

Department of Fish and Game

Office of Spill Prevention and Response

California Aquatic Non-native Organism Database (CANOD)

CANOD
The California Aquatic Non-Native Organism Database



Searchable Forms

- Non Native Organisms
- Non Native Organisms by Vector
- Organism Lookup
- Station Lookup
- Find Current Taxonomic Names

Click for Reports and Maps

EXIT CANOD

*California Department of Fish and Game
Office of Spill Prevention and Response*

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Please Contact Steve Foss: sfoss@ospr.dfg.ca.gov to determine if any changes have been made or if any updates are pending before citing this database or using the information it contains in any published study.

User Manual

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California Aquatic Non-native Organism Database (CANOD)

CANOD was created by the Departments of Fish and Game, Office of Spill Prevention and Response, Marine Invasive Species Program (MISP) for tracking information relating to the introduction of non-native species into California waters per vector and native region. Contact Karen Bigham at kbigham@dfg.ospr.ca.gov if you have any questions about CANOD or this user manual.

Main Menu

The Main Menu provides you with different ways to view the data. See figure below



The Main Menu offers two options.

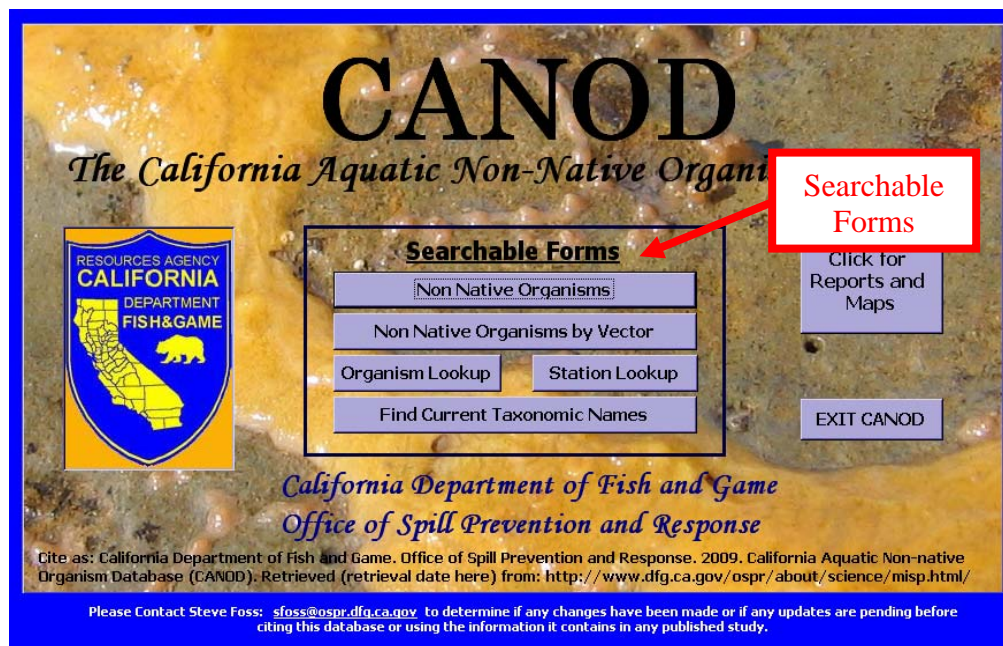
1. The first option is to build your own report through searchable forms. See page 4.
2. The second option is the view previously generated reports and maps by clicking the "Click for Reports and Maps" button. See page 21 for the "Reports and Maps" form.

Searchable Forms

The searchable forms allow you to build your own report quickly and easily. You have four options to choose from.

1. Non-Native Organisms
2. Non-Native Organisms by Vector
3. Organism Lookup
4. Station Lookup

Click on the title you would like to search in. The searchable form will automatically display on the screen. See figure below.



Non-Native Organisms

The “Non-Native Organisms” form allows you to choose from a list of all non-native organisms in CANOD and view detailed information on the species. The details include the organism’s phylum, class, order, family, source, native region, vector, and records of known occurrences in California.

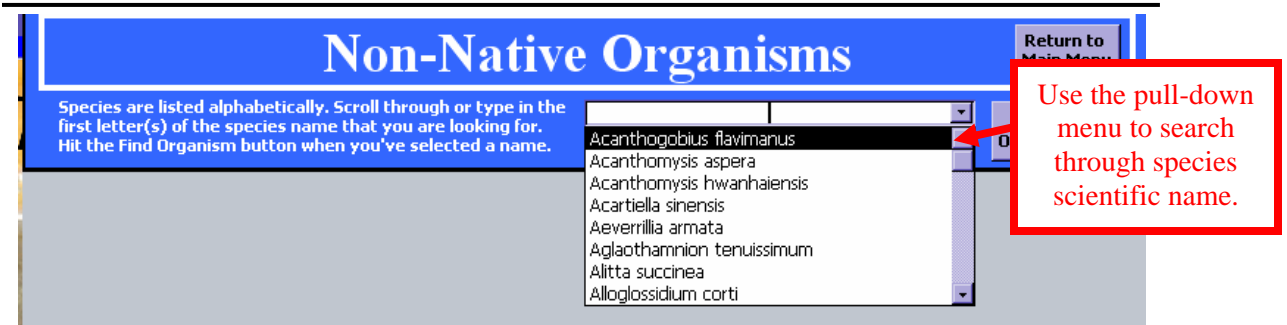
1. Click on the “Non-Native Organism” button **Non Native Organisms** to open the form. See figure below.




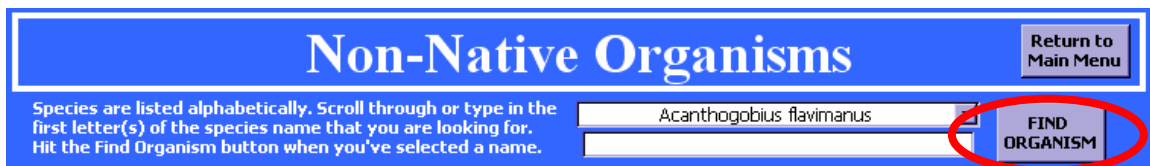
2. The "Non-Native Organisms" form will display on the screen. See figure below.


The image shows the "Non-Native Organisms" search form. The title "Non-Native Organisms" is displayed in a blue header. Below the title, there is a "Return to Main Menu" button. The main content area contains instructions: "Species are listed alphabetically. Scroll through or type in the first letter(s) of the species name that you are looking for. Hit the Find Organism button when you've selected a name." Below the instructions, there is a pull-down menu and a text input field. To the right of the input field is a "FIND ORGANISM" button.

3. Species are listed alphabetically. Scroll through the pull-down menu button or type in the first letters of the species name. See figure below.



4. Click the “Find Organism” button  when you have found the species you are searching for. See figure below.



5. You can review data and print the displayed record. To print the displayed record, click the “Print Current Record” button  on the right hand side of the screen. This will automatically begin printing the record displayed on the screen. You will not have the ability to set printing perimeters before the print job begin. See figure below.

The “Non-Native Organism” form has four sections. The four sections are:

1. Taxonomic Summary
2. Native Region
3. Vectors
4. Non-Native Organism Occurrences

The four sections are described below.

Taxonomic Summary - The first section is the taxonomic summary at the top of the form. This section provides the organism’s scientific name, common name, phylum, class, order, family, introduction status, literature citation or survey source used to determine the introduction status, year the species was first discovered in California and any comments regarding the history of the species status. See figure below.

Non-Native Organisms Return to Main Menu

Species are listed alphabetically. Scroll through or type in the first letter(s) of the species name that you are looking for. Hit the Find Organism button when you've selected a name.

Search:

ORGANISM:

PHYLUM: CLASS: ORDER: FAMILY:

ORGANISM STATUS: STATUS DETERMINATION SOURCES: CALIFORNIA DISCOVERY YEAR:

INTRODUCTION STATUS COMMENTS:
1st California Record: CA/San Joaquin River/ Prisoner's Point, Venice Island (1963 Cohen and Carlton, 1995) The yellowfin goby is native to Japan, South Korea and China where it ranges from marine into fresh water near sea level (Brittan et al., 1963; Haaker, 1979). The first yellowfin goby in California was collected in Jan. 1963 in a midwater trawl in the San Joaquin River off Prisoners Point, Venice Island. Brittan et al. (1963) suggested that the goby was transported across the Pacific in the fouled seawater system of a ship, and Haaker (1979) suggested the possibility of transport as eggs laid on fouling organisms on ships' hulls. (Cohen and Carlton, 1995)

Print Current Record button automatically prints what is displayed on then screen.

Native Region - The second section is “Native Region”. This section provides a list of any known native regions of the introduced species. See figure below. See page 35 for a list of all native regions in CANOD

NATIVE REGION

- Western Pacific
- Asia

Vectors - The third section is “Vectors”. This section provides a list of know vectors (pathways) by which the organism was introduced to California. See figure below. See page 33 for a list of vectors in CANOD.

VECTOR(S)

- Fouling (Commercial shipping)
- Fouling (Recreational Boats)

Non-Native Organism Occurrences - The fourth section is “Non-Native Organism Occurrences”. This section provides a list of observed occurrences in California. The record includes the data type (for example: a literature or survey source), project name, sample date, station where the species was observed, and the waterbody. This data can be sorted or filtered. See page 43 for directions on sorting and filtering data. Occurrence records are organized by the

sample date. Unless the organism has a California discovery year of 1950, a sample date of 1/1/1950 represents an unknown or default collection date in CANOD and does not mean the organism was collected in 1950. See figure below.

NON NATIVE ORGANISM OCCURENCES				
Occurrence records are organized by sample date. Unless the organism has a California discovery year of 1950, a sample date of 1/1/1950 represents an unknown or default collection date in CANOD and does not mean that an organism was collected in 1950.				
Data Type	Project Name	Sample Date	Station	Waterbody
Literature	Cohen and Carlton, 1995	01/Jan/1963	Delta - Prisoner's Point, Venice Island	San Francisco Bay
Literature	Cohen and Carlton, 1995	01/Jan/1966	Delta General Location	San Francisco Bay
Literature	Cohen and Carlton, 1995	01/Jan/1966	Suisun Bay	San Francisco Bay
Literature	Cohen and Carlton, 1995	01/Jan/1966	South San Francisco Bay	San Francisco Bay
Literature	Cohen and Carlton, 1995	01/Jan/1966	North San Francisco Bay	San Francisco Bay
Literature	Cohen and Carlton, 1995	01/Jan/1966	Central San Francisco Bay	San Francisco Bay
Literature	Cohen and Carlton, 1995	01/Jan/1966	San Pablo Bay	San Francisco Bay

Record: 1 of 32

**Return to
Main Menu**

Use the “Return to Main Menu” button to return to the Main Menu.

Non-Native Organism by Vector

The “Non-Native Organism by Vector” form provides a list of species introduced to California by a specific vector. A vector is an agent or pathway through which an organism can be conveyed outside of its native range. For example, some species come to California in the ballast water of a commercial ship or by fouling on the hull of a boat. See table on page 33 for a list of vectors in CANOD. Factors that are considered when assigning vectors to organisms included:

- Life history
- Timing of introduction
- Previously known introduction events and spread
- Probable human-mediated transfer mechanism operating in proximity to where the organism was found.


Many organisms are polyvectic (Carlton and Ruiz, 2005), meaning they have been introduced to California waters by more than one mechanism. In these cases multiple vectors are assigned.

1. To open the “Non-Native Organisms by Vector” form, click on the “Non-Native Organisms by Vector” button **Non Native Organisms by Vector** on the Main Menu. See figure below.



2. The "Non-Native Organism by Vector" form will automatically display on screen. See figure below.

The image shows a screenshot of the "Non Native Organisms by Vector" form. The title is "Non Native Organisms by Vector". Below the title is a paragraph: "A vector is an agent or pathway through which an organism can be conveyed outside its native range. Factors considered when assigning vectors to organisms included: a) life history; b) timing of introduction; c) previously known introduction event(s) and spread; and d) probable human-mediated transfer mechanisms operating in proximity to where the organism was found." Below this text are two input fields: "Vector:" with a pull-down menu and "Vector Category:" with a text input field. To the right of these fields is a "Search" button. Further right are two buttons: "Return to Main Menu" and "Print Current Record". The background of the form is a photograph of a rocky coastline with waves crashing against the rocks and a large ship visible in the distance.

3. Use the pull-down menu button  to select the vector name that you would like to display.

Non Native Organisms by Vector

A vector is an agent or pathway through which an organism can be conveyed outside its native range.
Factors considered when assigning vectors to organisms included: a) life history; b) timing of introduction; c) previously known introduction event(s) and spread; and d) probable human-mediated transfer mechanisms operating in proximity to where the organism was found.

Vector:

Vector Category:

- Agricultural Weed
- Aquaculture/ Mariculture
- Aquarium Plant Release
- Aquatic Plant Shipments
- Bait-packing Material
- Ballast Water
- Biocontrol
- Cargo
- Discarded Bait
- Discarded Seafood
- Dry Ballast
- Fisheries (Accidental, with stocking)
- Fisheries-Intentional (Official)
- Fisheries-Intentional (Unofficial)
- Fouling (Commercial shipping)
- Fouling (Recreational Boats)
- Garden Escape
- Habitat Restoration
- Natural Dispersal
- Oyster-Accidental (Atlantic)
- Oyster-Accidental (Japanese)
- Oyster-Intentional
- Pet Release
- Scientific Escape
- Unknown

Click the pull-down menu to view the list of pathways. Highlight and select the desired pathway you would like to view.

