Appendix F - Vascular Plant List For Antioch Dunes National Wildlife Refuge

Current Plant Species at Antioch Dunes National Wildlife Refuge. Compiled from California Native Plant Society surveys and other sources. 1974-2001.

SEAFIG FAMILY (AIZOACEAE)

Ice Plant (Carpobrotus edulis)

AMARANTH FAMILY (AMARANTHACEAE)

Tumbleweed (Pigweed) (Amaranthus albus) Prostrate Amaranth (Amaranthus blitoides)**N Amaranthus (Amaranthus sp.)

AMARYLLIS FAMILY (AMARYLLIDACEAE)

Naked Ladies (Amaryllis belladonna)

CASHEW FAMILY (ANACARDIACEAE)

California Pepper Tree (Schinus molle)?N Poison Oak (Toxicodendron diversilobum)N

CELERY(CARROT) FAMILY (APIACEAE)

Button-celery (Coyote Thistle) (Eryngium aristulatum)**N
Fennel (Foeniculum vulgare)
Floating Marsh Pennywort (Hydrocotyle ranunculoides)**N
Whorled Marsh Pennywort (Hydrocotyle verticillata)**N
Mason's Lilaeopsis (Lilaeopsis masonii)*N (CA RARE/CNPS 1B)
Water Parsley (Oenanthe sarmentosa)N
Hemlock Water Parsnip (Sium suave)**N

DOGBANE FAMILY (APOCYNACEAE)

Indian-hemp (Apocynum cannabinum)**N Oleander (Nerium oleander)

MILKWEED FAMILY (ASCLEPIADACEAE)

Narrow-leaf Milkweed (Asclepias fascicularis) N

ASTER FAMILY (ASTERACEAE)

Yarrow (Achillea millefolium) N

Western Ragweed (Ambrosia psilostachya)

Unknown (Ambrosia sp.)

Mugwort (Artemisia douglasiana) N

Suisun Marsh Aster (Aster lentus)*N (CNPS 1B)

Covote Brush (Baccharis pilularis) N

Mule Fat (Baccharis salicifolia)N

Bur Marigold (Bidens laevis)**N

Italian Thistle (Carduus pycnocephalus)

Slender-flowered Thistle (Carduus teniflorus)?

Tocalote (Centaurea melitensis)

Yellow Starthistle (Centaurea solstitialis)

Spikeweed (Centromadia pungens ssp?)N

Horseweed (Conyza canadensis)

Kellogg's Tarweed (Deinandra kelloggii) (formerly by Hemizonia k.)**N

Western Goldenrod (Euthamia occidentalis)***N

California Fluffweed (Filago californica) N

Herba Impia (Fluffweed) (Filago gallica)N

Fragrant Everlasting (Gnaphalium canescens ssp. beneolens)**N

Common Cudweed (Gnaphalium luteo-album)

Cotton Batting Plant (Gnaphalium stramineum) N

Cudweed (Gnaphalium sp.)

Gumplant (Grindelia camporum var. camporum) N

Hirsute Grindelia (Grindelia hisutula var. h.)**N

Marsh Gumplant (Grindelia stricta var. angustifolia)**N (CNPS 4)

Grindelia (Grindelia sp.)N

California Matchweed (Gutierrezia californica)***N

Bigelow's Sneezeweed (Helenium bigelovii)**N

Hayfield Tarweed (Hemizonia congesta ssp. c.)**N

Telegraph Weed (Heterotheca grandiflora) N

Bristly Golden Aster (Heterotheca sessiliflora ssp. echioides)***N

Tarweed (Holocarpha sp.)N

Smooth Cat's Ear (Hypochaeris glabra)

Rough Cat's Ear (Hypochaeris radicata)

Prickly Lettuce (Lactuca serriola)

California Goldfields (Lasthenia californica)N

Tidy-tips (Layia platyglossa)***N

Glandular Lessingia (Lessingia glandulifera var. g.)**N

Slender Cottonweed (Micropus californicus var. c.) N

Cupped Monolopia (Monolopia major)**N

Bristly Ox-tongue (Picris echioides)

Bush Groundsel (Shrubby Butterweed) (Senecio flaccidus var. douglasii)**N

Alkali-marsh Butterweed (Senecio hydrophilus)**N

Common Butterweed (Senecio vulgaris)

Unknown (wet grower) (Senecio sp.)

