

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
NATIVE HERBS (Cont.)													
<i>Layia gaillardoides</i>	Woodland gaillardoides												
<i>Lesna</i> sp.	Duckweed												
<i>Lilaeopsis occidentalis</i> **	Western lilaeopsis												
<i>Ligusticum apiculatum</i>	Celery-leaved tonnage												
<i>Linanthus androsaceus</i>	Common linanthus												
<i>Linanthus grandiflorus</i> **													
<i>Lithophragma affine</i>	Woodland star												
<i>Lomatium dasycarpum</i>	Hog parsnip												
<i>Lonicera involucrata</i> var. <i>lode-</i> <i>Bourii</i>	Honeysuckle												
<i>Lotus humistratus</i>	Hill lotus												
<i>Lotus purshianus</i>													
<i>Lotus scoparius</i> forma <i>prostratus</i>	Coast trefoil												
<i>Lotus subpinnatus</i>	Chile trefoil												
<i>Lupinus bicolor</i>	Dove lupine												
<i>Lupinus densiflorus</i> var. <i>crinitus</i>													
<i>Lupinus variicolor</i>	Varied lupine												
<i>Lythrum hyssopifolia</i>	Loosestrife												

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Page 11 of 21

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
NATIVE HERBS (Cont.)													
<i>Lonicera hispidula</i> var. <i>varillana</i>	Honeysuckle	X											
<i>Mulinum caputata</i>	Wild cucumber	X	X	X	X					X			
<i>Mimulus guttatus</i>	Yellow monkey flower			X	X				X	X			
<i>Monardella villosa</i> var. <i>franciscana</i>	Pennyroyal		X	X									
<i>Montia perfoliata</i>	Milner's lettuce				X					X			
<i>Navaretia aquilegifolia</i>	Skunkweed	X		X									
<i>Nemophila menziesii</i>	Baby blue eyes			X									
<i>Nemophila menziesii</i> ssp. <i>atamaria</i> *					X								
<i>Oenothera biennis</i>	Water parsley												
<i>Orthocarpus crinitiflorus</i>	Paintbrush owl's clover			X					X				
<i>Orthocarpus densiflorus</i>			X	X									
<i>Orthocarpus fasciculatus</i>	Yellow owl's clover		X	X									
<i>Oxalis pilosa</i>			X	X									
<i>Phacelia californica</i>	California phacelia	X		X	X								
<i>Phacelia diantha</i>	Fern phacelia	X	X	X	X					X			

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** Observed only in Estero Americano.

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
NATIVE HERBS (Cont.)													
<i>Plantago erecta</i>	Native plantain			X									
<i>Plantago hirtella</i> var. <i>galeottiana</i>													
<i>Plantago maritima</i> ssp. <i>juncoides</i>	Salt marsh plantain												
<i>Plantago maritima</i> var. <i>californica</i> *													
<i>Plagiobothrys notosulfus</i>	Popcorn flower												
<i>Plectritis major</i> *	Plectritis												
<i>Polygonum pavonishia</i> *													
<i>Potamogeton pectinatus</i>	Pond weed												
<i>Potentilla californica</i>													
<i>Potentilla ogedii</i> var. <i>grandis</i>	Pacific silverweed												
<i>Potentilla glandulosa</i>	Sticky cinquefoil												
<i>Pellaea andromeda</i> **	Everlasting												
<i>Ranunculus californicus</i>	California buttercup												
<i>Ranunculus muricatus</i>	Spring buttercup												
<i>Ranunculus occidentalis</i> **	Western buttercup												
<i>Rorippa curvisiliqua</i>	Yellow cress												
<i>Rubus ursinus</i>	Native blackberry												
<i>Rumex occidentalis</i> *													

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Page 13 of 21

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
NATIVE HERBS (Cont.)													
<i>Ruppia maritima</i>	Pearlwort												
<i>Sagina crassicaulis</i>	Pickweed												
<i>Salicornia virginica</i>	Bear's paws												
<i>Sarcocolla arctostaphylos</i>	Gambelweed												
<i>S. crassicaulis</i>	Verba buena												
<i>Satureja douglasii</i>	Bee plant												
<i>Scrophularia californica</i>	Stonecrop												
<i>Sedum spathulatum</i> *	California butterweed												
<i>Senecio aronicoides</i>	Checkerbloom												
<i>Sidalcea malvaeflora</i>	Blue-eyed grass												
<i>Sisyrinchium boltonii</i>	Yellow-eyed grass												
<i>Sisyrinchium californicum</i> *	Slim Solomon's seal												
<i>Solidago stellata</i> var. <i>acutifolia</i>	Purple nightshade												
<i>Solanum nodiflorum</i>	Goldenrod												
<i>Solidago</i> sp.	Rur-reed												
<i>Sporobolus vaginatus</i> **	Sand-spurrey												
<i>Sporobolus vaginatus</i>	White hedge nettle												
<i>Stachys adnigrifolia</i>	Red hedge nettle												
<i>Stachys virginica</i> var. <i>quercetorum</i>													

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

APPENDIX A

Page 14 of 21

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
NATIVE HERBS (Cont.)													
<i>Stachys chinensis</i>	Coast hedge nettle												
<i>Tellima grandifolia</i>	Fringe cups												
<i>Trifolium barbigera</i>	Bearded clover												
<i>Trifolium gracilentum</i>													
<i>Trifolium wormskoldii</i>	Cow-clover												
<i>Trillium chloropetalum</i> **	Trillium												
<i>Typha latifolia</i>	Cattails												
<i>Urtica holosericea</i>	Nettle												
<i>Veronica americana</i>	Speedwell												
<i>Vicia gigantea</i>	Johnny jump up												
<i>Viola pedunculata</i>	Narrow mule ears												
<i>Wyethia angustifolia</i>	Mule ears												
<i>Wyethia glabra</i>	Eel grass												
<i>Zostera marina</i>													
INTRODUCED HERBS													
<i>Angelica arvensis</i>	Scarlet pimpernel												
<i>Angelica arvensis f. var. rupestris</i> *													
<i>Anthemium cicutula</i>	Mayweed												
<i>Bellis perennis</i>	English daisy												

