurantiacum</i> L.	Orange hawkweed	WI	2,7,9,14
<i>Hieracium</i> sp.	Hawkweed	ON,NH,WI	1,2,10
<i>Krigia biflora</i> (Wlt.) Blake	Two-flowered Cynthia	WI	2,14
<i>Liatris</i> Spp.	Blazing star	IN	15
<i>Lithospermum canescens</i> (Michx.) Lehm.	Hoary puccoon	IN	15
<i>Lithospermum carolinense</i> (Walt.) MacM.	Hairy puccoon	ON,WI,IN	2,10,15
<i>Lupinus perennis</i> L.	Wild lupine	MI,NH,OM,WI,IN	1,2,7,9,10,11,14,15
<i>Medicago lupulina</i> L.	Black medic	WI	2,7
<i>Melilotus officinalis</i> (L.) Pallas	Yellow sweet clover	IN,WI	2,7,8

Table C1. (continued)

Scientific name	Common name	Location	Reference
<i>Pedicularis canadensis</i> L.	Lousewort	WI	2,14
<i>Phlox pilosa</i> L.	Downy phlox	IN	8,15
<i>Potentilla recta</i> L.	Rough-fruited cinquefoil	WI	2
<i>Potentilla simplex</i> Michx.	Common cinquefoil	WI,MI,IN	2,7,13,14,15
<i>Potentilla</i> sp.	Cinquefoil	MI,NY	3,11
<i>Rosa carolina</i> L.	Carolina rose	IN	15
<i>Rumex acetosella</i> L.	Sheep sorel	WI	2
<i>Senecio pauperculus</i> Michx.	Ragwort	WI	7
<i>Senecio</i> sp.	Ragwort	WI	2,9
<i>Smilacina racemosa</i> (L.) Desf.	False spikenard	WI	2,7
<i>Smilacina stellata</i> (L.) Desf.	Star-flow. fals. sol. seal	WI	2,14
<i>Solidago sciaphila</i> Steele	Cliff goldenrod	WI	7
<i>Tephrosia virginiana</i> (L.) Pers.	Goat's rue	NY	3
<i>Tradescantia ohiensis</i> Raf.	Spiderwort	IN	15
<i>Trifolium hybridum</i> L.	Alsike clover	WI	2,14
<i>Trifolium pratense</i> L.	Red clover	WI	7
<i>Trifolium repens</i> L.	White clover	WI	2
<i>Vicia villosa</i> Roth.	Hairy vetch	WI	2
<i>Viola pedata</i> L.	Bird foot violet	NY,WI	2,3,13
<i>Zizia aurea</i> (L.) Koch	Golden alexanders	WI	2
-----Woody species-----			
<i>Amelanchier</i> sp.	Juneberry	ON	10
<i>Ceanothus herbaceus (ovatus)</i> Raf.	Red root	WI	7
<i>Ceanothus</i> sp.	New jersey tea	WI	2
<i>Physocarpus opulifolius</i> (L.) Maxim.	Common ninebark	WI	7
<i>Prunus</i> sp.	Wild plum	NY	3
<i>Rubus allegheniensis</i> Porter	Blackberry	WI	7
<i>Rubus flagellaris</i> Willd.	Dewberry	IN,MI,WI	7,6,8,13,15
<i>Rubus</i> sp. or sPP. (IN)	Bramble	IN,MI,MN,WI	2,5,8,11,9,14,15
<i>Salix humilis</i> Marsh.	Prairie willow	WI	2, 7
<i>Vaccinium</i> sp.	Blueberry	NY,IN	3,15
<i>Vitis riparia</i> Michx.	River grape	MN	5
-----Second brood adult nectar sources-----			
-----Herbaceous species-----			
<i>Achillea millefolium</i> L.	Common yarrow	IN,MI,MN,WI	2,5,7,8,11,14
<i>Amorpha canescens</i> Pursh	Lead plant	WI	2,7,9,14
<i>Apocynum androsaemifolium</i> L.	Spreading dogbane	NH,NY	1,12
<i>Arabis lyrata</i> L.	Sand-cress	IN,WI	2,7,8,14
<i>Asclepias incarnata</i> L.	Swamp milkweed	IN	15
<i>Asclepias syriaca</i> L.	Common milkweed	NH,NY,WI	2,7,12
<i>Asclepias tuberosa</i> L.	Butterfly-weed	IN,MI,MN, NY,ON,WI	2,3,4,5,6,7, 8,10,11,13,15
<i>Asclepias verticillata</i> L.	Whorled milkweed	MI,WI,IN	2,7,8,11,9,13,15
<i>Aster</i> sp.	Aster	WI	2,13
<i>Aureolaria pedicularia</i> (L.) Raf.	Fern-leaved false foxglove	WI	2
<i>Aureolaria</i> sp.	False foxglove	WI	2,13
<i>Berteroa incana</i> (L.) DC.	Hoary alyssum	NY,WI	2,4