Prickly Sow Thistle (Sonchus asper)

Common Sow Thistle (Sonchus oleraceus)

Purple Salsify (Tragopogon porrifolius)

Cocklebur (Xanthium strumarium) N

BIRCH FAMILY (BETULACEAE)

White Alder (Alnus rhombifolia) N

BORAGE FAMILY (BORAGINACEAE)

Common Fiddleneck (Amsinckia menziesii var. intermedia) N

Rancher's Fireweed (Amsinckia menziesii var. menziesii) N

Devil's Lettuce (Amsinckia tessellata var. t.)**N

Alkali Heliotrope (Heliotropium curassavicum) N

Bracted Popcornflower (Plagiobotrys bracteatus)

MUSTARD FAMILY (BRASSICACEAE)

Black Mustard (Brassica nigra)

Hoary Cress (Cardaria sp.)

Contra Costa Wallflower (Érysimum capitatum ssp. angustatum)*N(US & CA ENDANGERED/ CNPS 1B)

Summer Mustard (Hirschfeldia incana)

Wide-leaved Peppergrass (Lepidium latifolium)

Radish (Raphanus sativus)

Tumble Mustard (Sisybrium altissimum)

Oriental Sisybrium (Sisybrium orientale)

CACTUS FAMILY (CACTACEAE)

Prickly-pear Cactus (Opuntia ficus-indica)

HONEYSUCKLE FAMILY (CAPRIFOLIACEAE)

Blue Elderberry (Sambucus mexicana) N

PINK FAMILY (CARYOPHYLLACEAE)

Mouse-ear Chickweed (Cerastium glomeratum) Windmill Pink (Silene gallica) Sand-spurrey (Spergularia rubra) Common Chickweed (Stellaria media)

(CASUARINACEAE)

Beefwood (Casuarina sp.)

GOOSEFOOT FAMILY (CHENOPODIACEAE)

Spearscale (Atriplex triangularis) N Goosefoot (Chenopodium murale) Russian Thistle (Salsola tragus)

MORNING GLORY FAMILY (CONVOLVULACEAE)

Hedge Morning-glory (Bindweed) (Calystegia sepium ssp. limnophila)**N Bindweed (Convolvulus arvensis)

STONECROP FAMILY (CRASSULACEAE)

Pygmyweed (Crassula connata) N Pygmyweed (Crassula tillaea)

GOURD FAMILY (CUCURBITACEAE)

Man-root (Wild Cucumber) (Marah fabaceus) N

CYPRESS FAMILY (CUPRESSACEAE)

Cypress (Cupressus sp.) Arbivitae (Thuja sp.)

DODDER FAMILY (CUSCUTACEAE)

Field Dodder (Cuscuta pentagona)**N

SEDGE FAMILY (CYPERACEAE)

Sitka Sedge (Carex aquatilis var. dives)**N
Nebraska Sedge (Carex nebrascensis)**N
Sedge (Carex sp.)N
Tall Cyperus (Nutsedge) (Cyperus eragrostis)N
Common Tule (Scirpus acutus var. occidentalis)N
Three Square (Scirpus americanus)N
California Tule (Cali. Bulrush) (Scirpus californicus)N
Tule (Low Club Rush) (Scirpus cernuus)**N

HORSETAIL FAMILY (EQUISETACEAE)

Smooth Scouring Rush (Equisetum laevigatum)N

SPURGE FAMILY (EUPHORBIACEAE)

California Croton (Croton californicus)**N

LEGUME FAMILY (FABACEAE)

Bird-of-paradise Bush (Caesalpinia gilliesii) French Broom (Genista monspessulana) Leather Root (Hoita macrostachya)**N

Delta Tule Pea (Lathyrus jepsonii var. jepsonii)*N (CNPS 1B)

Birdfoot Trefoil (Lotus corniculatus)

Spanish-clover (Lotus purshianus var. purshianus) N

Deerweed (Lotus scoparius)N

Stipulate Trefoil (Lotus stipularis var. stipularis)**N

Strigose Trefoil (Lotus strigosus)**N

Common Trefoil (Lotus wrangelianus)N

Silver Lupin (Lupinus albifrons)N

Dove Lupine (Dwarf Lupine) (Lupinus bicolor var. pipersmithii)**N

Dove Lupine (Dwarf Lupine) (Lupinus bicolor var. umbellatus)**N

Chamisso's Bush Lupine (Lupinus chamissonis)**N

Lupine (Lupinus sp.)N

Arroyo Lupine (Lupinus succulentus)N

Burr Clover (Medicago polymorpha)

Alfalfa (Medicago sativa)

White Sweetclover (Melilotus alba)

Yellow Sweetclover (Melilotus indica)