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Page 15 of 21

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams Drainage Ravines	Coastal Strand	Bay Groves	Wetlands	Estuary
INTRODUCED HERBS (Cont.)													
<i>Brassica oleracea</i>	Field mustard												
<i>Cakile maritima</i>	Sea rocket												
<i>Capoella bursa-pastoris</i>	Shepherd's purse												
<i>Carduus pycnostachyus</i>	Italian thistle												
<i>Centaurea melitensis</i>	Napa thistle												
<i>Cerastium vulgatum</i>	Chickweed												
<i>Cirsium edule</i>													
<i>Cirsium vulgare</i>	Bull thistle												
<i>Conium maculatum</i>	Poison hemlock												
<i>Convolvulus sepium</i>	Bindweed												
<i>Cotula coronopifolia</i>	Brass buttons												
<i>Daucus carota</i>	Carrot												
<i>Datura stramonium</i>	Rattlesnake weed												
<i>Erythriton argentea</i>	Fireweed												
<i>Erechtitum pinnatifidum</i>	Fireweed												
<i>Erodium cicutarium</i>	Red-stem filaree												
<i>Erodium cicutarium</i>	White-stem filaree												
<i>Foeniculum vulgare</i>	Sweet fennel												
<i>Geranium diacanthum</i>	Geranium												
<i>Geranium molle</i>	Geranium												

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Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams Drainage Ravines	Coastal Strand	Bay Groves	Wetlands	Estuary
INTRODUCED HERBS (Cont.)													
<i>Hedyotis corymbosa</i> *	Smooth cat's ear												
<i>Hypochaeris glabra</i> *	Hairy cat's ear												
<i>Hypochaeris radicata</i>	Poker plant												
<i>Kniphofia uvaria</i> *	Wild lettuce												
<i>Lactuca setigera</i>	Peppergrass												
<i>Lepidium nitidum</i>	Toad flax												
<i>Linaria vulgaris</i>	Flax												
<i>Linum angustifolium</i>													
<i>Lobularia maritima</i> *	Bird's foot trefoil												
<i>Lotus corniculatus</i>	Cheese weed												
<i>Malva nicaeensis</i> *	Pineapple weed												
<i>Astragalus matricarioides</i>	Bur clover												
<i>Medicago hispida</i>	Yellow sweet clover												
<i>Melilotus indicus</i>	Pennycress												
<i>Mentha pulchra</i>	Ice plant												
<i>Microgynanthum chilense</i>	Water cress												
<i>Medicago officinalis</i>	Bermuda sorrel												
<i>Oenothera biennis</i> **													
<i>Phlox sp.</i> *													
<i>Pimpinella</i>	Bristly ox-tongue												

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Page 17 of 21

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
INTRODUCED HERBS (Cont.)													
<i>Plantago lanceolata</i>	Plantain	X	X	X	X			X	X	X			
<i>Platystemon californicus</i>	Cream cups			X				X	X	X			
<i>Polygonum arvense</i>	Knotweed			X				X	X	X			
<i>Potulaca oleracea</i>	Purslane			X				X	X	X			
<i>Prunella vulgaris</i> var. <i>atro-purpurea</i>	Self heal		X	X			X	X	X	X			
<i>Ranunculus acris</i>	Cursed buttercup							X	X	X			
<i>Raphanus sativus</i>	Mild radish			X			X	X	X	X			
<i>Rumex acetosella</i>	Sheep sorrel			X	X			X	X	X			
<i>Rumex crispus</i>	Curly dock			X				X	X	X			
<i>Rumex pulcher</i>	Fiddle dock			X				X	X	X			
<i>Senecio vulgaris</i>	Groundsel			X	X			X	X	X			
<i>Silene gallica</i>	Windmill pink			X				X	X	X			
<i>Silybum maritimum</i>	Milk thistle			X				X	X	X			
<i>Sisymbrium officinale</i>	Hedge mustard			X				X	X	X			
<i>Sonchus asper</i>	Sow thistle			X	X			X	X	X			
<i>Sparganium angustifolium</i>	Spurrey			X				X	X	X			
<i>Sparganium angustifolium</i>	Pink spurrey			X	X			X	X	X			
<i>Stellaria media</i>	Chickweed			X	X			X	X	X			

* Observed only in Estero de San Antonio.

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
INTRODUCED HERBS (Cont.)													
<i>Tetragonia expansa</i> *	New Zealand spinach												
<i>Torilis nodosa</i>	Hedge parsley												
<i>Trifolium dubium</i>													
<i>Trifolium repens</i>	Creeping clover												
<i>Vicia angustifolia</i>	Vetch												
<i>Vicia sativa</i>	Vetch												
<i>Vinosa major</i>	Periwinkle												
<i>Xanthium spinosum</i>	Cocklebur												
SHRUBS													
<i>Amelanchier pallida</i>	Service berry												
<i>Arctostaphylos uva-ursi</i> **	Bear berry												
<i>Artemisia californica</i>	California sagebrush												
<i>Baccharis pilularis</i> var. <i>cuneanginea</i>	Coyote brush												
<i>Berberis pinnata</i>	Barberry												
<i>Ceanothus thyrsiflorus</i>	Blue blossom												
<i>Cornus californica</i>	Dogwood												
<i>Corylus cornuta</i> var. <i>californica</i>	Hazelnut												
<i>Crataegus douglasii</i>	Douglas hawthorne												

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Page 19 of 21

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Coastal Strand	Bay Groves	Wetlands	Estuary
SHRUBS (Cont.)													
<i>Eriophyllum stachadifolium</i> var. <i>arborescens</i>	Golden yarrow												
<i>Garrya elliptica</i> **	Silk tassel												
<i>Grindelia stricta</i>	Gum plant												
<i>Holodiscus discolor</i>	Ocean spray												
<i>Lupinus arboreus</i>	Bush lupine												
<i>Mimulus aurantiacus</i>	Sticky monkey flower												
<i>Myrica californica</i>	Wax myrtle												
<i>Oenothera cernua</i> var. <i>formosa</i> **	Oso berry												
<i>Physocarpus opulifolius</i>	Ninebark												
<i>Prunus emarginata</i> **	Bitter cherry												
<i>Prunus virginiana</i> var. <i>dominica</i>	Western choke-cherry												
<i>Rhamnus californica</i>	Coffee berry												
<i>Rhus diversiloba</i>	Poison oak												
<i>Ribes divaricatum</i>	Gooseberry												
<i>Ribes sanguineum</i> var. <i>platanum</i>	Current												
<i>Rosa californica</i>	California rose												
<i>Rosa eglandaris</i>	Eglantine												
<i>Rosa gymnocarpa</i>	Woodland rose												
<i>Rubus parviflorus</i> var. <i>velutinus</i>	Thimbleberry												