4. Then click Search. See figure below.

Non Native Organisms by Vector


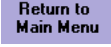
A vector is an agent or pathway through which an organism can be conveyed outside its native range.
Factors considered when assigning vectors to organisms included: a) life history; b) timing of introduction; c) previously known introduction event(s) and spread; and d) probable human-mediated transfer mechanisms operating in proximity to where the organism was found.

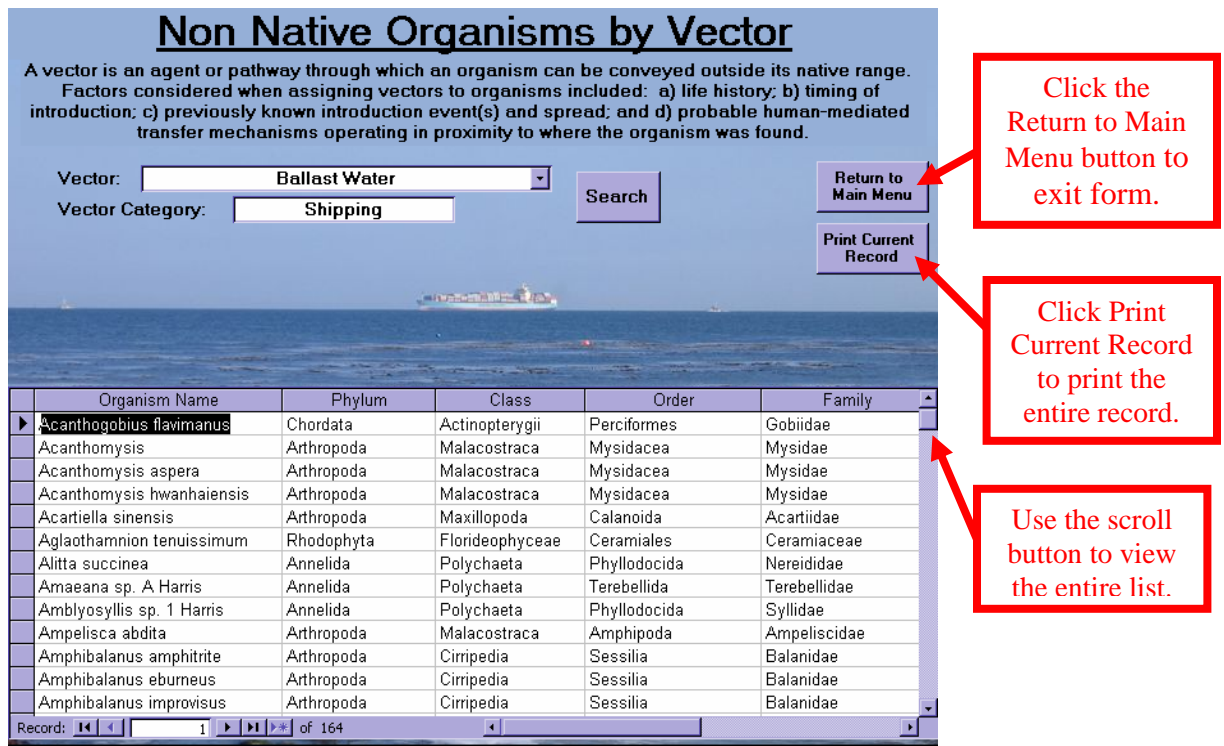
Vector:

Vector Category:

5. When the vector name is selected, the vector category field will automatically populate. A list of organism associated with the specified

vector will display on the bottom half of the screen along with its phylum, class, order and family. See the next figure. Use the scroll button to scroll through the list of species.

- Click the “Print Current Record” bottom  to print the displayed screen. The print button automatically begins printing. You are not allowed to set specific parameters. See the next figure.
- Click the “Return to the Main Menu” bottom  to exit the Non-Native Organism by Vector form and return to the Main Menu. See the next figure.



Non Native Organisms by Vector

A vector is an agent or pathway through which an organism can be conveyed outside its native range. Factors considered when assigning vectors to organisms included: a) life history; b) timing of introduction; c) previously known introduction event(s) and spread; and d) probable human-mediated transfer mechanisms operating in proximity to where the organism was found.

Vector:

Vector Category:

Organism Name	Phylum	Class	Order	Family
▶ Acanthogobius flavimanus	Chordata	Actinopterygii	Perciformes	Gobiidae
Acanthomysis	Arthropoda	Malacostraca	Mysidacea	Mysidae
Acanthomysis aspera	Arthropoda	Malacostraca	Mysidacea	Mysidae
Acanthomysis hwanhaiensis	Arthropoda	Malacostraca	Mysidacea	Mysidae
Acartiella sinensis	Arthropoda	Maxillopoda	Calanoida	Acartiidae
Aglaothamnion tenuissimum	Rhodophyta	Florideophyceae	Ceramiales	Ceramiaceae
Alitta succinea	Annelida	Polychaeta	Phyllodocta	Nereididae
Amaeana sp. A Harris	Annelida	Polychaeta	Terebellida	Terebellidae
Amblyosyllis sp. 1 Harris	Annelida	Polychaeta	Phyllodocta	Syllidae
Ampelisca abdita	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Amphibalanus amphitrite	Arthropoda	Cirripedia	Sessilia	Balanidae
Amphibalanus eburneus	Arthropoda	Cirripedia	Sessilia	Balanidae
Amphibalanus improvisus	Arthropoda	Cirripedia	Sessilia	Balanidae

Record: of 164

Organism Lookup

The “Organism Lookup” form provides detailed information on all organisms in CANOD including non-native, native and cryptogenic species. The form includes the following information about each species:

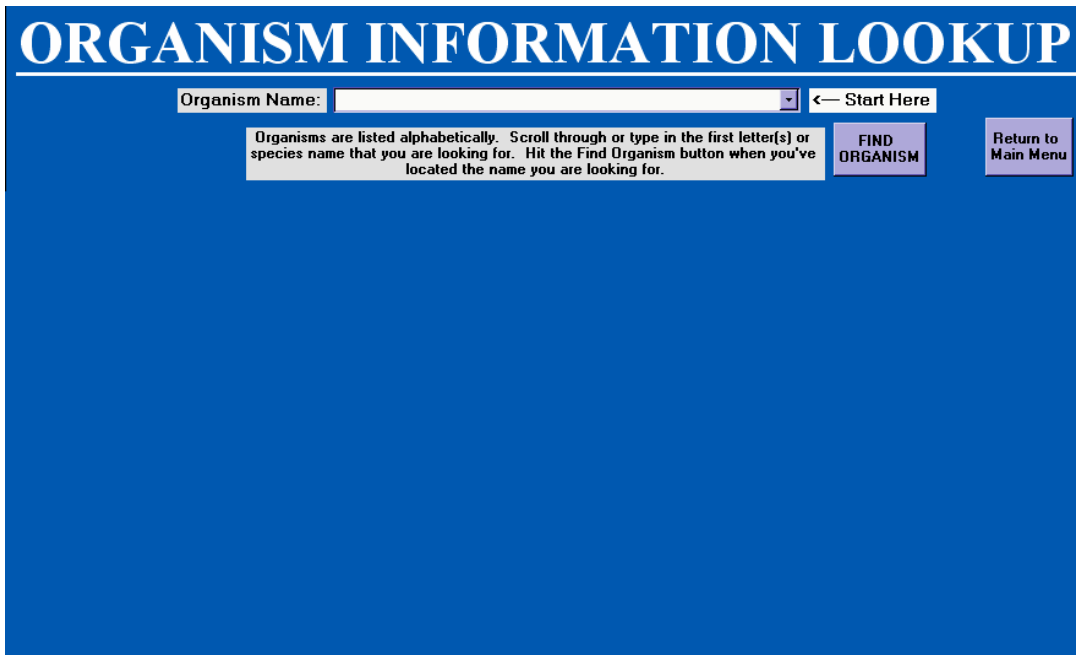
- phylum
- class
- order
- family

- species complex
- common name
- other known names of the species (synonym names)
- comments regarding the synonym names
- introduction status
- year the species was discovered in California
- the source of discovery
- additional comments regarding the introduction status

1. Click the “Organism Lookup” button **Organism Lookup** on the Main Menu to open the form. See figure below.




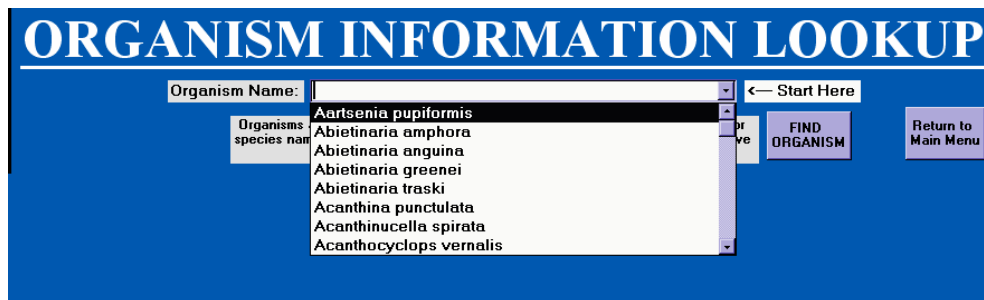
2. The “Organism Information Lookup” form will automatically display on the screen. See figure below.




3. Locate the “Start Here” arrow **← Start Here** at the top of the form to begin a search for a specific organism. See figure below.



4. Species are listed alphabetically. Use the pull-down menu button  to scroll through the pull-down menu and locate the species you are looking for or begin typing the name of the species in the white box. See figure below.



5. Click the “Find Organism” button  when you have found the species you are looking for. The data will automatically populate the form. See figure below.

ORGANISM INFORMATION LOOKUP

Organism Name: ← Start Here

Organisms are listed alphabetically. Scroll through or type in the first letter(s) or species name that you are looking for. Hit the Find Organism button when you've located the name you are looking for.

FIND ORGANISM Return to Main Menu

(Carpenter, 1865)

Phylum:	Class:	Order:	Family:
Mollusca	Gastropoda	Heterostropha	Pyramidellidae

Species Complex: Common Name:

Synonym Name(s)	Synonym Comments
Odostomia nota	synonym

Introduction Status: Likely Status (if Cryptogenic): California Discovery Year:

Status Determination Sources: Light and Smith, 2007

Introduction Status Comments: In roots of surfgrass Phyllospadix.(Light and Smith, 2007)

The species' taxonomic hierarchy and common name are listed at the top of the page. See figure on next page.

ORGANISM INFORMATION LOOKUP

Organism Name: ← Start Here

Organisms are listed alphabetically. Scroll through or type in the first letter(s) or species name that you are looking for. Hit the Find Organism button when you've located the name you are looking for.

FIND ORGANISM Return to Main Menu

(Carpenter, 1865)


Phylum:	Class:	Order:	Family:
Mollusca	Gastropoda	Heterostropha	Pyramidellidae

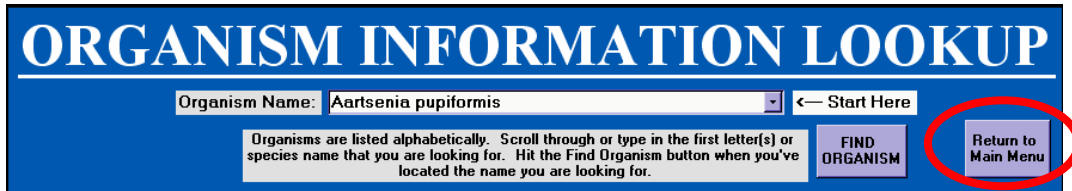
Species Complex: Common Name:

The center of the page lists additional names the species is known as. The Synonym Comments field addresses the history of the synonym names. See figure below.

The box at the bottom of the form includes the Introduction Status, Likely Status (if Cryptogenic) CA Discovery Year, Status Determination Sources, and Introduction Status Comments. See figure on next page. The following describes the fields in the bottom box of the form.

- **Organism Status:** Provides the status of the organism as Introduced, Native or Cryptogenic.
- **Likely Status (if Cryptogenic):** Provides a opinion of the more likely species status until further investigation has been completed.
- **CA Discovery Year:** The year the organism was discovered in California waters.
- **Status Determination Sources:** The name of the survey, taxonomist, or the citation of the literary source that identified the species.
- **Introduction Status Comments:** Comments by taxonomists or literature sources about the status of the species.

- Click the “Return to the Main Menu” button  to exit the form. See figure below.

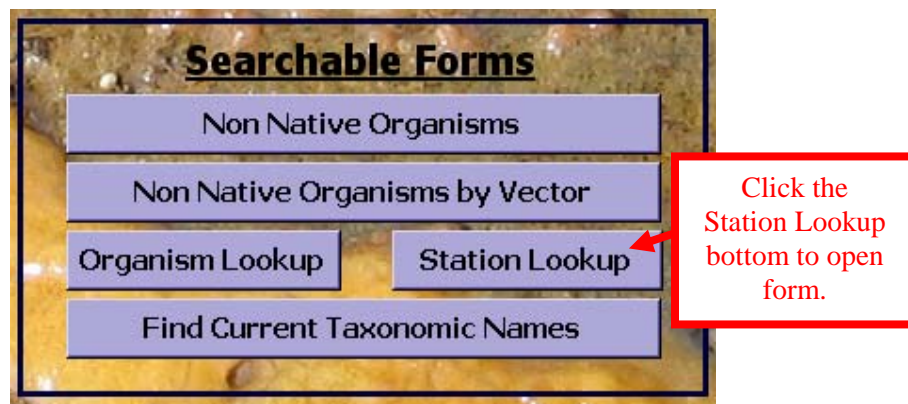


Station Lookup


The “Station Lookup” form allows you to search all the stations in CANOD by name or view a list of all stations currently in CANOD. The form provides data associated with the station, including:

- species found at each station
- date the station was sampled
- station coordinates
- sub-bay
- bay or watershed
- county
- bioregion

- To begin a search, click the “Station Lookup” button. See figure on next page.