Black Locust (Robinia pseudoacacia)

Pin-point Clover (Trifolium gracilentum)N

Rose Clover (Trifolium hirtum)

Clover (Trifolium sp.)N

Tomcat Clover (Trifolium willdenovii)N

Common Vetch (Vicia sativa ssp. nigra)

Spring Vetch (Vicia sativa ssp. sativa)

Winter Vetch (Vicia villosa ssp. varia)

Winter Vetch (Vicia villosa ssp. villosa)

BEECH FAMILY (FAGACEAE)

Coastal Live Oak (Quercus agrifolia) N

Coastal Live Oak-Interior Live Oak Hybrid (Quercus agrifolia var. wizliseni) N

Valley Oak (Quercus lobata)

GENTIAN FAMILY (GENTIANACEAE)

Monterey Centaury (Centaurium muehlenbergii)***N

GERANIUM FAMILY (GERANIACEAE)

Large-flowered Filaree (Erodium botrys)

Red-stemmed Filaree (Erodium cicutarium)

Cut-leaf Geranium (Geranium dissectum)

WATER-MILFOIL FAMILY (HALORAGACEAE)

Milfoil (Myriophyllum sp.)

WATERWEED FAMILY (HYDROCHARITACEAE)

Common Waterweed (Elodea canadensis)

IRIS FAMILY (IRIDACEAE)

Yellow Flag (Iris pseudacorus)

WALNUT FAMILY (JUGLANDACEAE)

N. Cali. Black Walnut (Juglans californica var. hindsii)*N

RUSH FAMILY (JUNCACEAE)

Jointed Rush (Juncus articulatus)**N

Baltic Rush (Juncus balticus) N

Toad Rush (Juncus bufonius (var.?))N Bog Rush (Juncus effusus) Irisleaf Rush (Juncus xiphioides)?N

ARROW-GRASS FAMILY (JUNCAGINACEAE)

Flowering Quillwort (Lilaea scilloides)? Arrow-grass (Triglochin sp.) N

MINT FAMILY (LAMIACEAE)

Cutleaf Bugleweed (Lycopus americanus)**N
Horehound (Marrubium vulgare)
Field mint (Mentha arvensis)
Mint (Mentha sp.)
Hoary Hedge-nettle (White Hedge-nettle) (Stachys albens)**N
Vinegar Weed (Trichostema lanceolatum)N

LILY FAMILY (LILIACEAE)

Asparagus (Asparagus officinalis ssp. o.) Blue Dicks (Dichelostemma capitatum) N

LOOSESTRIFE FAMILY (LYTHRACEAE)

California Loosestrife (Lythrum californicum)**N

MALLOW FAMILY (MALVACEAE)

Lavatera (Lavatera arborea) Cretican Tree-mallow (Cretan lavatera) (Lavatera cretica) Cheeseweed (Malva parviflora)

(MELIACEAE)

Chinaberry (Melia azedanach)

MYRTLE FAMILY (MYRTACEAE)

Blue Gum (Eucalyptus globulus)

OLIVE FAMILY (OLEACEAE)

Oregon Ash (Fraxinus latifolia)**N Olive (Olea europaea)

EVENING-PRIMROSE FAMILY (ONAGRACEAE)

Contorted Primrose (Camissonia contorta)?**N

Small-flowered Sun Cup (Small Primrose) (Camissonia micrantha)?**N

Camissonia (Camissonia sp.) N

Elegant Clarkia (Clarkia unguiculata) N

Panicled Willowherb (Epilobium brachycarpum) N

Willowherb (Epilobium ciliatum ssp. ciliatum) N

Smooth Boisduvalia (Epilobium pygmaeum)**N

Willowherb (Epilobium sp.) N

Water Primrose (Ludwigia peploides)?**N

Antioch Dunes Evening Primrose (Oenothera deltoides ssp. howellii)*N (US & CA ENDANGERED/CNPS 1B)

Hooker's Evening Primrose (Oenothera elata ssp. hookeri)**N

OXALIS FAMILY (OXALIDACEAE)

Bermuda Buttercups (Oxalis pes-caprae)

POPPY FAMILY (PAPAVERACEAE)

California Poppy (Eschscholzia californica)N Narrow-leaved Meconella (Meconella linearis)**N Wind Poppy (Stylomecon heterophylla)N

PLANTAIN FAMILY (*PLANTAGINACEAE*)

Crownfoot Plantain (Cutleaf Plantain) (*Plantago coronopus*) English Plantain (*Plantago lanceolata*) Mexican Plantain (*Plantago subnuda*)**N

SYCAMORE FAMILY (PLANTANACEAE)

Western Sycamore (Platanus racemosa)**N

GRASS FAMILY (POACEAE)

Spike Redtop (Agrostis exarata) N Giant Reed (Arundo donax)

Slender Wild Oats (Avena barbata)

Wild oat (Avena fatua)

Bamboo (Bambusa sp.)