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

APPENDIX A

Page 20 of 21

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Drainage Ravines	Coastal Strand	Bay Groves	Wetlands	Estuary
SHRUBS (Cont.)														
<i>Rubus spectabilis</i> var. <i>francoisii</i>	Salmonberry	X						X						
<i>Sambucus californica</i>	Red elderberry													
<i>Sambucus caerulea</i>	Blue elderberry	X							X					
<i>Salix coulteri</i>	Coulter's willow								X					
<i>Salix lasiolepis</i>	Red willow								X					
<i>Salix lasiolepis</i>	Arroyo willow	X							X					
<i>Symphoricarpos rivularis</i>	Snowberry	X							X					
<i>Ulex europaeus</i> **	Gorse			X										
<i>Vaccinium obtatum</i>	Huckleberry	X												
TREES														
<i>Aesculus californica</i> **	California buckeye													
<i>Alnus rubra</i> *	Red alder													
<i>Cupressus macrocarpa</i>	Monterey cypress													
<i>Eucalyptus globulus</i>	Blue gum eucalyptus													
<i>Malus domestica</i>	Apple													
<i>Pinus radiata</i> **	Monterey pine	X												
<i>Populus sp.</i> **	Poplar													

* Observed only in Estero de San Antonio.

** Observed only in Estero Americano.

VEGETATION--ESTEROS AMERICANO and de SAN ANTONIO

Scientific Name	Common Name	Coastal Scrub	Coastal Prairie	Annual Grassland	Estuarine & Coastal Rocky Bluffs, Outcrops	Vernal Pool	Fresh Water Marshes, Ponds (border) & Seeps	Seasonal Brackish Marsh	Intermittent Streams	Drainage Ravines	Coastal Strand	Bay Groves	Wetlands	Estuary
TREES (Cont.) <i>Pseudotsuga menziesii</i> ** <i>Umbellularia californica</i> **	Douglas fir California bay	x										x		

* Observed only in Estero de San Antonio.

ALGAE OF THE ESTEROS AMERICANO AND DE SAN ANTONIO

page 1 of 2

Family	Estero Americano	Estero de San Antonio
CHLOROPHYTA (green algae)	<i>Blidingia minima</i> var. <i>subsalsa</i> <i>Enteromorpha angusta</i> <i>E. clathrata</i> <i>E. intestinalis</i> <i>E. linza</i> <i>Rhizoclonium riparium</i> <i>Ulva expansa</i> <i>U. rigida</i> <i>U. stenophylla</i> <i>Ulvaria oxyspermum</i>	<i>Enteromorpha flexuosa</i> <i>Ulvela mirabilis</i>
PHAEOPHYTA (brown algae)	<i>Ectocarpus corticulans</i> <i>E. tomentosus</i> <i>Egregia menziesii</i> <i>Hecatonema streblo-</i> <i>nematoides</i> <i>Macrocystis integrifo-</i> <i>lia</i> <i>Nereocystis luetkeana</i> <i>Scytosiphon lomentaria</i>	<i>Alaria marginata</i> <i>Hapalospongidion gela-</i> <i>tinosum</i> <i>Leathesia difformis</i> <i>Ralfsia pacifica</i> <i>Sorcanthera ulvoidea</i>
RHODOPHYCOPHYTA (red algae)	<i>Antithamnion occiden-</i> <i>tale</i> <i>A. uncinatum</i> <i>Gigartina californica</i> <i>G. harveyana</i> <i>G. papillata</i> <i>G. boryi</i> <i>Gloiophloea confusa</i> <i>Gracilaria verrucosa</i> <i>Gracilariopsis sjoes-</i> <i>tedtii</i> <i>Iridaea cordata</i> var. <i>spendens</i>	<i>Antithamnion glanduli-</i> <i>ferum</i> <i>Bangia fuscopurpurea</i> <i>Cryptosiphonia woodii</i> <i>Dermatolithon dispar</i> <i>Dilsea californica</i> <i>Endocladia muricata</i> <i>Farlowia conferta</i> <i>Gigartina agardhii</i> <i>Gloiosiphonia verti-</i> <i>cillaris</i> <i>Grateloupia doryphora</i> <i>G. setchellii</i>

Family	Estero Americano	Estero de San Antonio
RHODOPHYCOPHYTA (Cont.)	<i>Iridaea lineare</i> <i>Polysiphonia paniculata</i> <i>Prionitis filiformis</i> <i>P. lyallii</i> <i>*Rhodoglossum americanum</i> <i>R. californica</i> <i>Rhodymenia palmata</i> f. <i>mollis</i>	<i>Gymnogongrus leptophyllus</i> <i>Halymenia californica</i> <i>Microcladia borealis</i> <i>Plocamium coccineum</i> <i>var. pacificum</i> <i>Polysiphonia pacifica</i> <i>var. pacifica</i> <i>Pterosiphonia gracilis</i> <i>*Rhodoglossum americanum</i> <i>Schizymenia pacifica</i>
CYANOPHYTA (blue-green algae)	<i>Spirulina subsalsa</i> <i>Microcoleus vaginatus</i> <i>Anabaena variabilis</i> <i>Nostoc</i> sp.	

*Species collected from both Estero Americano and Estero de San Antonio.

SOURCE: Kjeldsen, C.K. 1971. A Checklist of the Marine Algae in the Vicinity of California State College; Sonoma, Marin, and Mendocino Counties.