- The “Station Information Lookup” form will display on the screen. See figure below.

3. Locate the “Start Here” arrow **<--- Start Here** at the top of the form. Station names are listed alphabetically. You can scroll through the pull-down menu or type in the first letter of the name of the station that you are searching for.
4. Click the pull-down menu button  next to the “Start Here” arrow to view the list of station names.
5. Highlight and select the station you would like to view. See figure below.

6. When the Station Name is selected the Station Code field will automatically populate. See figure below.

7. Click the “Find Station” button **FIND STATION** to populate the form. The Station Source, Sub-Bay, Waterbody, Bay/Watershed, County, Bioregions, Station comments and the Outer Coast check box will automatically populate. See figure below.

Station Information Lookup

Station names are listed alphabetically. You can scroll through or type in the first letter or name of the station that you are looking for. Hit the Find Station button when you have selected a station.

Station Name: <--- Start Here Return to Main Menu

Station Code: **FIND STATION** The print button goes directly to print. Please preview the information you wish to print to ensure that it is sized properly. Print Current Record

Station Source	Sub-Bay	Waterbody	Bay/Watershed
OSPR	Agua Hedionda Lagoon	Pacific Ocean	San Diego Coast-North
County	Bioregion	Station Comments	Outer Coast
San Diego	Southern California		<input type="checkbox"/>

Master Station List | Station Coordinates | Species List by Station

Using the Master Station Query button will show you a list of all stations currently in the Query, you can alphabetize, sort and filter the station list according to whichever you'd like. Return to the top of this page and search by station name when you have determined which station(s) you would like to see additional information on.

Master Station Table

8. There are three tabs on the lower half of the form labeled “Master Station List”, “Station Coordinates”, and “Species List by Station”. See figure below.

Station Information Lookup

Station names are listed alphabetically. You can scroll through or type in the first letter or name of the station that you are looking for. Hit the Find Station button when you have selected a station.

Station Name: <--- Start Here Return to Main Menu

Station Code: **FIND STATION** The print button goes directly to print. Please preview the information you wish to print to ensure that it is sized properly. Print Current Record

Station Source	Sub-Bay	Waterbody	Bay/Watershed
OSPR	Agua Hedionda Lagoon	Pacific Ocean	San Diego Coast-North
County	Bioregion	Station Comments	Outer Coast
San Diego	Southern California		<input type="checkbox"/>

Master Station List | Station Coordinates | Species List by Station

Using the Master Station Query button will show you a list of all stations currently in CANOD. In the Query, you can alphabetize, sort and filter the station list according to whichever parameters you'd like. Return to the top of this page and search by station name when you have determined which station(s) you would like to see additional information on.

Master Station Table

The “Master Station List” tab Master Station List provides a list of all stations currently in CANOD.

9. Click the “Master Station Table” button to view the list. Use the scroll bar to scroll through the list of stations. See figure below.

Master Station List | Station Coordinates | Species List by Station


Using the Master Station Query button will show you a list of all stations currently in CANOD. In the Query, you can alphabetize, sort and filter the station list according to whichever parameters you'd like. Return to the top of this page and search by station name when you have determined which station(s) you would like to see additional information on.

Click this button to view the Master Station Table.

Master Station Table

The Master Station Table will display on screen.

StationSource	StationCode	StationName	SubBaySubHarbor	BaysWatershed	ISSWaterbody	Bioregion
OSPR	AHL	Agua Hedionda Lagoon	Agua Hedionda Lagoon	San Diego Coast-North	Pacific Ocean	Southern California
OSPR	CA28	Alameda County	Alameda County	None	None	Central California
OSPR	ALB	Alamitos Bay	Alamitos Bay	San Pedro Bay	Alamitos Bay	Southern California
ISS	203ALCATR	Alcatraz	Central San Francisco Bay	San Francisco Bay	San Francisco Bay	Central California
ISS	410HNME06	Alpha Wharf	Port Hueneme	Calleguas	Port Hueneme	Southern California
ISS	519AMERIV	American River	Sacramento River	San Francisco Bay	Sacramento River	Central California
ISS2000	SDE12	America's Cup Harbor	North San Diego Bay	San Diego Bay	San Diego Bay	Southern California
OSPR	AI	Anacapa Islands	Anacapa Islands	Anacapa Islands	Pacific Ocean	Southern California
Cohen2002	SCX22	Anacapa Isle Marina	Channel Islands Harbor	Calleguas	Pacific Ocean	Southern California
OSPR	ANB	Anaheim Bay	Anaheim Bay	San Pedro Bay	Pacific Ocean	Southern California
ISS	304ANONUE	Ano Nuevo	Ano Nuevo	San Lorenzo-Soquel	Pacific Ocean	Central California
ISS	411LALB03	APL Terminal	Los Angeles Harbor	San Pedro Bay	LA/Long Beach Harbor	Southern California
ISS	110HUMB02	Aquaculture Floats	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California
ISS	203AQUATC	Aquatic Park	Central San Francisco Bay	San Francisco Bay	San Francisco Bay	Central California


10. Click on the  button to maximize the table to view in full screen. See figure below.


Microsoft Access - [QRY_Stn Master : Select Query]

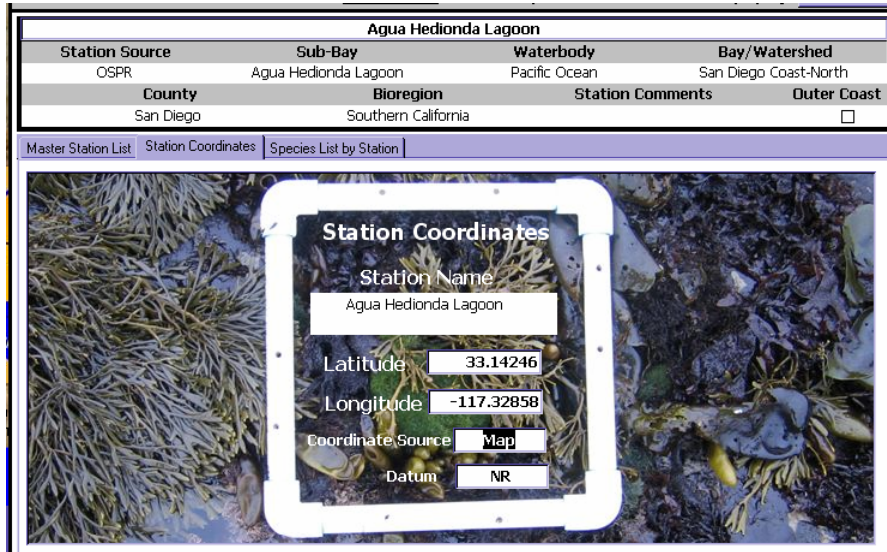
Click here to maximize the query.


StationSource	StationCode	StationName	SubBaySubHarbor	BaysWatershed	ISSWaterbody	Bioregion	OuterC
OSPR	AHL	Agua Hedionda Lagoon	Agua Hedionda Lagoon	San Diego Coast-North	Pacific Ocean	Southern California	<input type="checkbox"/>
OSPR	CA28	Alameda County	Alameda County	None	None	Central California	<input type="checkbox"/>
OSPR	ALB	Alamitos Bay	Alamitos Bay	San Pedro Bay	Alamitos Bay	Southern California	<input type="checkbox"/>
ISS	203ALCATR	Alcatraz	Central San Francisco Bay	San Francisco Bay	San Francisco Bay	Central California	<input type="checkbox"/>
ISS	410HNME06	Alpha Wharf	Port Hueneme	Calleguas	Port Hueneme	Southern California	<input type="checkbox"/>
ISS	519AMERIV	American River	Sacramento River	San Francisco Bay	Sacramento River	Central California	<input type="checkbox"/>
ISS2000	SDE12	America's Cup Harbor	North San Diego Bay	San Diego Bay	San Diego Bay	Southern California	<input type="checkbox"/>
OSPR	AI	Anacapa Islands	Anacapa Islands	Anacapa Islands	Pacific Ocean	Southern California	<input type="checkbox"/>
Cohen2002	SCX22	Anacapa Isle Marina	Channel Islands Harbor	Calleguas	Pacific Ocean	Southern California	<input type="checkbox"/>
OSPR	ANB	Anaheim Bay	Anaheim Bay	San Pedro Bay	Pacific Ocean	Southern California	<input type="checkbox"/>
ISS	304ANONUE	Ano Nuevo	Ano Nuevo	San Lorenzo-Soquel	Pacific Ocean	Central California	<input checked="" type="checkbox"/>
ISS	411LALB03	APL Terminal	Los Angeles Harbor	San Pedro Bay	LA/Long Beach Harbor	Southern California	<input type="checkbox"/>
ISS	110HUMB02	Aquaculture Floats	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
ISS	203AQUATC	Aquatic Park	Central San Francisco Bay	San Francisco Bay	San Francisco Bay	Central California	<input type="checkbox"/>
OSPR	HB03	Arcata Bay	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUSAB	Arcata Bay-2	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS54	Arcata Channel HB, St. 1	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS68	Arcata Channel HB, St. 12	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS56	Arcata Channel HB, St. 2	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS58	Arcata Channel HB, St. 3	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS60	Arcata Channel HB, St. 4	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS63	Arcata Channel HB, St. 5	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS46	Arcata Channel HB, St. 54	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS47	Arcata Channel HB, St. 55	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS49	Arcata Channel HB, St. 56	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS51	Arcata Channel HB, St. 57	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS64	Arcata Channel HB, St. 6	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS66	Arcata Channel HB, St. 7	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS67	Arcata Channel HB, St. 8	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS166	Arcata Marsh - Klopp Lake	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS167	Arcata Marsh - njrap + mudflat	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
Boyd2002	HUS165	Arcata Marsh boat ramp	Arcata Bay	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
ISS	315ARRHON	Arroyo Hondo	Santa Barbara Channel	Pacific Ocean	Southern California	Southern California	<input checked="" type="checkbox"/>

You can Sort, Filter and Find records in the "Master Station" table. See the section on sorting and filtering on page 43 to learn how to search by specific parameters.

11. Click the  icon in the upper right hand corner to close the “Master Station” table.

The “Station Coordinates” tab  provides the station name as well as the latitude, longitude, coordinate source, and datum information. See figure below.




The “Species List by Name” tab  provides a list of all species found at the specified station. The information includes the project name, sample date, organism’s scientific name, introduction status, and the phylum. See figure below.

Agua Hedionda Lagoon				
Station Source	Sub-Bay	Waterbody	Bay/Watershed	
OSPR	Agua Hedionda Lagoon	Pacific Ocean	San Diego Coast-North	
County	Bioregion	Station Comments	Outer Coast	
San Diego	Southern California		<input type="checkbox"/>	


Master Station List | Station Coordinates | **Species List by Station**


Organisms are listed by sample date. A sample date of 01/Jan/1950 represents an unknown or default date. It does NOT mean a species was collected in 1950. Where only the year of collection is known, 01/Jan/XXXX is the default Day/Month. You can sort on any field below using the A-Z or lightning bolt (filter) icons in the Access header.

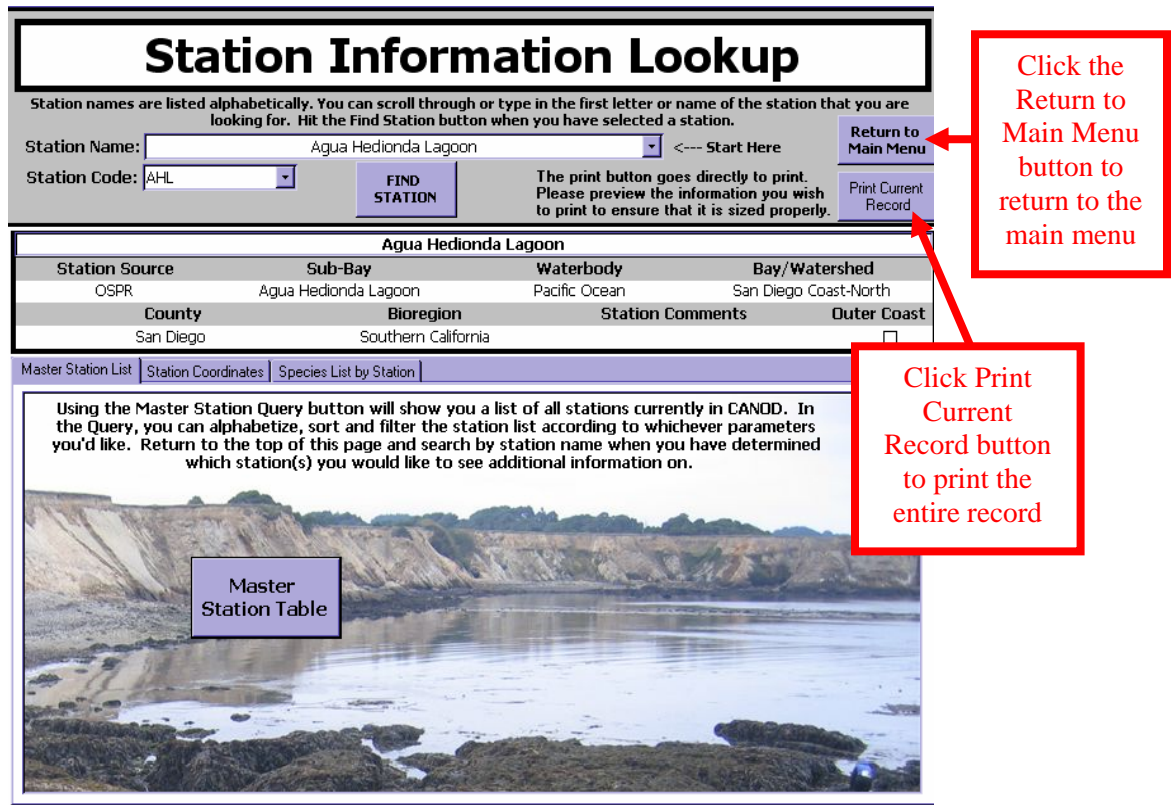
Project Name	SampleDate	Organism Name	IntroductionStatus	Phylum
▶ OSPR - Historic Data	01/Jun/2000	Caulerpa taxifolia	Introduced	Chlorophyta
Cohen and Carlton, 1995	01/May/1987	Pseudodiaptomus marinus	Introduced	Arthropoda

Record:  1 of 2

The organisms are listed by sample date. A sample date of 01/Jan/1950 represents an unknown or default date. This does not mean the species was collected in 1950. The default Day/Month is 01/Jan/19XX when only the year of collection is known. You can Sort, Filter, and Find records in this table. See the section on sorting and filtering on page 43.