Ripgut Brome (Bromus diandrus)

Soft Brome (Bromus hordeaceus)

Red Foxtail Brome (Bromus madritensis ssp. rubens)

Pampas Grass (Cortaderia selloana)

Bermuda Grass (Cynodon dactylon)

Tufted Hairgrass (Deschampsia cespitosa ssp. c.)**N

Tufted Hairgrass (Deschampsia cespitosa ssp. holiciformis)?**N

Saltgrass (Distichlis spicata)N

Meadow Barley (Hordeum brachyantherum ssp. b.)N

Farmer's Foxtail (Hordeum murinum ssp. leporinum)

Farmer's Foxtail (Hordeum murinum ssp. m.)

Bristly Koeleria (Koeleria phleoides)

Alkali Rye (Creeping Ryegrass) (Leymus triticoides)N

Italian Ryegrass (Lolium multiflorum)

Witchgrass (Panicum capillare)**N

Canary Grass (Phalaris canariensis)

Common Reed (Phragmites australis)**N

Smilo Grass (Piptatherum miliaceum)

Kentucky Bluegrass (Poa pratensis)

Pacific Fescue (Vulpia microstachys var. pauciflora) N

Zorro Grass (Vulpia myuros var. hirsuta)

Zorro Grass (Vulpia myuros var. m.)

PHLOX FAMILY (POLEMONIACEAE)

Blue-headed Gilia (Range Gilia) (Gilia capitata ssp. staminea)**N

KNOTPLANT FAMILY (POLYGONACEAE)

Slender Buckwheat (Eriogonum gracile var. g.)**N

Naked-stemmed Buckwheat (Eriogonum nudum var. auriculatum) N

Hairyflower Buckwheat (Eriogonum nudum var. pubiflorum)**N

Willow Weed (Polygonum lapathifolium)***N

Water Smartweed (Polygonum punctatum)**N

Knotweed (Polygonum sp.)

Curly Dock (Rumex crispus)

PICKEREL-WEED FAMILY (PONTEDERIACEAE)

Water-hyacinth (Eichornia crassipes)

PURSLANE FAMILY (PORTULACACEAE)

Red Maids (Calandrinia ciliata)N Miner's Lettuce (Claytonia parviflora)N Miner's Lettuce (Claytonia perfoliata)N Common Purslane (Portulaca oleracea)

ROSE FAMILY (ROSACEAE)

Toyon (Heteromeles arbutifolia) N
Silverplant (Potentilla anserina ssp. pacifica)**N
Almond (Prunus dulcis)
Stone Fruit (Prunus sp.)
California Rose (Rosa californica) N
Himalayan Blackberry (Rubus discolor)
California Blackberry (Rubus ursinus) N

MADDER FAMILY (RUBIACEAE)

Button-willow (Cephalanthus occidentalis var. californicus)**N Goose Grass (Common Bedstraw) (Galium aparine) Bedstraw (Galium sp.)

WILLOW FAMILY (SALICACEAE)

Fremont Cottonwood (Populus fremontii ssp. fremontii) N Narrow-leaved Willow (Sandbar Willow) (Salix exigua) N Arroyo Willow (Salix lasiolepis) N Shining Willow (Salix lucida ssp. lasiandra)***N

SAXIFRAGE FAMILY (SAXIFRAGACEAE)

Fringe Cups (Tellima grandiflora)**N

SNAPDRAGON FAMILY (SCROPHULARIACEAE)

Cream Sacs (Castilleja attenuata)N Purple Owlsclover (Castilleja exserta (ssp.?))N Delta Mudwort (Limosella subulata)N (CNPS 2) Yellow Monkeyflower (Mimulus guttatus)N Purslane Speedwell (Veronica peregrina ssp. xalapensis)N

QUASSIA FAMILY (SIMAROUBACEAE)

Tree of Heaven (Ailanthus altissima)

NIGHTSHADE FAMILY (SOLANACEAE)

Thorn-apple (Tolguacha) (Datura wrightii)N Tree Tobacco (Nicotiana glauca) Blue Witch (Solanum umbelliferum)N

CATTAIL FAMILY (TYPHACEAE/SPARGANIACEAE)