APPENDIX C

LICHEN OBSERVED IN ESTERO DE SAN ANTONIO AREA

Caloplaca sp., Th.Fr.--twig of arroyo willow and Monterey cypress
Dendrographa minor--on coastal and estuarine cliffs
Desmaziera homalea, Ach.--rock at mouth of Estero
Lepraria sp., Ach.--twig of arroyo willow and Monterey cypress
Parmelia caperata (L.) Ach.--trunk of Oregon alder and arroyo willow
Parmelia flaventior, Stirt.--trunk of arroyo willow
Parmelia glabratula (Lamy.) Wyl.--twig of arroyo willow
Parmelia perlata (Huds.) Ach.--live branches & trunks of chaparral broom
and arroyo willow
Parmelia sulcata, Tayl.--twig of arroyo willow and Oregon alder
Pertusaria sp., DC--on exfoliating trunk bark of Oregon alder
Physcia adscendens (Th.Fr.) Oliv.--on dead twig of Monterey cypress
Ramalina farinacea (L.) Ach.--twig of arroyo willow and Monterey cypress
Ramalina menziesii, Tayl.--twig of arroyo willow
Umbilicaria sp., Hoffm--boulder at mouth of Estero
Usnea spp., P.Br.--dead branches of arroyo willow and Oregon alder
Xanthoria polycarpa (Ehrh.) Oliv--dead twig of arroyo willow

Source: Identifications by Rockford Thompson.

BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 1 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>GAVIIDAE</u>				
Common loon	<i>Gavia immer</i>	X	X	WR
Arctic loon	<i>G. arctica</i>		X	WR
Red-throated loon	<i>G. stellata</i>	X	X	WR
<u>PODICIPEDIDAE</u>				
Horned grebe	<i>Podiceps auritus</i>	X		WR
Eared grebe	<i>P. caspius</i>		X	WR
Western grebe	<i>Aechmophorus occidentalis</i>	X	X	WR
Pied-billed grebe	<i>Podilymbus podiceps</i>	X	X	R
<u>PELECANIDAE</u>				
White pelican	<i>Pelecanus erythrorhynchos</i>	X	X	WR
Brown pelican	<i>P. occidentalis californicus</i>	X	X	SR
<u>PHALACROCORACIDAE</u>				
Double-crested cormorant	<i>Phalacrocorax auritus</i>	X	X	R
Pelagic cormorant	<i>P. pelagicus</i>	X	X	R
Brandt's cormorant	<i>P. penicillatus</i>	X	X	WR
<u>ARDEIDAE</u>				
Great blue heron	<i>Ardea herodias</i>	X	X	R
Great egret	<i>Casmerodius albus</i>	X	X	R
Snowy egret	<i>Egretta thula</i>	X	X	R
Black-crowned night heron	<i>Nycticorax nycticorax</i>	X	X	R

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 2 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>ANATIDAE</u>				
Whistling swan	<i>Olor colombianus</i>		X	WR
Mallard	<i>Anas platyrhynchos</i>	X	X	R
Pintail	<i>A. acuta</i>	X	X	WR
Green-winged teal	<i>A. crecca carolinensis</i>	X	X	WR
Cinnamon teal	<i>A. cyanoptera</i>	X	X	SR
American wigeon	<i>A. cyanoptera</i>		X	WR
Redhead duck	<i>Aythya americana</i>		X	WR
Canvasback	<i>Aythya valisineria</i>	X	X	WR
Lesser scaup	<i>Aythya affinis</i>		X	WR
Common goldeneye	<i>Bucephala clangula</i>		X	WR
Bufflehead	<i>B. albeola</i>	X	X	WR
White-winged scoter	<i>Melanitta deglandi</i>	X	X	WR
Surf scoter	<i>M. perspicillata</i>	X	X	WR
Black scoter	<i>M. nigra</i>	X	X	WR
Ruddy duck	<i>Oxyura jamaicensis</i>	X	X	R
Merganser, Unidentified			X	
Red-breasted merganser	<i>Mergus serrator</i>	X		WR
<u>CATHARTIDAE</u>				
Turkey vulture	<i>Cathartes aura</i>	X	X	R
<u>ACCIPITRIDAE</u>				
White-tailed kite	<i>Elanus leucurus</i>	X	X	R

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 3 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>ACCIPITRIDAE (Cont.)</u>				
Sharp-shinned hawk	<i>Accipiter striatus</i>	X	X	R
Cooper's hawk	<i>A. cooperii</i>	X	X	R
Red-tailed hawk	<i>Buteo jamaicensis</i>	X	X	R
Rough-legged hawk	<i>B. lagopus</i>		X	WR
Ferruginous hawk	<i>B. regalis</i>		X	WR
Marsh hawk	<i>Circus cyaneus</i>	X	X	R
Golden eagle	<i>Aquila chrysaetos</i>	X	X	WR
Bald eagle	<i>Haliaeetus leucocephalus</i>		X	WR
<u>PANDIONIDAE</u>				
Osprey	<i>Pandion haliaetus</i>	X	X	SR
<u>FALCONIDAE</u>				
American kestrel	<i>Falco sparverius</i>	X	X	R
<u>PHASIANIDAE</u>				
California quail	<i>Lophortyx californicus</i>	X	X	R
<u>RALLIDAE</u>				
American coot	<i>Fulica americana</i>	X	X	R
<u>CHARADRIIDAE</u>				
Semipalmated plover	<i>Charadrius semipalmatus</i>	X		M
Killdeer	<i>C. vociferus</i>	X	X	R
Snowy plover	<i>C. alexandrinus</i>		X	R
Black-bellied plover	<i>Pluvialis squatarola</i>		X	WR

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 4 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>SCOLOPACIDAE</u>				
Ruddy turnstone	<i>Arenaria interpres</i>	X	X	M
Common snipe	<i>Capella gallinago</i>	X	X	WR
Long-billed curlew	<i>Numenius americanus</i>	X	X	WR
Willet	<i>Catoptrophorus semipalmatus</i>	X	X	WR
Yellowlegs	<i>Tringa</i> spp.	X	X	WR
Sanderling	<i>Calidris alba</i>	X	X	WR
Pectoral sandpiper	<i>Melanotos</i>		X	M
Least sandpiper	<i>C. minutilla</i>	X	X	WR
Dunlin	<i>C. alpina</i>	X	X	WR
Western sandpiper	<i>Ereuneter mauri</i>		X	WR
Dowitcher	<i>Limnodromus</i> spp.	X	X	M/WR
Marbled godwit	<i>Limosa fedoa</i>	X	X	WR
<u>HAEMATOPODIDAE</u>				
Black oystercatcher	<i>Haematopus bachmani</i>	X	X	R
<u>RECURVIROSTRIDAE</u>				
American avocet	<i>Recurvirostra americana</i>	X		WR
<u>PHALAROPODIDAE</u>				
Red phalarope	<i>Phalaropus fulicarius</i>	X	X	M
Wilson's phalarope	<i>Steganopus tricolor</i>	X	X	M
Northern phalarope	<i>Lobipes lobatus</i>	X	X	M