Table C1. (continued)

Scientific name	Common name	Location	Reference
<i>Campanula rotundifolia</i> L.	Harebell	MN,WI	1,2,9,14
<i>Centaurea biebersteinii (maculosa)</i> DC.	Spotted knapweed	MI,NY,WI	2,3,4,7,11,13,14
<i>Chrysanthemum leucanthemum</i> L.	Ox-eye daisy	WI	7
<i>Coreopsis lanceolata</i> L.	Lance-leaved coreopsis	MI	11
<i>Coreopsis palmata</i> Nutt.	Stiff tickseed	WI	7,9,14
<i>Coreopsis</i> sp.	Coreopsis	WI	2
<i>Dianthus armeria</i> L.	Deptford pink	MI	11
<i>Erigeron annuus</i> (L.) Pers.	Daisy fleabane	MI,MN	5,11
<i>Erigeron canadensis</i>		WI	9
<i>Erigeron strigosus</i> Muhl.	Daisy fleabane	WI,IN	2,7, 9,15
<i>Erigeron</i> sp.	Fleabane	IN,WI,MI	2,8,13,14
<i>Euphorbia corollata</i> L.	Flowering spurge	IN,MI,MN,WI	1,2,5,6,7,8,11,13,14,15
<i>Euphorbia podperae (esula)</i> Croizat	Leafy spurge	WI	2,7
<i>Euthamia graminifolia (Solidago graminifolia)</i> (L.) Nutt	Grass-leaved goldenrod	NH,WI	2,12,14
<i>Froelichia floridana</i> (Nutt.) Moq.	Cottonweed	WI	7
<i>Galium</i> sp.	Bedstraw	WI	2,14
<i>Gnaphalium obtusifolium</i> L.	Sweet everlasting	MN,WI	1,2,5,9,14
<i>Hackelia deflexa</i> (Wahlenb.) Opiz	Stickseed	MN	5
<i>Hedyotis (Houstonia) longifolia</i> (Gaetrn.) Hook.	Longleaved houstonia	WI	2,14
<i>Helianthemum canadense</i> (L.) Michx.	Frostweed	WI	9
<i>Helianthus divaricatus</i> L.*	Woodland sunflower	IN,MI	8,11,15
<i>Helianthus occidentalis</i> Riddell	Western sunflower	MN,WI,IN	2,5,7,9,14,15
<i>Helianthus</i> sp.	Sunflower	NH,NY,MI,WI	2,11,12,14
<i>Hieracium aurantiacum</i> L.	Orange hawkweed	WI	2,7,9,14
<i>Hieracium pilosella</i> L.	Mouse ear hawkweed	MI	11
<i>Hieracium</i> sp.	Hawkweed	MI	11
<i>Hypericum perforatum</i> L.	Common St.John's wort	MI	11
<i>Krigia biflora</i> (Walt.) Blake	Two-flowered Cynthia	WI	2,14
<i>Lespedeza capitata</i> Michx.	Bush clover	WI	2,14
<i>Liatris aspera</i> Michx.	Rough blazing star	MI,WI	2,6,7,11,9,14
<i>Liatris cylindracea</i> Michx.	Dwarf blazing-star	ON,WI	2,7,9,12,14
<i>Liatris</i> spp.	Blazing-star	IN	15
<i>Lilium philadelphicum</i> L.	Wood lily	NH	1
<i>Linaria canadensis</i> (L.) Dum.-Cours.	Old-field toad flax	WI	2
<i>Linaria vulgaris</i> Hill	Butter-and-eggs	WI	2
<i>Lithospermum caroliniense</i> (Walt.)MacM	Hairy puccoon	WI	2
<i>Lobelia spicata</i> Lam.	Pale-spike lobelia	WI	7
<i>Lotis corniculatus</i> L.	Birdsfoot trefoil	MI,WI	2,11,14
<i>Lupinus perennis</i> L.	Wild lupine	NY,WI	2,12,14
<i>Lycopus americanus</i> Muhl.	Water-horehound	IN	15
<i>Lysimachia</i> sp.	Loosestrife	WI	2,14
<i>Lythrum alatum</i> Pursh.	Winged loosestrife	IN	15
<i>Medicago lupulina</i> L.	Black medic	WI	2,7,9
<i>Medicago sativa</i> L.	Alfalfa	WI	2
<i>Melilotus alba</i> Medic.	White sweet clover	IN,MN,WI	2,5,7,8,9,14,15
<i>Melilotus officinalis</i> (L.) Pallas	Yellow sweet clover	MN,WI	2,5,7
<i>Monarda fistulosa</i> L.	Wild bergamot	IN	8,9,14,15
<i>Monarda punctata</i> L.	Horsemint	IN,MI,MN,NY,ON,WI	2,3,4,5,6,7,8,9,10,11,14,15