Giant Burreed (Sparganium eurycarpum or erectum)?N Narrow-leaved Cattail (Typha angustifolia)N Southern Cattail (Typha domingensis)N

ELM FAMILY (*ULMACEAE*)

Dwarf Asiatic Elm (Ulmus pumila)

NETTLE FAMILY (URTICACEAE)

Dwarf Nettle (Urtica urens)

GRAPE FAMILY (VITACEAE)

Cultivated Grape (Vitis vinifera)

RARE PLANTS OF HISTORICAL OCCURRENCE

Hoover's Cryptantha (Cryptantha hooveri) (CNPS 4)*N Small Spikerush (Eleocharis parvula) (CNPS 4)*N Diamond-petaled Calif.Poppy (Eschscholzia rhombipetala) (CNPS 1B)*N Contra Costa Goldfields (Lasthenia conjugens) (CA ENDANGERED/CNPS 1B)*N Showy Madia (Madia radiata) (CNPS 1B)*N

N Native Species

* Rare, threatened or endangered in California. Special Plants List, July 2000, California Dept. of Fish and Game, Natural Diversity Database; and drafot of CNPS Inventory of Rare and Endangered Vascular Plants of California, Sixth ed, Due for publicaion 2001.

**Rare, thereatend or endangered in Alameda and Contra Costa counties. Listed in Unusaul and Significant Plants of Alameda and Contra Costa Counties, Dianne Lake, (CNPS, East ay Chapter, sixth ed, 2001).

***Watch List for Alameda and Contra Costa counties. Unusual and Significant Plants of Alameda and Contra Costa Counites, Diane Lake, (CNPS, East Bay Chapter, six ed, 2001).

Appendix G - Bird List for Antioch Dunes National Wildlife Refuge and Offshore Waters

Red-throated loon Pied-billed grebe Western grebe Brown pelican

Double-crested cormorant Black-crowned night-heron

Unknown egret Great blue heron Snow goose Canada goose Mallard Greater scaup Turkey vulture

Osprey

White-tailed kite Black kite

Marsh hawk (Northern harrier)

Cooper's hawk
Red-tailed hawk
American kestrel
Ring-necked pheasant
California quail
American coot
Killdeer

Spotted sandpiper Common snipe Ring-billed gull

Herring gull - North American

Caspian tern Forster's tern Rock dove Mourning dove Barn owl

White-throated swift

Ruby throated hummingbird

Anna's hummingbird Rufous hummingbird Belted kingfisher Nuttall's woodpecker Red-shafted flicker Black phoebe Western kingbird Loggerhead shrike

Blue jay

Western scrub-jay American crow Common raven Violet-green swallow

Cliff swallow

Northern rough-winged swallow

Barn swallow

Bushtit - coastal

(Gavia stellata)
(Podilymbus podiceps)
(Aechmophorus occidentalis)
(Pelecanus occidentalis)
(Phalacrocorax auritus)
(Nycticorax nycticorax)

(Egretta thula or Ardea alba?)

(Ardea herodias (Anser caerulescens) (Branta canadensis)

 $(Anas\ platyrhynchos\ platyrhynchos)$

(Aythya marila)
(Cathartes aura)
(Pandion haliaetus)
(Elanus leucurus)
(Milvus migrans)
(Circus cyaneus)
(Accipiter cooperii)
(Buteo jamaicensis)
(Falco sparverius)
(Phasianus colchicus)
(Callipepla californica)
(Fulica americana)
(Charadrius vociferus)
(Actitis macularia)

(Actitis macularia) (Gallinago gallinago) (Larus delawarensis)

(Larus argentatus smithsonianus)

(Sterna caspia) (Sterna forsteri) (Columba livia) (Zenaida macroura)

 $(Tyto\ alba)$

(Aeronautes saxatalis)
(Archilochus colubris)
(Calypte anna)
(Selasphorus rufus)
(Ceryle alcyon)
(Picoides nuttallii)
(Colaptes cafer)
(Sayornis nigricans)
(Tyrannus verticalis)
(Lanius ludovicianus)
(Cyanocitta cristata)

(Corvus corax)

(Tachycineta thalassina) (Petrochelidon pyrrhonota) (Stelgidopteryx serripennis)

(Aphelocoma californica)

(Corvus brachyrhynchos)

(Hirundo rustica)

(Psaltriparus minimus minimus)