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 5 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>LARIDAE</u>				
Gull, Unidentified		X	X	
Glaucous-winged gull	<i>Larus glaucescens</i>	X	X	WR
Western gull	<i>L. occidentalis</i>	X	X	R
Herring gull	<i>L. argentatus</i>		X	WR
California gull	<i>L. californicus</i>	X	X	WR
Ring-billed gull	<i>L. delawarensis</i>	X	X	WR
Mew gull	<i>L. canus</i>	X	X	WR
Bonaparte's gull	<i>L. philadelphia</i>	X	X	WR
Heerman's gull	<i>L. heermanni</i>		X	M
Tern, Unidentified			X	
Forster's tern	<i>Sterna forsteri</i>		X	M
<u>COLUMBIDAE</u>				
Rock dove	<i>Columbia livia</i>	X	X	R
Mourning dove	<i>Zenaida macroura</i>	X	X	R
<u>STRIGIDAE</u>				
Great horned owl	<i>Bubo virginianus</i>	X	X	R
Burrowing owl	<i>Speotyto cunicularia</i>	X	X	R
<u>TROCHILIDAE</u>				
Hummingbird, Unidentified			X	
Anna's hummingbird	<i>Calypte anna</i>		X	R
Rufous hummingbird	<i>Selasphorus rufus</i>	X		M
Allen's hummingbird	<i>S. sasin</i>		X	SR

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 6 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>ALCEDINIDAE</u>				
Belted kingfisher	<i>Megaceryle alcyon</i>	X	X	R
<u>PICIDAE</u>				
Common flicker	<i>Colaptes auratus</i>	X	X	R
Hairy woodpecker	<i>Dendrocopos villosus</i>		X	R
Downy woodpecker	<i>D. pubescens</i>		X	R
<u>TYRANNIDAE</u>				
Black phoebe	<i>Sayornis nigricans</i>	X	X	R
Say's phoebe	<i>S. saya</i>	X	X	WR
<u>ALANDIDAE</u>				
Horned lark	<i>Eremophila alpestris</i>		X	R
<u>HIRUNDINIDAE</u>				
Violet-green swallow	<i>Tachycineta thalassina</i>	X		SR
Tree swallow	<i>Iridoprocne bicolor</i>	X		SR
Barn swallow	<i>Hirundo rustica</i>	X	X	SR
Cliff swallow	<i>Petrochelidon pyrrhonota</i>	X	X	SR
<u>CORVIDAE</u>				
Scrub jay	<i>Aphelocoma coerulescens</i>	X	X	R
Steller's jay	<i>Cyanocitta stelleri</i>	X		R
Common raven	<i>Corvus corax</i>	X	X	R
Common crow	<i>C. brachyrhynchos</i>	X	X	R
<u>PARIDAE</u>				
Bushtit	<i>Psaltiriparus minimus</i>		X	R

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 7 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>CHAMAEIDAE</u>				
Wrentit	<i>Chamaea fasciata</i>	X		R
<u>TROGLODYTIDAE</u>				
House wren	<i>Troglodytes aedon</i>	X		SR
Bewick's wren	<i>Thryomanes bewickii</i>	X	X	R
Long-billed marsh wren	<i>Telmatodytes palustris</i>	X	X	R
<u>MIMIDAE</u>				
Mockingbird	<i>Mimus polyglottos</i>	X		R
<u>TURDIDAE</u>				
American robin	<i>Turdus migratorius</i>	X	X	R
Varied thrush	<i>Ixoreus naevulus</i>	X	X	WR
Hermit thrush	<i>Hylocichla gluttata</i>	X	X	R
Western bluebird	<i>Sialia mexicana</i>	X	X	R
<u>SYLVIIDAE</u>				
Ruby-crowned kinglet	<i>Regulus calendula</i>	X	X	WR
<u>MOTACILLIDAE</u>				
Water pipit	<i>Anthus spinoletta</i>		X	WR
<u>LANIIDAE</u>				
Loggerhead shrike	<i>Lanius ludovicianus</i>	X	X	R
<u>STURNIDAE</u>				
Starling	<i>Sturnus vulgaris</i>	X	X	R

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 8 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>PARULIDAE</u>				
Yellow-rumped warbler	<i>Dendroica coronata auduboni</i>	X	X	WR
<u>PLOCEIDAE</u>				
House sparrow	<i>Passer domesticus</i>	X	X	R
<u>ICTERIDAE</u>				
Western meadowlark	<i>Sturnella neglecta</i>	X	X	R
Red-winged blackbird	<i>Agelaius phoeniceus</i>	X	X	R
Tricolored blackbird	<i>A. tricolor</i>		X	R
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	X	X	R
Bullock's oriole	<i>Icterus bullockii</i>	X		WR
<u>FRINGILLIDAE</u>				
Purple finch	<i>Carpodacus purpureus</i>	X	X	R
House finch	<i>C. mexicanus</i>	X	X	R
American goldfinch	<i>Spinus tristis</i>	X	X	R
Lesser goldfinch	<i>S. psaltria</i>	X		R
Brown towhee	<i>Pipilo fuscus</i>	X	X	R
Savannah sparrow	<i>Passerculus sandwichensis</i>		X	R
Lark sparrow	<i>Chondestes grammacus</i>		X	SR
Dark-eyed junco	<i>Junco hyemalis oreganus</i>	X	X	WR
Chipping sparrow	<i>Spizella passerina</i>	X		R
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	X	X	R
Golden-crowned sparrow	<i>Z. atricapilla</i>	X	X	WR
White-throated sparrow	<i>Z. albicollis</i>		X	WR

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BIRDS OBSERVED IN ESTEROS AMERICANO AND DE SAN ANTONIO, 1975-76

page 9 of 9

Common Name	Scientific Name	Estero de San Antonio	Estero Americano	Regional Seasonal Status *
<u>FRINGILLIDAE (Cont.)</u>				
Fox sparrow	<i>Passerella iliaca</i>	X	X	WR
Song sparrow	<i>Melospiza melodia</i>	X	X	R

*Seasonal Status Symbols: R = permanent resident; WR = winter resident;
 SR = summer resident; M = migrant; V = vagrant.