12. Click the “Print Current Record” button  to print the displayed screen. The print button automatically begins printing. You are not allowed to set specific parameters. See figure below.

13. Click the “Return to Main Menu” button  to exit the “Station Information Lookup” form and return to the Main Menu. See figure below.



Station Information Lookup

Station names are listed alphabetically. You can scroll through or type in the first letter or name of the station that you are looking for. Hit the Find Station button when you have selected a station.

Station Name: <--- Start Here

Station Code:

FIND STATION The print button goes directly to print. Please preview the information you wish to print to ensure that it is sized properly.

Return to Main Menu **Print Current Record**

Station Source	Sub-Bay	Waterbody	Bay/Watershed
OSPR	Agua Hedionda Lagoon	Pacific Ocean	San Diego Coast-North
County	Bioregion	Station Comments	Outer Coast
San Diego	Southern California		<input type="checkbox"/>

Master Station List | Station Coordinates | Species List by Station

Using the Master Station Query button will show you a list of all stations currently in CANOD. In the Query, you can alphabetize, sort and filter the station list according to whichever parameters you'd like. Return to the top of this page and search by station name when you have determined which station(s) you would like to see additional information on.

Master Station Table

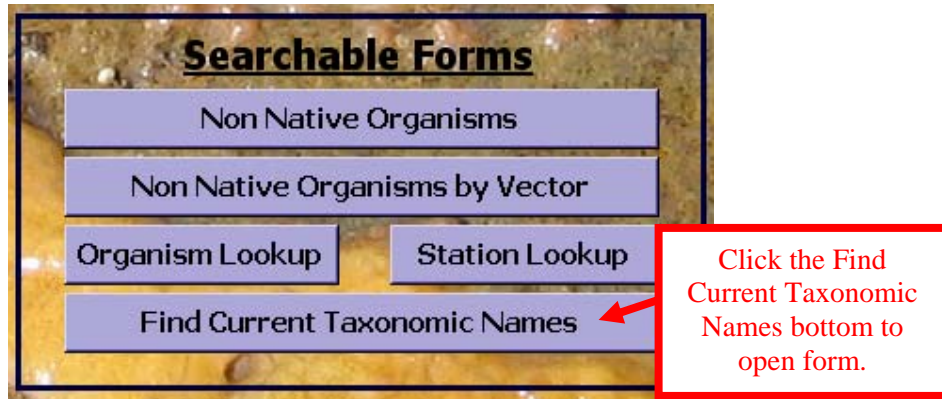
Find Current Taxonomic Names

Some species have been identified under different or synonym names. The “Find Current Taxonomic Names” form allows you to search different names that the species may have previously been identified as. In CANOD, the term, “synonym” is used loosely. In addition to true synonyms, provisional names and other nomenclatural anomalies such as misspellings, misidentifications or incurrent formatting are also listed. The form will display the current taxonomic

name of the species and data associated with the species, including:

- phylum
- class
- order
- family
- taxonomic authority (the research that identified the species as it's current taxonomic name)
- introduction status
- additional comments

6. To begin a search, click the "Find Current Taxonomic Names" button in the Main Menu. See figure below.




7. The "Find Current Taxonomic Names" form will display on the screen. See figure below.

The image shows a screenshot of a web form titled "Find Current Taxonomic Names from Synonyms *". At the top, it says "DIRECTIONS: Select the synonym from the box below, then click the Find Taxon button to see the current valid taxonomic name and related species information. To find additional organism information return to the main menu and use the current taxonomic name." Below this is a "Synonym Name:" dropdown menu, a "FIND TAXON" button, and a "Return to Main Menu" button. A note below reads: "*Note: In CANOD, the term 'synonym' is used loosely. In addition to true synonyms, provisional names and other nomenclatural anomalies such as misspellings, misidentifications, or incorrect formatting are also listed." The "QUERY RESULTS:" section contains fields for "Phylum:", "Class:", "Order:", "Family:", "Current Taxonomic Name:", "Taxonomic Authority:", and "IntroductionStatus:". At the bottom, there is a "Comments from Synonym Table:" field and a disclaimer: "The term 'synonym,' as used here, may not distinguish true synonyms from other nomenclatural anomalies. Whenever possible, misspellings and formatting issues are listed as such. In addition, only a selection of synonyms is available here. A means of tracking complete taxonomic histories is currently unavailable in CANOD."

8. Locate the Synonym Name box near the top of the screen.

The image is a close-up of the "Synonym Name:" dropdown menu and the "FIND TAXON" button from the form shown in the previous image.

- Synonym names are listed alphabetically. You can scroll through the pull-down menu or type in the first letter of the name of the station that you are searching for. Click the pull-down menu button  next to the “Find Taxon” button to view the list of synonym names.
- Highlight and select the synonym name you would like to view. See figure below.

Find Current Taxonomic Names from Synonyms *

DIRECTIONS: Select the synonym from the box below, then click the Find Taxon button to see the current valid taxonomic name and related species information. To find additional organism information return to the main menu and use the current taxonomic name.

Synonym Name:

*Note: In CANOD, the nomenclatural anomalies are listed as such. In addition, only a selection of synonyms is available here. A means of tracking complete taxonomic histories is currently unavailable in CANOD.

Phylum: Class: Order: Family:

IntroductionStatus:

Comments from Synonym Table:

The term "synonym," as used here, may not distinguish true synonyms from other nomenclatural anomalies. Whenever possible, misspellings and formatting issues are listed as such. In addition, only a selection of synonyms is available here. A means of tracking complete taxonomic histories is currently unavailable in CANOD.

- Click the “Find Taxon” button to populate the form. The Phylum, Class, Order, Family, Current Taxonomic Name, Taxonomic Authority, Introduction Status and Comments from Synonym Name Table boxes will automatically populate. See figure below.
- To find additional organism information, return to the main menu and use the current taxonomic name. Click the “Return to Main Menu” button to exit the “Find Current Taxonomic Names from Synonyms” form and return to the Main Menu. See figure below.

Find Current Taxonomic Names from Synonyms *

DIRECTIONS: Select the synonym from the box below, then click the Find Taxon button to see the current valid taxonomic name and related species information. To find additional organism information return to the main menu and use the current taxonomic name.

Synonym Name:

*Note: In CANOD, the term "synonym" is used loosely. In addition to true synonyms, provisional names and other nomenclatural anomalies such as misspellings, misidentifications, or incorrect formatting are also listed.

QUERY RESULTS:

Phylum: Class: Order: Family:

Current Taxonomic Name: Taxonomic Authority: IntroductionStatus:

Comments from Synonym Table:

The term "synonym," as used here, may not distinguish true synonyms from other nomenclatural anomalies. Whenever possible, misspellings and formatting issues are listed as such. In addition, only a selection of synonyms is available here. A means of tracking complete taxonomic histories is currently unavailable in CANOD.

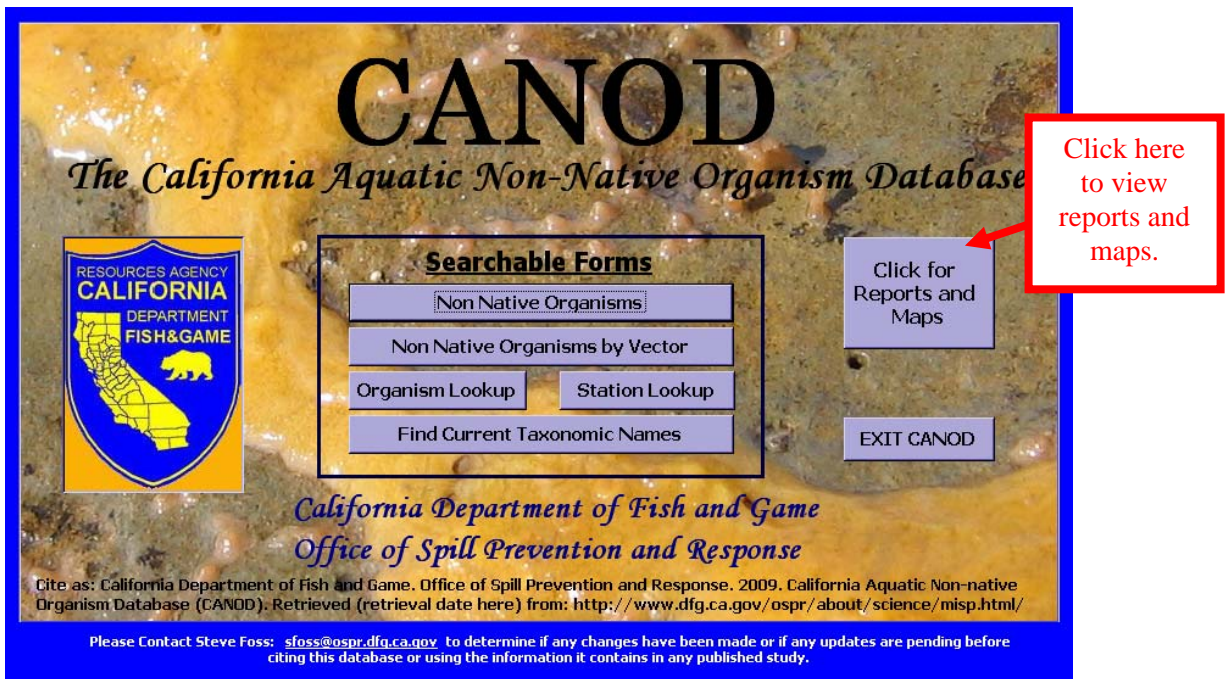
Reports, Maps and Tables

The reports and maps section allows you to view reports and maps that have already been generated for CANOD. You can export the reports into Excel for sorting or to create charts and tables with the data.

All Organism Table

The “All Organisms Table” [All Organisms Table](#) lists all the organisms in CANOD in alphabetical order by FinalID. The list includes native, non-native and cryptogenic species.

1. Click the “Click for Reports and Maps” button [Click for Reports and Maps](#) on the Main Menu to open the “Reports and Maps” menu. See figure below.



2. The “Reports and Maps” menu will display on the screen after you click the “All Organisms Table” [All Organisms Table](#) button. See figure below.

The buttons below link to printable reports. Use the green X icon to export the report's data to an excel file. Use the All Organisms Table to sort through data. Return to the Main Menu for searchable forms.



- The "All Organisms Table" will display on the computer screen. See figure below. You can Sort, Filter and Find records in this table. See the section on sorting and filtering on page 43.