Table C1. (continued)

Scientific name	Common name	Location	Reference
<i>Oenothera</i> sp.	Evening primrose	WI	2,13
<i>Petalostemon candidum</i> (Willd.) Michx.	White prairie clover	WI	2,7,9
<i>Petalostemon purpureum</i> (Vent.) Rydb.	Purple prairie clover	WI	2,7
<i>Phlox pilosa</i> L.	Downy phlox	IN	15
<i>Polygala polygama</i> Walt.	Racemed milkwort	MI	11
<i>Polygonum</i> sp.	Knotweed	WI	2,14
<i>Potentilla recta</i> L.	Rough-fruited cinquefoil	IN	15
<i>Potentilla simplex</i> Michx.	Common cinquefoil	WI	2,14
<i>Pycnanthemum virginianum</i> L.	Mountain-mint	IN	15
<i>Rosa carolina</i> L.	Carolina rose	IN	15
<i>Rosa</i> sp.	Wild rose	WI	2,14
<i>Rudbeckia hirta</i> (serotina) L.	Black-eyed susan	MI, MN, ON, WI, IN	2,5,7,9,10,11,14,15
<i>Saponaria officinalis</i> L.	Soapwort	NY, IN	3,15
<i>Scutellaria epilobiifolia</i>	Marsh skullcap	IN	15
<i>Smilacina stellata</i> (L.) Desf.	Star-flow. fals. sol. seal	WI	2,14
<i>Solidago ptarmicoides</i> (Nees) Boivin (<i>Aster ptarmicoides</i>)	Upland white aster	WI	2,9
<i>Solidago speciosa</i> Nutt.	Showy goldenrod	WI, IN	13,15
<i>Solidago</i> sp.	Goldenrod	IN, NH, WI	1,2,8,14
<i>Spiraea tomentosa</i> L.	Meadowsweet	WI	14
<i>Talinum rugospermum</i> Holz.	Fameflower	WI	2
<i>Tephrosia virginiana</i> (L.) Pers.	Goat's rue	IN	8,14,15
<i>Tradescantia ohiensis</i> Raf.	Spiderwort	IN	15
<i>Tradescantia virginiana</i> L.*	Virginia spiderwort	MI	11
<i>Trifolium arvense</i> L.	Rabbit-foot clover	WI	2,14
<i>Trifolium hybridum</i> L.	Alsike clover	WI	2,14
<i>Trifolium pratense</i> L.	Red clover	WI	2,7,14
<i>Trifolium repens</i> L.	White clover	WI	2,7,14
<i>Vicia villosa</i> Roth.	Hairy vetch	WI	2,14
-----Woody species-----			
<i>Ceanothus americanus</i> L.	New Jersey tea	IN, NH, NY, ON, WI	1,2,3,4,8,10,14,15
<i>Ceanothus herbaceus</i> (ovatus) Raf.	Red root	ON	10
<i>Rhus copallinia</i>	Winged sumac	IN	14

References: 1= Bidwell, in Helmbolt and Amaral 1994, 2 = Bleser 1992, 3 = Dirig 1976, 4 = Fried 1987, 5 = Lane, pers. comm. 1994, 6 = Lawrence 1994, 7 = Leach 1993, 8 = Martin 1994, 9 = Maxwell and Givnish 1994, 10 = Packer 1987, 11 = Papp 1993, 12 = Schweitzer, pers. comm. 1994, 13 = Sferra and Darnell 1993, 14 = Swengel and Swengel 1993, 15 = Grundel and Pavlovic 2000.

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