SOURCE: Observations made by California Department of Fish and Game Personnel.

APPENDIX E

WATER-ASSOCIATED AND RAPTorial BIRDS REGULARLY OCCURRING
IN NEARBY AREAS AND EXPECTED TO BE FOUND IN ESTEROS
AMERICANO AND DE SAN ANTONIO*

Common Name	Scientific Name	Regional Seasonal Status**
<u>PROCELLARIIDAE</u>		
Sooty Shearwater	<i>Puffinus griseus</i>	SR
<u>ANATIDAE</u>		
Black brant	<i>Branta nigricans</i>	WR
Greater scaup	<i>Aythya affinis</i>	WR
<u>SCOLOPACIDAE</u>		
Surfbird	<i>Aphriza virgata</i>	WR
Black turnstone	<i>Arenaria melanocephala</i>	WR
<u>LARIDAE</u>		
Caspian tern	<i>Hydroprogne caspia</i>	M
<u>TYTONIDAE</u>		
Barn owl	<i>Tyto alba</i>	M
<u>HIRUNDINIDAE</u>		
Rough-winged swallow	<i>Stelgidopteryx ruficollis</i>	M
<u>TROGLODYTIDAE</u>		
Winter wren	<i>Troglodytes troglodytes</i>	WR
<u>PARULIDAE</u>		
Orange-crowned warbler	<i>Vermivora celata</i>	M
Wilson's warbler	<i>Wilsonia pusilla</i>	M

*Source: California Department of Fish and Game. May, 1975.
The Natural Resources of Bodega Harbor.
(Birds listed as uncommon or rare are not included.)

** SR = summer resident; WR = winter resident; M = migrant.

FISH OF ESTEROS AMERICANO AND de SAN ANTONIO

	Estero de San Antonio	Estero Americano	Life History Notes
CLUPEIDAE: herrings <i>Clupea harengus</i> Pacific herring	X mouth-common	X	Inshore schooling species; spawns in inter- and subtidal zones in winter, adhesive egg masses adhere to eel grass, kelp, and other fixed objects.
ENGRAULIDAE: anchovies <i>Engraulis mordax</i> Northern anchovy		X	
OSMERIDAE: smelts <i>Hypomesus pretiosus</i> Surf smelt	X mouth-common	X	Marine brackish water, daylight spawning in surf zone, May-October; eggs adhesive and stick to sand grains, feed on small crustaceans mainly.
BATRACHOIDIDAE: mid- shipman <i>Porichthys notatus</i> Plainfin midshipman	X mouth, middle- uncommon		
ATHERINIDAE: silversides <i>Atherinops affinis</i> Top smelt <i>Atherinops californiensis</i> Jacksmelt	X mouth-common	X	Surface schooling species, spawns late winter and spring, eggs adhere to kelp and other plant life, feed mainly on planktonic crustaceans. Inshore areas and bays.

FISH OF ESTEROS AMERICANO AND de SAN ANTONIO

	Estero de San Antonio	Estero Americano	Life History Notes
GASTEROSTEIDAE: stickle- backs	X	X	Anadromous, feed mainly on insects and crustaceans, breeds in late spring and early summer, male builds nest and guards eggs until they hatch.
<i>Gasterosteus aculeatus</i> Threespine stickleback	all stat. 1-12 common		
SYNGNATHIDAE: pipefish	X	X	Lives in eel grass beds in bays, feeds on micro- invertebrates; reproduce in spring, fertilized eggs are brooded by male until 3/4 inch long;
<i>Syngnathus leptorhynchus</i> Bay pipefish	mouth-common; middle-less common		
COTTIDAE: sculpins	X		Feeds on about 50% crabs and 50% mollusks and fishes, spawn from Nov. to March, eggs are laid in masses on cleared rocks, nest is guarded by male.
<i>Scorpaenichthys mormo- ratus</i> Cabezon			
<i>Leptocottus armatus</i> Staghorn sculpin	X mouth-common; middle-less common	X	Most common in shallow subtidal areas of the outer coast, and in bays and estuaries, spawning mainly between Oct. and April, crus- taceans main food item.

F-2

FISH OF ESTEROS AMERICANO AND de SAN ANTONIO

page 3 of 6

	Estero de San Antonio	Estero Americano	Life History Notes
COTTIDAE: sculpins (cont.)			
<i>Oligocottus maculosus</i> Tidepool sculpin	X mouth-common	X	Intertidal and shallow rocky areas.
<i>Cottus asper</i> Prickly sculpin	X mouth-uncommon	X	Usually found in freshwater coastal streams from Ventura County, California to Alaska
SERRANIDAE: sea basses			
<i>Rocessus saxatilis</i> Striped bass	X mouth, middle- common (10-18")		Anadromous; introduced; juveniles feed mainly on <u>Neomysis</u> and then on larger fish as they grow.
EMBIOTOCIDAE: surfperches			
<i>Cymatogaster aggregata</i> Shiner surfperch	X mouth, middle- abundant	X	Schools in shallow nearshore waters along the outer coast and in bays and estuaries; young hatch in spring and summer; feed mainly on crustaceans and algae; preyed upon by birds, fishes, crabs & marine mammals.
<i>Embiotoca lateralis</i> Striped surfperch	X mouth-uncommon		Found from Baja California to Alaska from the surface to 55 feet deep.
<i>Micrometrus minimus</i> Dwarf surfperch	X mouth-uncommon	X	From Baja to Bodega Bay, California; rocky habitat proximate to surf grass beds, young born in late spring or early summer; feed mainly on amphipods, algae, mollusks & polychaete worms.