Microsoft Access - [QRY SPECIES MASTER : Select Query]

FinalID	TaxonomicAuthorityDate	IntroductionStatus	LikelyIntroducedorNative	Phylum	Class	Order	F
▶ Aartsenia pupiformis	(Carpenter, 1865)	Native		Mollusca	Gastropoda	Heterostropha	Pyran
Abietinaria	Kirchenpauer, 1884	Unresolved		Cnidaria	Hydrozoa	Thecatae	Sertul
Abietinaria amphora	Nutting, 1904	Native		Cnidaria	Hydrozoa	Thecatae	Sertul
Abietinaria anguina	(Trask, 1857)	Native		Cnidaria	Hydrozoa	Thecatae	Sertul
Abietinaria greenii	(Murray, 1860)	Native		Cnidaria	Hydrozoa	Thecatae	Sertul
Abietinaria traski	(Torrey, 1902)	Native		Cnidaria	Hydrozoa	Thecatae	Sertul
Ablabesmyia	Johannsen, 1905	Unresolved		Arthropoda	Insecta	Diptera	Chiror
Acanthina punctulata	(G. B. Sowerby I, 1825)	Native		Mollusca	Gastropoda	Neogastropoda	Murici
Acanthinucella	Cooke, 1918	Unresolved		Mollusca	Gastropoda	Neogastropoda	Murici
Acanthinucella spirata	(de Blainville, 1832)	Native		Mollusca	Gastropoda	Neogastropoda	Murici
Acanthochitonina	Bergenhayn, 1930	Unresolved		Mollusca	Polyplacophora	Chitonida	
Acanthocyclops vernalis	Fischer, 1853	Native		Arthropoda	Maxillopoda	Cyclopoida	Cycloj
Acanthodoris	Gray, 1950	Unresolved		Mollusca	Gastropoda	Nudibranchia	Onchi
Acanthodoris hudsoni	MacFarland, 1905	Native		Mollusca	Gastropoda	Nudibranchia	Onchi
Acanthodoris lutea	MacFarland, 1925	Native		Mollusca	Gastropoda	Nudibranchia	Onchi
Acanthodoris nanaimoensis	O'Donoghue, 1921	Native		Mollusca	Gastropoda	Nudibranchia	Onchi
Acanthodoris pilosa	(Abildgaard, 1789)	Native		Mollusca	Gastropoda	Nudibranchia	Onchi
Acanthogobius flavimanus	Temminck, C. J. and Schlegel, H. 1	Introduced		Chordata	Actinopterygii	Perciformes	Gobiic
Acanthomysis	Czerniavsky, 1882	Unresolved		Arthropoda	Malacostraca	Mysidacea	Mysid
Acanthomysis aspera	li, 1964	Introduced		Arthropoda	Malacostraca	Mysidacea	Mysid
Acanthomysis californica	Murano & Chess, 1987	Cryptogenic	Native	Arthropoda	Malacostraca	Mysidacea	Mysid
Acanthomysis hwanhaiensis	li, 1964	Introduced		Arthropoda	Malacostraca	Mysidacea	Mysid
Acanthomysis macropsis	(WM Tattersall, 1932)	Native		Arthropoda	Malacostraca	Mysidacea	Mysid
Acanthozoon lepidum	Heath And McGregor, 1912	Native		Platyhelmin	Turbellaria	Polycladida	Pseuc
Acarina		Unresolved		Arthropoda	Arachnida		
Acamus erithacus	de Laubenfels, 1927	Native		Porifera	Demospongiae	Poecilosclerida	Acarn
Acartia	Dana, 1846	Unresolved		Arthropoda	Maxillopoda	Calanoida	Acarti
Acartia californiensis	Trinast, 1976	Native		Arthropoda	Maxillopoda	Calanoida	Acarti
Acartia danae	Giesbrecht, 1889	Native		Arthropoda	Maxillopoda	Calanoida	Acarti
Acartia hudsonica	Pinhey, 1926	Native		Arthropoda	Maxillopoda	Calanoida	Acarti
Acartia longiremis	(Lilljeborg, 1853)	Native		Arthropoda	Maxillopoda	Calanoida	Acarti
Acartia tonsa	Dana, 1849	Native		Arthropoda	Maxillopoda	Calanoida	Acarti
Acartiella sinensis	Shen and Lee, 1963	Introduced		Arthropoda	Maxillopoda	Calanoida	Acarti

Record: 1 of 4116




CalEDAS REPORTING REQUIREMENT - Scientific name for the taxon

NUM



4. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu.

Reports



The generated reports and maps are described in the following bullet points:

All Organisms – The “All Organisms” table  contains a list of all introduced, cryptogenic, native, species complexes, and unresolved organisms in alphabetical order by phylum. The list includes the organisms’ scientific name, introduction status, most likely status (if species is classified as Cryptogenic), class, order, and family. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.

MASTER ORGANISM LIST IN CANOD					
Phylum <i>Annelida</i>					
Organism Name	Introduction Status	Likely Status?	Class	Order	Family
<i>Annelida</i>					
<i>Ancistrosyllis</i> sp. <i>C. Harris</i>	Unresolved		Polychaeta	Syllidae	Ancistrosillidae
<i>Aglaophamus verrilli</i>	Cryptogenic		Polychaeta	Phyllodoctida	Nephtyidae
<i>Aitta suscinna</i>	Introduced		Polychaeta	Phyllodoctida	Nereididae
<i>Aitta vires</i>	Cryptogenic		Polychaeta	Phyllodoctida	Nereididae
<i>Anacrodorum</i> sp. <i>1. EMAP03</i>	Unresolved		Polychaeta	Phyllodoctida	Sphecozetidae
<i>Amaeona occidentalis</i>	Cryptogenic		Polychaeta	Terebellida	Terebellidae
<i>Amaeona</i> sp. <i>A. Harris</i>	Introduced		Polychaeta	Terebellida	Terebellidae
<i>Amage anops</i>	Native		Polychaeta	Terebellida	Amphaeidae
<i>Amastigos acutus</i>	Native		Polychaeta	Caryophyllida	Caryophyllidae
<i>Amblyosyllis</i> sp. <i>1. Harris</i>	Unresolved		Polychaeta	Phyllodoctida	Syllidae
<i>Amblyosyllis</i> sp. <i>2. Harris</i>	Unresolved		Polychaeta	Phyllodoctida	Syllidae
<i>Amblyosyllis speciosa</i>	Introduced		Polychaeta	Phyllodoctida	Syllidae
<i>Ampharete acutifrons</i>	Cryptogenic		Polychaeta	Terebellida	Amphaeidae
<i>Ampharete formosensis</i>	Cryptogenic	Native	Polychaeta	Terebellida	Amphaeidae
<i>Ampharete labrops</i>	Native		Polychaeta	Terebellida	Amphaeidae
<i>Amphicteis mucronata</i>	Native		Polychaeta	Terebellida	Amphaeidae
<i>Amphicteis scaphobranchiata</i>	Cryptogenic		Polychaeta	Terebellida	Amphaeidae
<i>Amphiduros pacificus</i>	Cryptogenic		Polychaeta	Phyllodoctida	Herioididae
<i>Amphitrite cirrata</i>	Cryptogenic		Polychaeta	Terebellida	Terebellidae
<i>Ancistrosyllis</i> cf. <i>governandae</i>	Cryptogenic		Polychaeta	Phyllodoctida	Pileolidae
<i>Ancistrosyllis hamata</i>	Native		Polychaeta	Phyllodoctida	Pileolidae
<i>Ancistrosyllis</i> sp. <i>A. Harris</i>	Unresolved		Polychaeta	Phyllodoctida	Pileolidae
<i>Anctonacutus goniododes</i>	Native		Polychaeta	Caryophyllida	Caryophyllidae
<i>Aonides glandulosa</i>	Native		Polychaeta	Syllidae	Syllidae
<i>Aonides</i> sp. <i>B. Harris</i>	Unresolved		Polychaeta	Syllidae	Syllidae
<i>Aphelochaeta</i> cf. <i>elongata</i>	Native		Polychaeta	Syllidae	Cimastriidae
<i>Aphelochaeta glandularia</i> complex	Unresolved Complex		Polychaeta	Syllidae	Cimastriidae
<i>Aphelochaeta mobilis</i>	Cryptogenic		Polychaeta	Syllidae	Cimastriidae
<i>Aphelochaeta peterseni</i>	Native		Polychaeta	Syllidae	Cimastriidae
<i>Aphelochaeta philippii</i>	Native		Polychaeta	Syllidae	Cimastriidae

- Non-Native Organisms** – The “Non-Native Organisms” table [Non Native Organisms](#) is a list of all introduced organisms in alphabetical order by phylum. The list includes the organisms’ scientific name, introduction status, class, order, family and the date the species was discovered in California. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure on page 24.

NON NATIVE ORGANISMS IN CANOD						
Organism Name	Introduction Status	Class	Order	Family	CADiscovery Year	
Phylum Annelida						
<i>Aiccia sacrorum</i>	Introduced	Polychaeta	Polychaeta	Polychaeta	1996	
<i>Acanthosyllis sp. A. Warren</i>	Introduced	Polychaeta	Terebratulida	Terebratulidae	2004	
<i>Amblyopoda opaciora</i>	Introduced	Polychaeta	Polychaeta	Syllidae	2000	
<i>Bdella arctica (ignota)</i>	Introduced	Polychaeta	Spiracida	Spiracidae	1915	
<i>Bonellia orientalis</i>	Introduced	Oligochaeta	Tubificida	Tubificidae	1950	
<i>Cambrareus pacificus</i>	Introduced	Oligochaeta	Demarellidae	Cambrareidae	1982	
<i>Chaetognathus alpinus</i>	Introduced	Oligochaeta	Tubificida	Chaetognathidae	1986	
<i>Chaetognathus rotundus</i>	Introduced	Polychaeta	Spiracida	Chaetognathidae	1910	
<i>Dieterus californicus</i>	Introduced	Oligochaeta	Oligochaeta	Oligochaeta		
<i>Eteobothrus magnificus</i>	Introduced	Polychaeta	Syllidae	Syllidae	1920	
<i>Gonocystidia californica</i>	Introduced	Polychaeta	Polychaeta	Syllidae	1918	
<i>Hydrotus alpinus</i>	Introduced	Polychaeta	Syllidae	Syllidae	2000	
<i>Hydrotus elongatus</i>	Introduced	Polychaeta	Syllidae	Syllidae	1911	
<i>Laeonereis sp. SF-1 Warren</i>	Introduced	Polychaeta	Syllidae	Syllidae	1989	
<i>Marenzelleria japonica</i>	Introduced	Polychaeta	Syllidae	Syllidae	1963	
<i>Marenzelleria rotunda</i>	Introduced	Polychaeta	Spiracida	Spiracidae	1991	
<i>Myxineola pacifica</i>	Introduced	Polychaeta	Polychaeta	Syllidae	1990	
<i>Myxobolus (ignota)</i>	Introduced	Hirudinea	Pharyngobranchiida	Pharyngobranchiidae	1949	
<i>Nereis acropora (N. acropora)</i>	Introduced	Polychaeta	Syllidae	Syllidae	1914	
<i>Nereis sp. A. Warren</i>	Introduced	Polychaeta	Terebratulida	Terebratulidae	2000	
<i>Palaemonetes pugio</i>	Introduced	Oligochaeta	Tubificida	Tubificidae	1991	
<i>Salvatorella elongata</i>	Introduced	Polychaeta	Caprellida	Marshallidae	1980	
<i>Sipula ventralis</i>	Introduced	Polychaeta	Syllidae	Syllidae	1992	
<i>Sipuloproductus californicus</i>	Introduced	Polychaeta	Spiracida	Spiracidae	1912	
<i>Syllis spp.</i>	Introduced	Polychaeta	Polychaeta	Syllidae	1998	
<i>Terebratulida (Terebratulina)</i>	Introduced	Polychaeta	Syllidae	Syllidae	1980	
<i>Tubificoides apterocaudatus</i>	Introduced	Oligochaeta	Tubificida	Tubificidae	1961	
<i>Tubificoides benedictus</i>	Introduced	Oligochaeta	Tubificida	Tubificidae	1961	
<i>Tubificoides novaezealandiae</i>	Introduced	Oligochaeta	Tubificida	Tubificidae	1961	
<i>Tubificoides tubificus</i>	Introduced	Oligochaeta	Tubificida	Tubificidae	1982	
Phylum Arthropoda						
<i>Acanthocyclops oregonus</i>	Introduced	Malaacostraca	Myzidacea	Myzidae	1992	
<i>Acanthocyclops vernalis</i>	Introduced	Malaacostraca	Myzidacea	Myzidae	1991	
<i>Acanthidea americana</i>	Introduced	Malaacostraca	Calappa	Acanthidae	1993	
<i>Ampelisca abdita</i>	Introduced	Malaacostraca	Ampeliscida	Ampeliscidae	1914	
<i>Ampeliscoides ampeliscoides</i>	Introduced	Copepoda	Scolecida	Dalmanidae	1914	
<i>Ampeliscoides benedictus</i>	Introduced	Copepoda	Scolecida	Dalmanidae	2000	
<i>Ampeliscoides caryocarpus</i>	Introduced	Copepoda	Scolecida	Dalmanidae	1913	
<i>Ampeliscoides californicus</i>	Introduced	Copepoda	Scolecida	Dalmanidae	2003	
<i>Ampelisca elongata</i>	Introduced	Malaacostraca	Ampeliscida	Ampeliscidae	1949	
<i>Ampelisca rotunda</i>	Introduced	Malaacostraca	Ampeliscida	Ampeliscidae	1941	
<i>Ampelisca americana</i>	Introduced	Insecta	Dermaptera	Carrionicolidae	1921	
<i>Ampelisca americana</i>	Introduced	Malaacostraca	Ampeliscida	Ampeliscidae	1998	
<i>Ardalis (ignota)</i>	Introduced	Malaacostraca	Isopoda	Ardalidae	1915	
<i>Aquilella (ignota)</i>	Introduced	Ostracoda	Pholadacea	Neohelminthidae	1913	
<i>Cerastoderma lineatum</i>	Introduced	Malaacostraca	Isopoda	Ardalidae	1999	
<i>Chaetognathus (ignota)</i>	Introduced	Malaacostraca	Isopoda	Juanelidae	1910	
<i>Calappa (ignota) sp. 1 (Chappa)</i>	Introduced	Malaacostraca	Ampeliscida	Calappidae	1993	
<i>Caprellia alpestris</i>	Introduced	Malaacostraca	Ampeliscida	Caprellidae	2001	
<i>Caprellia medusa</i>	Introduced	Malaacostraca	Ampeliscida	Caprellidae	1913	
<i>Caprellia (ignota)</i>	Introduced	Malaacostraca	Ampeliscida	Caprellidae	2000	
<i>Cerastoderma</i>	Introduced	Malaacostraca	Dermaptera	Percepsidae	1989	



- Cryptogenic Organisms** – Cryptogenic organisms are species of unknown origin. The “Cryptogenic Organisms” table [Cryptogenic Organisms](#) is a list of all cryptogenic organisms in CANOD in alphabetical order by phylum. The list includes the organism’s scientific name, introduction status, most likely introduction status, class, order, and family. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.