Marsh wren

Ruby-crowned kinglet

American robin

Northern mockingbird

European starling

Water pipit Cedar waxwing

Orange-crowned warbler Yellow-rumped warbler Yellow-throated warbler

Yellow warbler

Rufous sided towheeSpotted

Song sparrow Fox sparrow

White-crowned sparrow

Dark-eyed junco Eastern meadowlark Western meadowlark Red-winged blackbird Tri-colored blackbird Brewer's blackbird Bullock's oriole

Lawrence's goldfinch

Pine siskin Lesser goldfinch American goldfinch

House finch

(Cistothorus palustris)

(Regulus calendula)

(Turdus migratorius)

(Mimus polyglottos)

(Sturnus vulgaris)

(Anthus spinoletta)

(Bombycilla cedrorum)

(Vermivora celata)

(Dendroica coronata)

(Dendroica dominica)

(Dendroica petechia)

(Pipilo maculatus)

(Melospiza melodia)

(Passerella iliaca)

(Zonotrichia leucophrys)

(Junco hyemalis)

(Sturnella magna)

 $(Sturnella\ neglecta)$

(Agelaius phoeniceus)

(Agelaius tricolor)

(Euphagus cyanocephalus)

(Icterus bullockii)

 $(Carduelis\ lawrencei)$

(Carduelis pinus) (Carduelis psaltria)

(Carduelis tristis)

(Carpodacus mexicanus)

Appendix H - Fish Species Found Offshore of Antioch Dunes National Wildlife Refuge

American shad Yellowfin goby Sacramento sucker Prickly sculpin Shiner surfperch Threadfin shad Sculpin family Goby family

Western mosquitofish Threespine stickleback

Delta smelt Tule perch Hitch Bluegill

Redear sunfish

Pacific staghorn sculpin Rainwater killifish Inland silverside Largemouth bass Striped bass Hardhead Golden shiner Rosyface shiner Steelhead trout

Sacramento blackfish Bigscale logperch Starry flounder Sacramento splittail Sacramento squawfish

Chinook salmon

Logfin smelt Goby shimofuri Chameleon goby Unknown Bass

(Alosa sapidissima)

(Acanthogobius flavimanus) (Catostomus occidantalis) (Cottus asper) (Richardson) (Cymatogaster aggregata) (Dorosoma petenense) (Family Cottidae) (Family Gobiidae) (Gambusia affinis)

(Gasterosteus aculeatus) (Linnaeus)

(Hypomesus transpacificus) (Hysterocarpus traski) (Gibbons)

(Lavinia exilicauda) (Lepomis macrochirus) (Lepomis microlopus)

(Leptocottus armatus) (Girard)

(Lucania parva) (Menidia beryllina) (Micropterus salmoides) (Morone saxatilis)

(Mylopharodon conocephalus) (Notemigonus crysoleucas) (Notropis rubellus) (Oncorhynchus mykiss) (Oncorhynchus tshawytscha) (Orthodon microlepidotus) (Ayres) (Percina macrolepida) (Stevenson)

(Platichthys stellatus)

(Pogonichthys macrolepidotus) (Ptychocheilus grandis) (Ayres) (Spirinchus thaleichthys) (Ayres)

(Tridentiger bifasciatus) (Tridentiger trigonocephalus)

Appendix I- Insect List for Antioch Dunes National Wildlife Refuge

Invertebrates observed or collected (1/95 - 6/97) Arranged alphabetically for ease of reference

Order Coleoptera (Beetles)

Family Alleculidae *Lopopoda sp.*

Family Anthicidae

Anthicus biguttulus

Formicilla sp. *

Family Buprestidae
Acmaeodera sp.*
Agrilus sp.

Family Carabidae

Agonoderus sp.

Agonum marginicolle

Amara sp.

Harpalus sp. @

Pterostichus sp. @

Scaphinotus striatopunctatus @

Stenolophus maculatus

Family Chrysomelidae

Altica lasulina

Diabrotica undecimpunctata

Monoxia consputa @

Family Coccinellidae

Coccinella californica

Coccinella septempunctata

Hippodamia convergens

Hipopodamia quinquesignata

Olla v-nigrum

Psyllobora vigintimaculata

Stethorus puntum picipes *

Undetermined taxa

Family Curculionidae

Apion proclive

Paragoges maculata

Sphenophorus aequalis *

Tychius sp. @

Undetermined taxa

Family Dermestidae *Anthrenus sp.* @

Family Dytiscidae

Colymbetes sp. *

Laccophilus decipiens

Thermonectus basillaris

Family Elateridae Agriotes sp. * Euthysanius sp. Family Heteroceridae

Heterocerus sp.