FISH OF ESTEROS AMERICANO AND de SAN ANTONIO

	Estero de San Antonio	Estero Americano	Life History Notes
EMBIOTOCIDAE: surfperches (cont.)			
<i>Phanerodon furcatus</i> White surfperch	X mouth-uncommon		Found from Baja California to British Columbia, from surface to 150 feet.
CEBIDICTHYIDAE: monkeyface-eels			
<i>Cebidictichys violaceus</i> Monkeyface-eel	X mouth-uncommon		From Baja to Crescent City, California; inter- tidal to 80 feet.
PHOLIDIDAE: gunnels			
<i>Pholis ornata</i> Saddleback gunnel		X	Intertidal and shallow subtidal zones in areas of mud bottom and eel grass, surf grass, and sea- weeds; feed on crustaceans and mollusks.
<i>Apodichthys flavidus</i> Penpoint gunnel		X	
GOBIIDAE: gobies			
<i>Eucyclogobius newberryi</i> Tidewater goby	X inner-abun- dant		Shallow areas of bays, coastal river-mouth areas, and in estuaries with low salinities.
<i>Clevelandia ios</i> Arrow goby	X mouth-abundant	X	Shallow areas of bays from the Gulf of California to British Columbia.

F-4

FISH OF ESTEROS AMERICANO AND de SAN ANTONIO page 5 of 6

	Estero de San Antonio	Estero Americano	Life History Notes
SCORPAENIDAE: scorpion- fishes and rockfishes <i>Sebastes</i> sp. Rockfish		X	Adults near bottom, water depth and life cycle varying with species; bear live young.
HEXAGRAMMIDAE: <i>Ophiodon elongatus</i> Lingcod		X	Juveniles in shallow bays and sand-mud bottoms; adults surface to 1400 feet; juveniles feed on crustaceans.
PLEURONECTIDAE: right-eyed flounders <i>Parophrys vetulus</i> English sole	X mouth	X	
<i>Platichthys stellatus</i> Starry flounder	X mouth, middle- abundant	X	Bottom species-euryhaline; spawn Dec. and Jan.; young feed on worms and small crustaceans, adults on crabs, clams, and sand dollar; most were parasitized by <u>Caligus clemensi</u> on the underside.
<i>Paralichthys melanostictus</i> Sand sole		X	

7
5

FISH OF ESTEROS AMERICANO AND de SAN ANTONIO

	Estero de San Antonio	Estero Americano	Life History Notes
BOTHIDAE: left-eyed flounders <i>Citarichthys atigmaeus</i> Speckled sanddab	X mouth-rare	X	From Baja California to Alaska; spawning from March to Sept.; feed mainly on tiny crustaceans.
CYPRINODONTIDAE: killifish <i>Lucania parva</i> Rainwater fish	X inner-rare		Swamps and brackish waters, introduced.
CYPRINIDAE: minnows <i>Cyprinus carpio</i> European carp	X Stemple Creek		Introduced; considered pest species because it destroys aquatic plants used by waterfowl, com- petes directly with game fish for food and space.
POECILIIDAE: topminnows <i>Gambusia affinis</i> Mosquitofish	X Stemple Creek		Introduced to control mosquito larvae; of minor importance as forage and bait.

Source: Baracco and Charters, 1976; Daggett, 1972; Friese, 1969; Friese, 1971; Studley, 1976.

MAMMALS OF ESTEROS AMERICANO AND DE SAN ANTONIO

page 1 of 2

Scientific Name	Common Name	Occurrence		
		Known	Probable	Possible
Marsupialia: marsupials				
<i>Didelphis marsupialis</i>	Opossum			X
Insectivora: insectivores				
<i>Scapanus latimanus</i>	California mole	X		
<i>Sorex trowbridgei</i>	Trowbridge shrew		X	
Chiroptera: bats				
<i>Antrozous pallidus</i>	Pallid bat		X	
<i>Eptesicus fuscus</i>	Big brown bat		X	
<i>Lasionycteris noctivagans</i>	Silver-haired bat		X	
<i>Lasiurus borealis</i>	Red bat		X	
<i>L. cinereus</i>	Hoary bat		X	
<i>Myotis californicus</i>	California myotis	X		
<i>M. evotis</i>	Long-eared myotis		X	
<i>M. lucifugus</i>	Little brown myotis		X	
<i>M. yumanensis</i>	Yuma myotis	X		
<i>Tadarida brasiliensis</i>	Mexican freetail bat		X	
Lagomorpha: rabbits				
<i>Lepus californicus</i>	Black-tailed jack rabbit	X		
<i>Sylvilagus bachmani</i>	Brush rabbit		X	
Rodentia: rodents				
<i>Citellus beecheyi</i>	California ground squirrel	X		
<i>Microtus californicus</i>	California vole	X		
<i>Mus musculus</i>	House mouse			X
<i>Neotoma fuscipes</i>	Dusky-footed woodrat			X

MAMMALS OF ESTEROS AMERICANO AND DE SAN ANTONIO

page 2 of 2

Scientific Name	Common Name	Occurrence		
		Known	Probable	Possible
Rodentia (Continued)				
<i>Ondatra zibethica</i>	Muskrat	X		
<i>Peromyscus maniculatus</i>	Deer mouse	X		
<i>Rattus norvegicus</i>	Norway rat		X	
<i>Reithrodontomys megalotis</i>	Western harvest mouse		X	
<i>Thomomys bottae</i>	Valley pocket gopher	X		
Carnivora: carnivores				
<i>Bassariscus astutus</i>	Ringtail	X		
<i>Canis latrans</i>	Coyote			X ^{1/}
<i>Felis concolor</i>	Mountain lion	X		
<i>Lutra canadensis</i>	River otter		X	
<i>Lynx rufus</i>	Bobcat	X		
<i>Mephitis mephitis</i>	Striped skunk	X		
<i>Mustela frenata</i>	Long-tailed weasel	X		
<i>M. vison</i>	Mink		X	
<i>Phoca vitulina</i>	Harbor seal	X		
<i>Procyon lotor</i>	Raccoon	X		
<i>Spilogale putorius</i>	Spotted skunk	X		
<i>Taxidea taxus</i>	Badger	X		
<i>Urocyon cinereoargenteus</i>	Gray fox	X		
Artiodactyla: hoofed mammals				
<i>Odocoileus hemionus</i>	Mule deer	X		

^{1/} Not observed in Marin County since 1940's.