Organism Name	Introduction Status	Likely Status ?	Class	Order	Family
Phylum Annelida					
<i>Agiophaeus verrilli</i>	Cryptogenic		Polychaeta	Polychaetida	Nephtyidae
<i>Aitra viverra</i>	Cryptogenic		Polychaeta	Polychaetida	Nereididae
<i>Ateacina occidentalis</i>	Cryptogenic		Polychaeta	Terebellida	Terebellidae
<i>Auaphane acaulifera</i>	Cryptogenic		Polychaeta	Terebellida	Ampharetidae
<i>Auaphane finlayi</i>	Cryptogenic	Native	Polychaeta	Terebellida	Ampharetidae
<i>Auaphane acapohuacensis</i>	Cryptogenic		Polychaeta	Terebellida	Ampharetidae
<i>Auaphane pacifica</i>	Cryptogenic		Polychaeta	Polychaetida	Heuconidae
<i>Auaphane atrata</i>	Cryptogenic		Polychaeta	Terebellida	Terebellidae
<i>Auaphane cf. greenlandica</i>	Cryptogenic		Polychaeta	Polychaetida	Platysidae
<i>Aphelocera ontariensis</i>	Cryptogenic		Polychaeta	Spironida	Cirratulidae
<i>Apoptonopsis pygmaea</i>	Cryptogenic		Polychaeta	Spironida	Spironidae
<i>Arabella tricolor complex</i>	Cryptogenic		Polychaeta	Eunicida	Oeroidae
<i>Arabella sp. SCAMT</i>	Cryptogenic	Native	Polychaeta	Eunicida	Oeroidae
<i>Artemesia foveola</i>	Cryptogenic		Oligochaeta	Tubificidae	Naididae
<i>Artemesia crassa</i>	Cryptogenic		Polychaeta	Capitellida	Aemicolidae
<i>Arriidea (Arriidea) carolinensis</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Arriidea (Arriidea) foveola</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Arriidea (Arriidea) rubra</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Arriidea (Arriidea) subplex</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Arriidea (Arriidea) americana</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Arriidea (Arriidea) ramosa</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Arriidea (Arriidea) sensu</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Arriidea hortobai</i>	Cryptogenic		Polychaeta	Orbiniida	Pararonidae
<i>Auodrilus japonicus</i>	Cryptogenic		Oligochaeta	Tubificidae	Tubificidae
<i>Auodrilus formosus</i>	Cryptogenic		Oligochaeta	Tubificidae	Tubificidae
<i>Auodrilus pigueti</i>	Cryptogenic		Oligochaeta	Tubificidae	Tubificidae
<i>Auodrilus pleuratus</i>	Cryptogenic		Oligochaeta	Tubificidae	Tubificidae
<i>Auodrilus rubrocaeruleus</i>	Cryptogenic		Polychaeta	Capitellida	Maldaridae
<i>Boccardia baltica</i>	Cryptogenic	Native	Polychaeta	Spironida	Spironidae
<i>Boccardia proboscidea</i>	Cryptogenic	Native	Polychaeta	Spironida	Spironidae
<i>Boccardia tricuspis</i>	Cryptogenic		Polychaeta	Spironida	Spironidae
<i>Boccardia bahamensis</i>	Cryptogenic	Introduced	Polychaeta	Spironida	Spironidae
<i>Boccardionotus vejdovskyanus</i>	Cryptogenic		Oligochaeta	Tubificidae	Tubificidae
<i>Bryda saccharina</i>	Cryptogenic		Polychaeta	Tubelligerida	Tubelligeridae
<i>Brancheionanassa aequalis</i>	Cryptogenic		Polychaeta	Capitellida	Aemicolidae
<i>Brancheionanassa</i>	Cryptogenic		Polychaeta	Polychaetida	Syllidae
<i>Brancheionassa unidentata</i>	Cryptogenic		Oligochaeta	Tubificidae	Naididae
<i>Brygida macrocephala</i>	Cryptogenic		Polychaeta	Polychaetida	Polynoidae
<i>Caranocera angulata</i>	Cryptogenic		Polychaeta	Polychaetida	Nereididae
<i>Chaeronea bairdii</i>	Cryptogenic	Native	Polychaeta	Spironida	Cirratulidae
<i>Chone caudata</i>	Cryptogenic		Polychaeta	Sabellida	Sabellidae
<i>Chone affinis</i>	Cryptogenic		Polychaeta	Sabellida	Sabellidae
<i>Chone islandiaformis</i>	Cryptogenic		Polychaeta	Sabellida	Sabellidae
<i>Chone ovata</i>	Cryptogenic		Polychaeta	Sabellida	Sabellidae

- Native Organisms** - A native organism is a native plant or animal that originated in California waters. The “Native Organism” table Native Organisms is a list of all native organisms in CANOD in alphabetical order by phylum. The list includes the organisms’ scientific name, introduction status, class, order, and family. Click on the □ icon to maximize the table to view in full screen. Click on the X icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.

NATIVE ORGANISMS IN CANOD



Organism Name	Introduction Status	Class	Order	Family
Phylum Annelida				
<i>Alvinigobius</i>	Native	Polychaeta	Terebellida	Ampharididae
<i>Alvinigobius stans</i>	Native	Polychaeta	Caprellida	Caprellidae
<i>Ampharete labroni</i>	Native	Polychaeta	Terebellida	Ampharididae
<i>Amphirete sturrocki</i>	Native	Polychaeta	Terebellida	Ampharididae
<i>Anacrostichia hawaiiensis</i>	Native	Polychaeta	Phyllodoceida	Phyllodoceidae
<i>Anonostoma gordalei</i>	Native	Polychaeta	Caprellida	Caprellidae
<i>Aonides glandulosa</i>	Native	Polychaeta	Spirochaeta	Spirochaetidae
<i>Aphelococha cf. elongata</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Aphelococha pennsylvanica</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Aphelococha philippina</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Aphelococha rigida</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Aphelococha williamsae</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Aphrodontidius ornatus</i>	Native	Polychaeta	Spirochaeta	Aphrodontidae
<i>Arabellia andersoni</i>	Native	Polychaeta	Ennelida	Ennelidae
<i>Arabellia arizonensis</i>	Native	Polychaeta	Ennelida	Okenidae
<i>Aricidea (Allia) hamletii</i>	Native	Polychaeta	Orbiniida	Paronidae
<i>Aricidea (Aricidea) pseudocarpulara</i>	Native	Polychaeta	Orbiniida	Paronidae
<i>Arionida brevis</i>	Native	Polychaeta	Opheidiida	Opheidiidae
<i>Arionida conferti</i>	Native	Polychaeta	Terebellida	Terebellidae
<i>Arabellida lincolnii</i>	Native	Polychaeta	Terebellida	Ampharididae
<i>Audiercheilia scintillata</i>	Native	Polychaeta	Opheidiida	Scalibregmatidae
<i>Audiercheilia thalassii</i>	Native	Polychaeta	Opheidiida	Scalibregmatidae
<i>Barbodrillus formosus</i>	Native	Oligochaeta	Tubificiida	Tubificidae
<i>Barbodrillus parviflorus</i>	Native	Oligochaeta	Tubificiida	Tubificidae
<i>Boicardia barbata</i>	Native	Polychaeta	Spirochaeta	Spirochaetidae
<i>Boicardia columbiana</i>	Native	Polychaeta	Spirochaeta	Spirochaetidae
<i>Boicardia pugnax</i>	Native	Polychaeta	Spirochaeta	Spirochaetidae
<i>Bradiopsis</i>	Native	Polychaeta	Tubificiida	Tubificidae
<i>Brania diversipharyngea</i>	Native	Polychaeta	Phyllodoceida	Syllidae
<i>Brania californensis</i>	Native	Polychaeta	Phyllodoceida	Syllidae
<i>Burbinella abnormis</i>	Native	Polychaeta	Sabellida	Serpulidae
<i>Caenidia californica</i>	Native	Polychaeta	Spirochaeta	Spirochaetidae
<i>Caufertidia apicalis</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Caufertidia arizonae</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Caufertidia rajata</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Caufertidia pacifica</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Chaetomorpha nana</i>	Native	Polychaeta	Phyllodoceida	Nemidae
<i>Chamaeone acuta</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Chamaeone columbiana</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Chamaeone cornuta</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Chamaeone hedgesi</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Chamaeone hawaiiensis</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Chamaeone americana</i>	Native	Polychaeta	Spirochaeta	Cirratulidae
<i>Chamaeone pilosa</i>	Native	Polychaeta	Amphirioniida	Amphirionidae

- Unresolved Species Complexes** - A species complexes is a group of species that are not distinguishable or not reliably based on form and structure. The “Unresolved Species Complexes” table [Unresolved Species Complexes](#) is a list of all species complexes in CANOD in alphabetical order by phylum. The list includes the organisms’ scientific name, introduction status, class, order, and family. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.



UNRESOLVED SPECIES COMPLEXES IN CANOD

The introduction status term, “unresolved complex” is used in situations where indistinguishable members of the species complex would be considered native if collected from some locations or habitats in California (e.g. the eastern coast) and introduced from other locations or habitats in California (e.g. bays and harbors). (Mullerney et al, 2009)

Organism Name	Introduction Status	Class	Order	Family
Phylum Annelida				
<i>Aulis lechaeata stanslaniae</i> complex	Unresolved Complex	Polychaeta	Scolecida	Cirratulidae
<i>Bryoclis viridis viridis</i> complex	Unresolved Complex	Polychaeta	Phyllodoctida	Syllidae
<i>Glycera canaliculata</i> complex	Unresolved Complex	Polychaeta	Phyllodoctida	Glyceridae
<i>Harmothoe imbricata</i> complex	Unresolved Complex	Polychaeta	Phyllodoctida	Polynoidae
<i>Heteromastus filiformis</i> complex	Unresolved Complex	Polychaeta	Capitellida	Capitellidae
<i>Laeonereis acuta variegata</i> complex	Unresolved Complex	Polychaeta	Terebellida	Terebellidae
<i>Nereis communis/variabilis</i> complex	Unresolved Complex	Clitellata	Terebellida	Naididae
Phylum Arthropoda				
<i>Caudothys scabra</i> complex	Unresolved Complex	Malacostraca	Anomala	Caudothoidae
<i>Gibberonereis unguis</i> complex	Unresolved Complex	Malacostraca	Anomala	Mesobriidae
<i>Harpacticoides leucurus</i> complex	Unresolved Complex	Maxillopoda	Harpacticoida	Harpacticoidae
<i>Hyakulla astuta</i> complex	Unresolved Complex	Malacostraca	Anomala	Hyakullidae
<i>Sinyleberis stanfordi</i> complex	Unresolved Complex	Malacostraca	Tanaidacea	Tanaididae
<i>Stomatopoda viridula</i> complex	Unresolved Complex	Malacostraca	Amphipoda	Stomatopodidae
Phylum Cnidaria				
<i>Diphyidina disticha</i> complex	Unresolved Complex	Hydrozoa	Hydrozoa	Sertulariidae
<i>Obelia dichotoma</i> complex	Unresolved Complex	Hydrozoa	Hydrozoa	Campoplexidae
Phylum Ectopoda				
<i>Bowerbankia macilis</i> complex	Unresolved Complex	Crustacea	Ctenostomata	Ventriculariidae
<i>Bugula maritima</i> complex	Unresolved Complex	Crustacea	Chelicerata	Bugulidae
<i>Cryptocula pallasiensis</i> complex	Unresolved Complex	Crustacea	Chelicerata	Cryptoculidae



- Unresolved Organisms** – An unresolved organism is a species that is not able to be identified to a sufficiently low taxonomic level (usually the species level) so the organism can't be classified as native or non-indigenous. The “Unresolved Organisms” table [Unresolved Organisms](#) lists all unresolved organisms in CANOD in alphabetical order by phylum. The list includes the organisms’ scientific name, introduction status, class, order, and family. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.

Organism Name	Introduction Status	Class	Order	Family
Phylum Amoebozoa				
Acanthamoeba sp. C Harri	Unresolved	Phychozoa	Spirionida	Acetabularidae
Acanthamoeba sp. 1 EMAP03	Unresolved	Phychozoa	Phyllozoa	Sphaerodoriidae
Acanthamoeba sp. 1 Harri	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. 2 Harri	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. A Harri	Unresolved	Phychozoa	Phyllozoa	Pharyngidae
Acanthamoeba sp. B Harri	Unresolved	Phychozoa	Spirionida	Spirionidae
Acanthamoeba sp. 1 Ruff	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba (Acanthamoeba) sp. SD 1	Unresolved	Phychozoa	Obolozoa	Parameciidae
Acanthamoeba (Acanthamoeba) sp. SD 3	Unresolved	Phychozoa	Obolozoa	Parameciidae
Acanthamoeba cf. agilis	Unresolved	Phychozoa	Ophelozoa	Ophelozoa
Acanthamoeba sp. SD 1 SCAMIT	Unresolved	Phychozoa	Ophelozoa	Ophelozoa
Acanthamoeba sp. 5 Harri	Unresolved	Phychozoa	Capillaria	Makrillidae
Acanthamoeba sp. 4 Harri	Unresolved	Phychozoa	Capillaria	Makrillidae
Acanthamoeba sp. 2 Rodriguez	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. 6 Harri	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. 7 Harri	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. BR1	Unresolved	Phychozoa	Spirionida	Spirionidae
Acanthamoeba sp. 1 Ruff	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. 1 Ruff	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. 4 Harri	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. 5 Harri	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. BR2	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba capitata complex	Unresolved	Phychozoa	Capillaria	Capillariidae
Acanthamoeba sp. ASCAMIT	Unresolved	Phychozoa	Spirionida	Spirionidae
Acanthamoeba alata	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba hirsuta	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. 1 Ruff	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. SD2 SCAMIT	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba nr. setosa	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba nr. setosa complex	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. BR1	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. SD 5	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba nr. bisopa	Unresolved	Phychozoa	Capillaria	Makrillidae
Acanthamoeba nr. complex	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. 1 Ruff	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. 1 Harri	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. 2 Harri	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. BR1	Unresolved	Phychozoa	Phyllozoa	Syllidae
Acanthamoeba sp. A Harri	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. B Rowe	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. C Harri	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. SD2 SCAMIT	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. SD1 Harri	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. SD2 Harri	Unresolved	Phychozoa	Spirionida	Cirratulidae
Acanthamoeba sp. A Phillips	Unresolved	Phychozoa	Coscinidae	Coscinidae
Acanthamoeba cf. rugosa	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. 1 Ruff	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. 2 Tishugh	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. 2 Ruff	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. BR1	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. BR2	Unresolved	Phychozoa	Sabellidae	Sabellidae
Acanthamoeba sp. SD1 SCAMIT	Unresolved	Phychozoa	Thalassidroma	Thalassidromidae
Acanthamoeba sp. BR1	Unresolved	Phychozoa	Spirionida	Spirionidae

- Master Station List in CANOD** – The “Master Station List” in CANOD table [Master Station List in CANOD](#) lists all the stations in CANOD. They are listed in alphabetical order by station source. Under the station source, the station names are in alphabetical order. The table includes the waterbody, sub-bays or watersheds, and the bioregion the stations are within. The bioregion divides California into three sections which include Northern, Central, and Southern California. Northern California is from the Northern California border to the Cape Mendocino sampling station. Central California is from South of Cape Mendocino sampling station to Point Conception sampling station. Southern California is from South of Point Conception sampling station to the Mexico border. See page 39 for MISP survey stations. The Outer Coast check box is checked when the station was from the Outer Coast surveys. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below for an example of the “Master Station List”.