Orthellia caesarion *

Family Hydrophilidae

Enochrus diffusus

Tropisternus lateralis

Tropisternus sp.

Family Meloidae $Lytta\ sp.\ *$ $Nemognatha\ lurida\ apicalis$

Family Scarabaeidae

Aphodius sp. @
Coenonycha sp.
Cyclocephala sp.
Plectrodes pubescens @
Polyphylla stellata
Serica anthracina *

Family Tenebrionidae

Amphidora littoralis @
Blapstinus sp. @
Coniontis sp.
Eleodes sp.
Eulabis bicarinata
Nyctoporis sp. @

Order Dermaptera (Earwigs)

Family Forficulidae Forficula auricularia

Order Diptera (Flies)

Family Anthomyiidae $Adia\ cinerella$

Family Anthomyzidae Anthomyza sp. @

Family Apioceridae *Apiocera chrysolasia* *

Family Asilidae
Asilus sp.
Efferia albibarbis*
Efferia antiochi *
Efferia cana*
Stenopogon breviusculus *
Stenopogon obscuriventris *@

Family Bibionidae $Bibio\ albipennis\ *$

Family Bombyliidae

Aphoebanius sp. *

Bombylius sp. *

Hemipenthes sp. *

Thyridanthrax sp. *

Toxophora sp. *

Villa sp.

Undetermined taxon

Family Calliphoridae Eucalliphora lilaea Phaenicia serricata

Family Cecidomyiidae *Cordylomyia sp.* *

Family Chironomidae

Chironomus decorus

Chironomus staegeri

Hydrobaenus sp.

Procladius sp. *

Symbiocladius equitans @

Family Conopidae

Physocephala texana *

Physoconops fronto

Family Culicidae

Aedes washinoi @
Culex erythrothorax @
Culex tarsalis
Culiseta incidens
Culiseta inornata
Culiseta particeps @

Family Dolichopodidae

Dolichopus sp. @

Hydrophorus sp. @

Medetera sp. @

Family Empididae Platypalpus sp. *

Family Ephydridae *Mosillus sp.*

Family Helcomyzidae Pseudoleria sp. * Suillia limbata @

Family Muscidae Musca domestica

Family Mycetophilidae $Mycomya\ sp.$

Family Otitidae Ceroxys latiusculus *

Family Sarcophagidae Euphytomima sp. Liopygia sp. * Ravinia sp. @

Family Scathophagidae Scathophaga sp. @

Family Sepsidae Sepsis sp. @

Family Simuliidae *Metacnephia sp.*

Family Sphaeroceridae

Leptocera fontinalis @

Leptocera (Rachispoda) sp.

Family Syrphidae

Epistrophe sp.

Eristalinus aeneus

Eristalis sp.

Helophilus latifrons @

Paragus tibialis

Platycheirus sp. @

Syritta pipiens

Family Tabanidae Chrysops coloradensis *

Family Tachinidae

Archytas apicifer *

Cylindromyia sp. @

Gonia sp. *

Gymnosoma sp. *

Tachina sp. @

Family Tephritidae

Dioxnya sororcula @

Tephritis californica @

Family Therevidae *Acrosathe sp.* *

Family Tipulidae

Tipula californica @

Tipula sp. *

Order Hemiptera (True Bugs)

Family Alydidae *Alydus sp.* *

Family Berytidae Jalysus sp. @

Family Corixidae Corisella decolor Trichocorixa reticulata

Family Cydnidae Microporus testudinatus @

Family Lygaeidae

Eremocoris sp. *

Geocoris niger @

Geocoris sp. @ Lygaeus kalmii * Neocoryphus bicrucis Nyssius sp.

Family Miridae

Adelphocoris superbus @ Irbisia californica Lopidea sp. Lygus hesperus

Family Nabidae Nabis sp. @

Family Pentatomidae Chlorochroa ligata * Chlorochroa sayi * Murgantia histrionica

Family Rhopalidae *Arhyssus sp.* *

Family Saldidae Saldula pallipes @

Order Homoptera (Cicadas, Hoppers, etc)

Family Cicadellidae Undetermined taxa

Family Cicadidae Okanagana sp. *

Family Dictyopharide *Scolops sp.*

Family Membracidae Undetermined taxa @

Order Hymenoptera (Bees, Wasps & Ants)

Family Andrenidae Andrena sp. Perdita sp. *

Family Anthophoridae

Anthophora sp.

Melissodes sp.