SOURCE: Arnold, J. 1976; Sample, S. 1976.

REPTILES AND AMPHIBIANS OF ESTEROS AMERICANO AND DE SAN ANTONIO

page 1 of 2

Scientific Name	Common Name	Occurrence		
		Known	Probable	Possible

REPTILES

Chelonia: turtles and tortoises

<i>Clemmys marmorata</i>	Western pond turtle	X		
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Squamata: lizards and snakes

<i>Coluber constrictor</i>	Racer		X	
<i>Contia tenuis</i>	Sharp-tailed snake		X	
<i>Crotalus viridis</i>	Western rattlesnake	X		
<i>Diadophis amabilis</i>	Ringneck snake		X	
<i>Eumeces skiltonianus</i>	Western skink		X	
<i>Gerrhonotus coeruleus</i>	Northern alligator lizard			X
<i>G. multicarinatus</i>	Southern alligator lizard		X	
<i>Lampropeltis getulus</i>	Common kingsnake		X	
<i>Phrynosoma coronatum</i>	Coast horned lizard		X	
<i>Pituophis melanoleucus</i>	Gopher snake	X		
<i>Sceloporus occidentalis</i>	Western fence lizard	X		
<i>Thamnophis couchi aquaticus</i>	Aquatic garter snake	X		
<i>Thamnophis elegans</i>	Western terrestrial garter snake		X	
<i>T. sirtalis infernalis</i>	Red-sided garter snake		X	

AMPHIBIANS

Caudata: salamanders

<i>Aneides flavipunctatus</i>	Black salamander			X
<i>A. lugubris</i>	Arboreal salamander		X	
<i>Batrachoseps attenuatus</i>	California slender salamander	X		
<i>Ensatina eschscholtzi</i>	Ensatina		X	

REPTILES AND AMPHIBIANS OF ESTEROS AMERICANO AND DE SAN ANTONIO

page 2 of 2

Scientific Name	Common Name	Occurrence		
		Known	Probable	Possible
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Amphibians:Caudata (Cont.)				
<i>Taricha granulosa</i>	Rough-skinned newt			X
<i>T. torosa</i>	California newt	X		
Anura: frogs and toads				
<i>Bufo boreas</i>	Western toad	X		
<i>Rana aurora</i>	Red-legged frog			X
<i>R. boylei</i>	Foothill yellow-legged frog		X	
<i>R. catesbeiana</i>	Bullfrog	X		
<i>Hyla regilla</i>	Pacific tree frog		X	

SOURCE: Brown, C.W. 1976; Cline, R and C Katoski.

INVERTEBRATES OF ESTEROS AMERICANO AND de SAN ANTONIO

	Estero de San Antonio	Estero Americano	Life History Notes
PROTOZOA: single-celled animals			
<i>Zoothamnium</i> sp.	inner		
<i>Vorticella</i> sp.	inner		
CNIDARIA: coelenterates			
Hydrozoa: hydroids			
<i>Aglaophenia</i> sp.	mouth		
<i>Tubularia</i> sp.	inner		
Schizophzoa: true jellyfish			
Ephyra stage	mouth		
PLATYHELMINTHES: flatworms			
Turbellaria	throughout		
NEMERTEA: ribbon worms	mouth, inner	X	
NEMATODA: roundworms	throughout		
ANNELIDA: segmented worms			
Polychaeta: bristle worms			
Unidentified species		X	
<i>Glycera capitata</i>	mouth, middle- uncommon		Sandy mud to mud.

INVERTEBRATES OF ESTEROS AMERICANO AND de SAN ANTONIO

	Estero de San Antonio	Estero Americano	Life History Notes
ANNELIDA: Polychaeta (Cont.)			
<i>Nephtys californiensis</i>	mouth-occasional		Clean, sandy beaches.
<i>Neanthes limicola</i>	middle-uncommon		Brackish-freshwater of estuaries and lagoons.
<i>Streblospio benedicti</i>	mouth-common		Mudflats of estuaries and tributaries.
<i>Polydora</i> sp.	middle-uncommon		
Oligochaeta	throughout		
ARTHROPODA: arthropods			
Crustacea: crustaceans			
Cirripedia: barnacles			
<i>Balanus glandula</i>	mouth-common		On rocks or hard surfaces of high intertidal.
<i>Chthamalus dalli</i>	mouth		Associated with <i>Balanus glandula</i> on rocks.
Ostracoda: ostracods	throughout		
Copepoda: copepods			
<i>Tigriopus</i> sp.	mouth, inner	X	Marine species; characteristic of higher tide pools; often in high salinities.
<i>Caligus clemensi</i>	mouth, middle-common		Ectoparasite; on the underside of starry flounders; up to 20 on a single fish 33 cm long.

APPENDIX I

INVERTEBRATES OF ESTEROS AMERICANO AND de SAN ANTONIO

	Estero de San Antonio	Estero Americano	Life History Notes
ARTHROPODA: Crustacea (Cont.)			
Branchiura: ectoparasites on fish			
<i>Argulus pugettensis</i>	uncommon		Three individuals parasitizing a striped surf-perch (28.6 cm, preg. female)
Leptostraca: nebaliceans			
<i>Nebalia pugettensis</i>	mouth-uncommon		In pools and/or associated with <i>Ulva</i> , <i>Enteromorpha</i> , and eel grass on mudflats.
Mysidacea: mysids			
<i>Neomysis mercedis</i>	throughout-abundant	X	Brackish water of bays, estuaries and sloughs; important in the diet of striped bass and possibly other fish in estero.
Isopoda: isopods			
<i>Idotea montereyensis</i>	mouth-uncommon		Eel grass.
<i>Idotea resicata</i>	mouth-abundant		Eel grass.
<i>Gnoriophaeroma lutea</i>	throughout-common		Fresh and brackish water.
<i>Ligia occidentalis</i>	mouth-common		Rocky shore.
Rock louse			