Master Station List in CANOD

Station Source	Station Code	Station Name	Bays/Watershed	ISS/Waterbody	Bioregion	Outer Coast
Boyd2002	HUS01	Mad River Slough - Langhere Christianson Dun	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS02	Mad River Slough - Samoa Blvd. Bridge	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS03	Klopp Lake	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS04	Jacoby Creek	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS05	Eracut	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS06	North Bay Oyster Beds	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS07	Samoa Bridge, West	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS08	Samoa Bridge, Middle	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS09	Samoa Bridge, East	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS10	Eureka Slough, Lower	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS100	North Bay Channel HB, St. 24	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS101	Entrance Bay Channel HB, St. 25	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS102	Entrance Bay Channel HB, St. 44	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS103	Fields Landing Channel HB, St. 43	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS104	R/V CoralSea/Borge&ls Class Cruise, St. 83	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS105	Southport Channel, St. 70	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS106	Fields Landing Channel HB, St. 42	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS107	Southport Channel, St. 69	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS108	Fields Landing Channel HB, St. 41	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS109	Fields Landing Channel HB, St. 40	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS11	Eureka Slough, Upper	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS110	Southport Channel, St. 68	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS111	Fields Landing Channel HB, St. 39	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS112	Southport Channel, St. 67	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS113	Fields Landing Channel HB, St. 38	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS114	Southport Channel, St. 66	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS115	R/V CoralSea/Borge&ls Class Cruise, St. 81	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS116	Fields Landing Channel HB, St. 37	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS117	R/V CoralSea/Borge&ls Class Cruise, St. 82	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS118	Southport Channel, St. 65	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS119	Southport Channel, St. 64	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS12	South Eureka Marina	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>
	HUS120	R/V CoralSea/Borge&ls Class Cruise, St. 80	Humboldt Bay	Humboldt Bay	Northern California	<input type="checkbox"/>

- Non-Native Organisms by Station** – The “Non-Native Organisms by Station” table [Non Native Organisms by Station](#) lists each sampling station in alphabetical order. The station code is to the left of the station name. Under each station name is a list of species found at that particular station. The table also includes the survey associated with the sample; the bay or watershed the species was found in; and the phylum, class and order. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.

INTRODUCED ORGANISMS BY STATION

Station	Organism	Phylum	Class	Order	Project Name	Bay/Watershed
Agua Hedionda Lagoon						
	<i>Caulerpa taxifolia</i>	Chlorophyta	Chlorophyceae	Byrrhopilales	OSPR - Historic Data	San Diego Coast+North
	<i>Pseudodiaptomus marinus</i>	Arthropoda	Mecillopoda	Calanoida	Cohen and Carlton, 1995	San Diego Coast+North
Alameda County						
	<i>Carassius auratus</i>	Chordata	Actinopterygii	Cypriniformes	Cohen and Carlton, 1995	None
	<i>Cyprinus carpio</i>	Chordata	Actinopterygii	Cypriniformes	Cohen and Carlton, 1995	None
	<i>Meridia beryllina</i>	Chordata	Actinopterygii	Atheriniformes	Cohen and Carlton, 1995	None
	<i>Micropterus dolomieu</i>	Chordata	Actinopterygii	Perciformes	Cohen and Carlton, 1995	None
	<i>Morone saxatilis</i>	Chordata	Actinopterygii	Perciformes	Cohen and Carlton, 1995	None
	<i>Percina macrolepida</i>	Chordata	Actinopterygii	Perciformes	Cohen and Carlton, 1995	None
	<i>Rumex crispus</i>	Magnoliophyta	Magnoliopsida	Polygonales	OSPR - Historic Data	None
Alamitos Bay						
	<i>Alitta succinea</i>	Annelida	Polychaeta	Phyllodocta	Cohen and Carlton, 1995	San Pedro Bay
	<i>Bugula stolonifera</i>	Ectopoda	Gymnoleonata	Chelostomata	Cohen and Carlton, 1995	San Pedro Bay
	<i>Chalinula loosanoffi</i>	Porifera	Demospongiae	Haplosclerida	Cohen and Carlton, 1995	San Pedro Bay
	<i>Diadumene leucoleuca</i>	Cnidaria	Anthozoa	Actinaria	Cohen and Carlton, 1995	San Pedro Bay
	<i>Elamopus rapax</i>	Arthropoda	Malacostraca	Amphipoda	OSPR - Historic Data	San Pedro Bay
	<i>Geukensia demissa</i>	Mollusca	Bivalvia	Mytilida	Cohen and Carlton, 1995	San Pedro Bay
	<i>Limnoria tripunctata</i>	Arthropoda	Malacostraca	Isopoda	Cohen and Carlton, 1995	San Pedro Bay
	<i>Lynceus pedicellatus</i>	Mollusca	Bivalvia	Mytilida	Cohen and Carlton, 1995	San Pedro Bay
	<i>Mercenaria mercenaria</i>	Mollusca	Bivalvia	Veneroida	OSPR - Historic Data	San Pedro Bay
	<i>Microcosmus squamiger</i>	Chordata	Ascidiacea	Stolidobranchia	OSPR - Historic Data	San Pedro Bay
	<i>Monocorophium insidiosum</i>	Arthropoda	Malacostraca	Amphipoda	Cohen and Carlton, 1995	San Pedro Bay
	<i>Neodiospira brasiliensis</i>	Annelida	Polychaeta	Sabellida	OSPR - Historic Data	San Pedro Bay
	<i>Schizoporella japonica</i>	Ectopoda	Gymnoleonata	Chelostomata	Cohen and Carlton, 1995	San Pedro Bay
	<i>Streblospio benedicti complex</i>	Annelida	Polychaeta	Spionida	Cohen and Carlton, 1995	San Pedro Bay
	<i>Spela cava</i>	Chordata	Ascidiacea	Stolidobranchia	Cohen and Carlton, 1995	San Pedro Bay

- Locations of Non-Native Organisms** – The “Location of Non-Native Organisms” table [Locations of Non Native Organisms](#) lists all introduced organisms by alphabetical order. Underneath the species’ scientific name is a list of sampling station where that particular species was found. The station records are listed by sample date. However, a sample date of 1/1/1950 represents an unknown or default date in CANOD and in most cases does not mean that the species was collected in 1950. The table also includes the bay or watershed and the survey associated with the sample. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.

LOCATIONS OF INTRODUCED ORGANISMS



(Station records are listed by sample date. However, a sample date of 1/1/1950 represents an unknown or default date in CANOD and in most cases does not mean that the species was collected in 1950.)

Acanthogobius flavimanus

StationName	Bays/Watershed	Sample Date	ProjectName
San Pedro Bay	San Pedro Bay	01/Jan/1950	Dunne and Moore, 1999
San Francisco Bay	San Francisco Bay	01/Jan/1950	Dunne and Moore, 1999
Delta	San Francisco Bay	01/Jan/1950	Dunne and Moore, 1999
Delta- Prisoner's Point, Venice Island	San Francisco Bay	01/Jan/1943	Cohen and Carlton, 1995
San Pablo Bay	San Francisco Bay	01/Jan/1944	Cohen and Carlton, 1995
North San Francisco Bay	San Francisco Bay	01/Jan/1944	Cohen and Carlton, 1995
Central San Francisco Bay	San Francisco Bay	01/Jan/1944	Cohen and Carlton, 1995
South San Francisco Bay	San Francisco Bay	01/Jan/1944	Cohen and Carlton, 1995
Delta	San Francisco Bay	01/Jan/1944	Cohen and Carlton, 1995
Suisun Bay	San Francisco Bay	01/Jan/1944	Cohen and Carlton, 1995
Delta- Port of Stockton	San Francisco Bay	01/Jan/1970	Cohen and Carlton, 1995
Delta	San Francisco Bay	01/Jan/1970	Cohen and Carlton, 1995
Delta- Delta Mendota Canal	San Francisco Bay	01/Jan/1970	Cohen and Carlton, 1995
San Francisco Bay- Folsom City Lagoon	San Francisco Bay	01/Jan/1970	Cohen and Carlton, 1995
San Francisco Bay- Berkeley Aquatic Park Lagoon	San Francisco Bay	01/Jan/1970	Cohen and Carlton, 1995
San Francisco Bay- Alviso	San Francisco Bay	01/Jan/1970	Cohen and Carlton, 1995
Belknap Lagoon	Delta Bay	01/Jan/1970	Cohen and Carlton, 1995
San Francisco Bay- Chualar, Lake Merritt	Lake Merritt	01/Jan/1970	Cohen and Carlton, 1995
Delta- Tracy Fish Collection Facility	San Francisco Bay	01/Jan/1970	Cohen and Carlton, 1995
Edheim Slough General Location	Monterey Bay & Edheim Slough	01/Jan/1972	Cohen and Carlton, 1995
Lomahe Bay	Lomahe Bay	01/Jan/1974	Cohen and Carlton, 1995
Estero de Americano	Boles Bay	01/Jan/1974	Cohen and Carlton, 1995
Los Angeles Harbor	San Pedro Bay	22/Sep/1977	Cohen and Carlton, 1995
Long Beach Harbor	San Pedro Bay	29/Mar/1978	Cohen and Carlton, 1995
San Gabriel River	None	01/Jan/1979	Cohen and Carlton, 1995
Newport Bay	Newport Bay	01/Jan/1979	Cohen and Carlton, 1995
California-Unspecified	California-Unspecified	01/Jan/1983	Cohen and Carlton, 1995
Mexico County	None	01/Jan/1984	Cohen and Carlton, 1995
Contra Costa County	None	01/Jan/1984	Cohen and Carlton, 1995
San Diego Bay	San Diego Bay	01/Jan/1984	Cohen and Carlton, 1995
Stockton Fish 01	San Francisco Bay	10/Sep/2001	ISS 2000-2002 Survey Data
Sacramento Fish 02	San Francisco Bay	25/Sep/2001	ISS 2000-2002 Survey Data

Acanthomysis aspera

StationName	Bays/Watershed	Sample Date	ProjectName
San Francisco Bay	San Francisco Bay	01/Jan/1950	Dunne and Moore, 1999
San Pablo Bay	San Francisco Bay	01/Jan/1992	Cohen and Carlton, 1995
Suisun Bay	San Francisco Bay	01/Jan/1992	Cohen and Carlton, 1995
San Pablo Bay	San Francisco Bay	01/Jan/1993	Cohen and Carlton, 1995
Suisun Bay	San Francisco Bay	01/Jan/1993	Cohen and Carlton, 1995

Introduction Vectors by Organism – Introduced organisms are assigned to probable vectors of introduction. The “Introduction Vectors by Organism” table [Introduction Vectors by Organism](#) lists all introduced species in CANOD, the assigned vector, and the category the vector falls under. See figure on page 32. Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu.

INTRODUCTION VECTORS BY ORGANISM

Organism	Vector	Vector Category
<i>Acanthogobius flavimanus</i>	Ballast Water	Shipping
<i>Acanthomyx</i>	Ballast Water	Shipping
<i>Acanthomyx aspera</i>	Ballast Water	Shipping
<i>Acanthomyx kuanhaiensis</i>	Ballast Water	Shipping
<i>Acartiella stenota</i>	Ballast Water	Shipping
<i>Aglaothamion tenuissimum</i>	Ballast Water	Shipping
	Fouling (Commercial shipping)	Shipping
<i>Allta succinea</i>	Ballast Water	Shipping
	Fouling (Commercial shipping)	Shipping
	Fouling (Recreational Boats)	Recreational Boats
	Oyster-Accidental (Japanese)	Oyster
<i>Allogostidium curt</i>	Fisheries (Accidental, with stocking)	Fisheries
	Fisheries-Intentional (Unofficial)	Fisheries
<i>Aloia sapidissima</i>	Fisheries-Intentional (Unofficial)	Fisheries
<i>Amacoma sp. A Harris</i>	Ballast Water	Shipping
	Fouling (Commercial shipping)	Shipping
	Fouling (Recreational Boats)	Recreational Boats
<i>Amblyostylis sp. 1 Harris</i>	Ballast Water	Shipping
	Fouling (Commercial shipping)	Shipping
	Fouling (Recreational Boats)	Recreational Boats
<i>Amelurus catus</i>	Fisheries-Intentional (Unofficial)	Fisheries
<i>Amelurus melas</i>	Fisheries-Intentional (Unofficial)	Fisheries
<i>Amelurus natalis</i>	Fisheries-Intentional (Unofficial)	Fisheries
<i>Amelurus nebulosus</i>	Fisheries-Intentional (Unofficial)	Fisheries
<i>Angelicabidita</i>	Ballast Water	Shipping
	Fouling (Commercial shipping)	Shipping
	Fouling (Recreational Boats)	Recreational Boats
	Oyster-Accidental (Japanese)	Oyster

Page 1 of 25

Vectors in CANOD Table



The “Vectors in CANOD” table lists the known vectors and the associated vector categories. The definitions of the categories are listed in the bullet points on page 33. There are 26 possible vectors listed in CANOD and 10 possible vector categories.