Nomada sp. *

Zacosmia maculata maculata

Family Apidae

Apis mellifera Bombus sonorensis Bombus vosnesenskii Xylocopa brasilianorum @

Family Argidae
Sterictophora sp. *

Family Braconidae Undetermined taxa Family Chalcididae Undetermined taxon

Family Chrysididae

Argochrysis mesillae *
Chrysis lucidera *
Chrysis vagabunda *
Hedychridium fletcheri *
Hedychrum boharti *
Parnopes edwardsi *

Family Colletidae *Colletes sp.* @

Family Eumenidae Undetermined taxon

Family Halictidae

Agapostemon sp. *
Dieunomia nevadensis angelisis *
Halictus sp. *
Lassioglossum sp.
Sphecodes sp. *

Family Ichneumonidae

Diplazon laetatorius @
Ophion sp. @
Undetermined taxa

Family Megachilidae

Anthidiellum notatum robertsoni *
Anthidium utahense *
Ashmeadiella sp.
Megachile sp. *
Osmia sp. *

Family Mutillidae

Dasymutilla abdita
Dasymutilla aureola pacifica @
Dasymutilla coccineohirta
Dasymutilla flammifera *
Dasymutilla sackeni
Sphaerophthalma sp.

Family Pompilidae

Anoplius cleora *
Anoplius nigritis *
Aporinellus completus *
Sericopompilus neotropicalis *
Tachypompilus unicolor unicolor *
Undetermined taxa

Family Sphecidae

Ammophila sp.
Bembix americana comata *
Bembix occidentalis
Bicyrtes ventralis *
Cerceris californica *
Cerceris finitima *
Cerceris frontata *
Cerceris vanduzeei
Chalybion californica *
Dryudella sp. *

Clypeadon californica * Isodontia elegans *

Philanthus multimaculatus *

Philanthus pacifica * Podalonia luctuosa *

Prionyx sp. *
Sphex lucae

Sphex pennsylvanica * Steniolia scolopacea * Undetermined taxa

Family Tenthredinidae $Tenthredo\ sp.\ *$

Family Tiphiidae Paratiphia nevadensis *

Family Vespidae

Mischocytarus flavitarsus @ Polistes apachus * Polistes fuscatus aurifer Vespula pennsylvanica Undetermined taxa

Order Lepidoptera (Butterflies & Moths)

Family Arctiidae

Apantesis proxima * Estigmene acraea *

Family Danaidae $Danaus\ plexippus$

Family Hesperiidae

Hylephila phyleus Pholisora cantullus * Pyrgus communis

Family Lycaenidae

Callophrys affinis perplexa Everes amyntula * Plebejus acmoni Strymon melinus

Family Noctuidae

Caenurgina crassiuscula Syneda sp. @

Trichoplusia ni @

Family Nymphalidae

Coenonympha californica Nymphalis antiopa Phyciodes mylitta Precis coenia Vanessa carye

Family Papilionidae Papilio zelicaon

Family Pieridae

Colias eurytheme

Euchloe ausinoides

Pieris rapae

Pieris protodice

Family Riodinidae

Apodemia mormo langei

Family Sphingidae Proserpinus clarkiae *

Order Neuroptera (Lacewings, Antlions, etc)

Family Hemerobiidae Sympherobius sp. @

Family Myrmeleontidae Brachynemurus pregrinus

Family Raphidiidae *Agulla sp.* *

Order Odonata (Dragonflies & Damselflies)

Family Aeschnidae

Aeshna multicolor

Anax junius

Family Coenagrionidae

Enallagma carunculatum

Enallagma civile

Family Libellulidae

Pachydiplax longipennis *

Tarnetrum costiferum

Tramea sp.

Order Orthoptera (Crickets, Roaches, etc)

Family Acrididae

Melanoplus cinereus dealbatus *

Trimerotropis pallidipennis

Family Gryllacrididae Ceuthophilus sp. @ Stenopelmatus sp. @

Family Mantidae *Iris oratoria* *

Family Phasmatidae
Parabacillus hesperus *

Family Polypagidae Arenivaga sp. @ Spiders, Scorpions, Wind Scorpions, Centipedes, Millipedes and Isopods have not yet been identified.

Many small bees, wasps and ants have yet to be determined. A few small beetles are also unidentified.

It is estimated that approximately 260 different kinds of insects have currently been collected from the refuge.

The microlepidoptera have essentially been ignored Because of the detailed studies performed by Jerry Powell. Their current status may need to be considered.

* indicates collection or observation of taxon at the Stamm Parcel.

@ indicates collection or observation of taxon at the Sardis Parcel.

No symbol by a taxon indicates that it was found at both refuge parcels.