Vector Category	Vector Name
Aquaculture	Aquaculture/ Mariculture
Biocontrol	Biocontrol
Fisheries	Bait-packing Material
	Discarded Bait
	Discarded Seafood
	Fisheries (Accidental, with stocking)
	Fisheries-Intentional (Official)
	Fisheries-Intentional (Unofficial)
Natural Dispersal	Natural Dispersal
Ornamental	Aquarium Plant Release
	Aquatic Plant Shipments
	Garden Escape
	Pet Release
Other	Agricultural Weed
	Canal
	Habitat Restoration
	Scientific Escape
Oyster	Oyster-Accidental (Atlantic), Oyster-International
	Oyster-Accidental (Japanese), Oyster-International
	Oyster-Intentional
Recreational Boats	Fouling (Recreational Boats)
Shipping	Ballast Water
	Cargo
	Dry Ballast
	Fouling (Commercial shipping)
Unknown	Unknown

Vector category definitions:



- Aquaculture: Accidental or intentional release as a result of farming of aquatic organisms for human consumption.
- Biocontrol: Release of organisms that are natural predators, parasites or pathogens for biological control of pests.
- Fisheries: Accidental or intentional translocation of fish, crustacean, or mollusk (non-oyster) species.

- Natural Dispersal
 - Ornamental: Aquatic organisms have been introduced for decorative purposes in the aquarium trade or horticulture and landscaping industries.
 - Other
 - Oyster: The intentional introduction of oysters or accidental introduction of species associated with oysters.
 - Recreational Boats: Infestation or colonization of aquatic organisms on the hull of a boat.
 - Shipping: Vectors associated with maritime transport and shipping activities. Includes ballast water, dry ballast, and hull fouling.
 - Unknown
- **Organisms by Vector of Introduction** – The “Organisms by Vector of Introduction” table [Organisms by Vector of Introduction](#) lists each vector (also known as pathway) in alphabetical order. Under each vector is a list of organisms associated with that vector. The table includes the organism’s scientific name, phylum, class, order, and family.

Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu. See figure below.

Organisms by Vector of Introduction					
Vector	Organism Name	Phylum	Class	Order	Family
Agricultural Weed					
	<i>Lepidium latifolium</i>	Magnoliophyta	Magnoliopsida	Capparales	Brassicaceae
	<i>Rorippa nasturtium-aquaticum</i>	Magnoliophyta	Magnoliopsida	Capparales	Brassicaceae
Aquaculture/ Mariculture					
	<i>Gracilaria vermiculophylla</i>	Rhodophyta	Rhodophyceae	Gigartinales	Gracilariaceae
	<i>Procambarus clarkii</i>	Arthropoda	Malacostraca	Decapoda	Cambaridae
Aquarium Plant Release					
	<i>Buccopropus cavalettiatus</i>	Mollusca	Gastropoda	Neogastropoda	Melanoididae
	<i>Chrysius auratus</i>	Chordata	Actinopterygii	Cypriniformes	Cyprinidae
	<i>Caulerpa taxifolia</i>	Chlorophyta	Chlorophyceae	Bryopsidales	Caulerpaceae
	<i>Chaetogaster diaphanus</i>	Aranelida	Oligochaeta	Tubificida	Naididae
	<i>Colossoma macropomum</i>	Chordata	Actinopterygii	Cypriniformes	Serrasalminidae
	<i>Bergia densa</i>	Magnoliophyta	Liliopsida	Hydrocharitales	Hydrocharitaceae
	<i>Melanoides tuberculata</i>	Mollusca	Gastropoda	Neomenioglossa	Thiaridae
	<i>Aphrodolus koi</i>	Protozoa	Myxosporea	Bivalvulida	Myxobolidae
	<i>Osteoglossum bicirrhosum</i>	Chordata	Actinopterygii	Osteoglossiformes	Osteoglossidae
	<i>Platometroides sanguineus</i>	Nemata	Secernentea	Camallanida	Platometridae
	<i>Varicorhinus angustipennis</i>	Aranelida	Oligochaeta	Tubificida	Tubificidae
Aquatic Plant Shipments					
	<i>Asellus hugendorfi</i>	Arthropoda	Malacostraca	Isopoda	Asellidae
	<i>Brancheion sowerbii</i>	Aranelida	Oligochaeta	Tubificida	Tubificidae
	<i>Chaetoptea racovitzai</i>	Arthropoda	Malacostraca	Isopoda	Asellidae
	<i>Coronilophora caspia</i>	Cnidaria	Hydrozoa	Athecatae	Clavidae
	<i>Cyanoecypris floridanus complex</i>	Arthropoda	Malacostraca	Amphipoda	Crangonyxidae
	<i>Craspedacusta sowerbii</i>	Cnidaria	Hydrozoa	Athecatae	Olinidae
	<i>Daphnia lumholzi</i>	Arthropoda	Branchiopoda	Diplostraca	Daphniidae

- **Native Regions of Non-Native Organisms** – Click the “Native Regions of Non-Native Organisms” button [Native Regions of Non Native Organisms](#) to view a table that lists native regions of introduced species under their scientific names. See figure on page 35.

Click on the  icon to maximize the table to view in full screen. Click on the  icon in the upper right hand corner to return to the “Reports and Maps” menu.

NATIVE REGIONS OF INTRODUCED ORGANISMS	
<i>Acanthogobius flavimanus</i>	Asia Western Pacific
<i>Acanthomyia</i>	Unknown
<i>Acanthomyia aspera</i>	Asia Japan
<i>Acanthomyia hwanhaiensis</i>	Asia
<i>Acartiella sinensis</i>	China Western Pacific
<i>Achelia echinata</i>	Atlantic
<i>Aeginella</i>	Atlantic
<i>Aglaothamion tenuissimum</i>	North America - Atlantic Northwest Atlantic
<i>Alcyonidium 'gelatinosum' complex</i>	North Atlantic
<i>Alderia modesta</i>	Unknown
<i>Alitta succinea</i>	North Atlantic Northwest Atlantic
<i>Alosa sapidissima</i>	North America - Midwest North America - Southern States
<i>Amacana sp. A Harris</i>	South America - Pacific
<i>Ameiurus catus</i>	North America - Midwest
<i>Ameiurus melas</i>	North America - Midwest
<i>Ameiurus natalis</i>	North America - Midwest


Regions in CANOD Table

The “Regions in CANOD” table on page 36 lists all 40 possible regions and the associated region categories. The “Region Name” field lists the known regions the non-native species originated from. The “Region Category” field lists the 10 region categories.

Region Category	Region Name
Africa	Africa
Indian Ocean	India
	Indian Ocean
Middle East	Middle East
Northeast Atlantic	Atlantic
	Atlantic Islands
	Black/Caspian Seas
	Eurasia
	Mediterranean
	North Atlantic
	Northeast Atlantic
Northeast Pacific	North America - Pacific Northwest
	Northeastern Pacific
Northwest Atlantic	Caribbean
	Central America
	Europe
	Gulf of Mexico
	North America - Atlantic
	North America - Midwest
	North America - Southern States
	Northwest Atlantic
Northwest Pacific	Asia
	China
	Indo-Pacific
	Japan
	Korea
	Northern Pacific
	Northwest Pacific
	Philippines
	Western Pacific
Southeast Pacific	South America - Pacific
	Southeast Pacific
Southwest Atlantic	South America - Atlantic
	Australia
	East Indies
	New Zealand

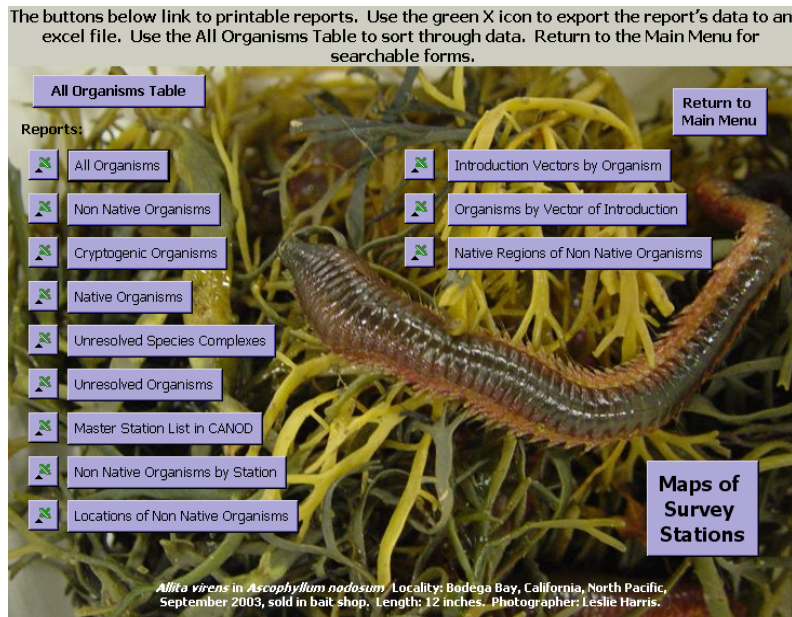
	Pacific Islands
	Southern Pacific
	Southwest Pacific
Unknown	Unknown


Export Reports to Excel

1. Click the “Click for Reports and Maps” button  on the Main Menu to open the “Reports and Maps” menu. See figure below.

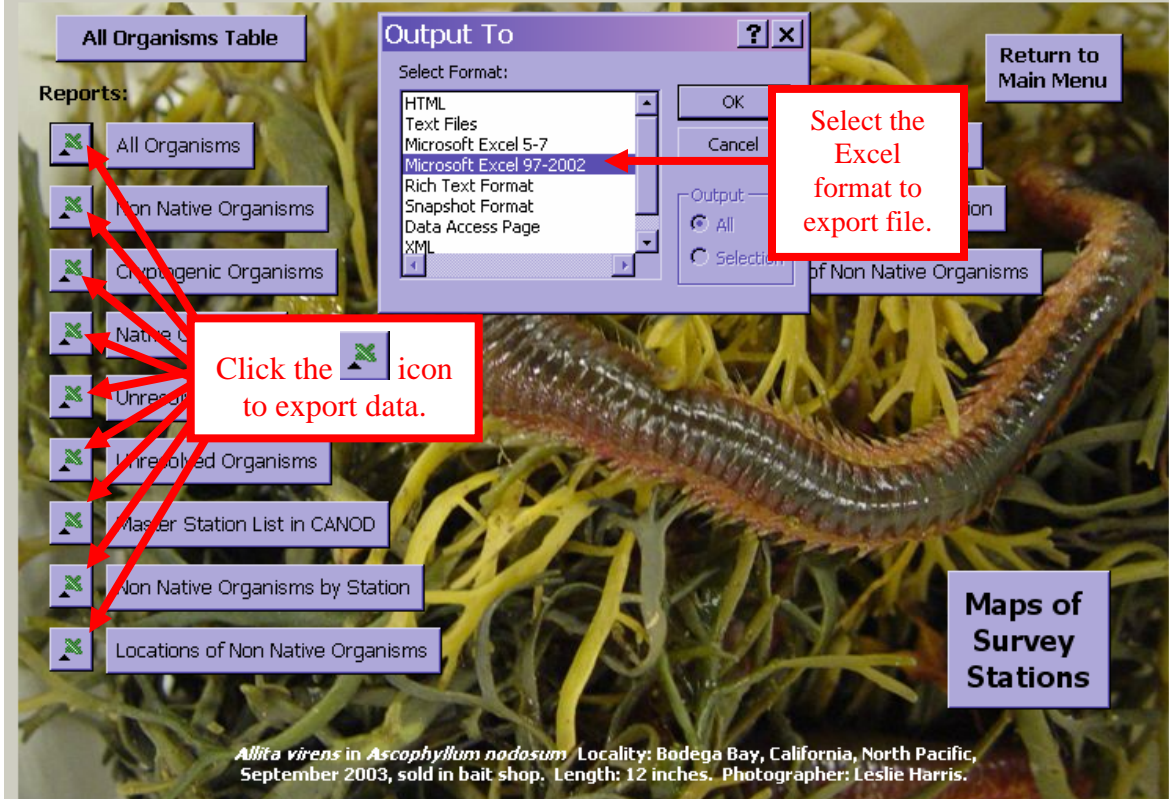



2. The “Reports and Maps” menu will display on the screen after you click the “Click for Reports and Maps” button. See figure below.



3. Click the title of the report you would like to view or export. The report will automatically display on the screen.
4. Use the green X  icon to export the report's data to an excel file. An "Output To" dialogue box will display on the screen. See figure below.

The buttons below link to printable reports. Use the green X icon to export the report's data to an excel file. Use the All Organisms Table to sort through data. Return to the Main Menu for searchable forms.



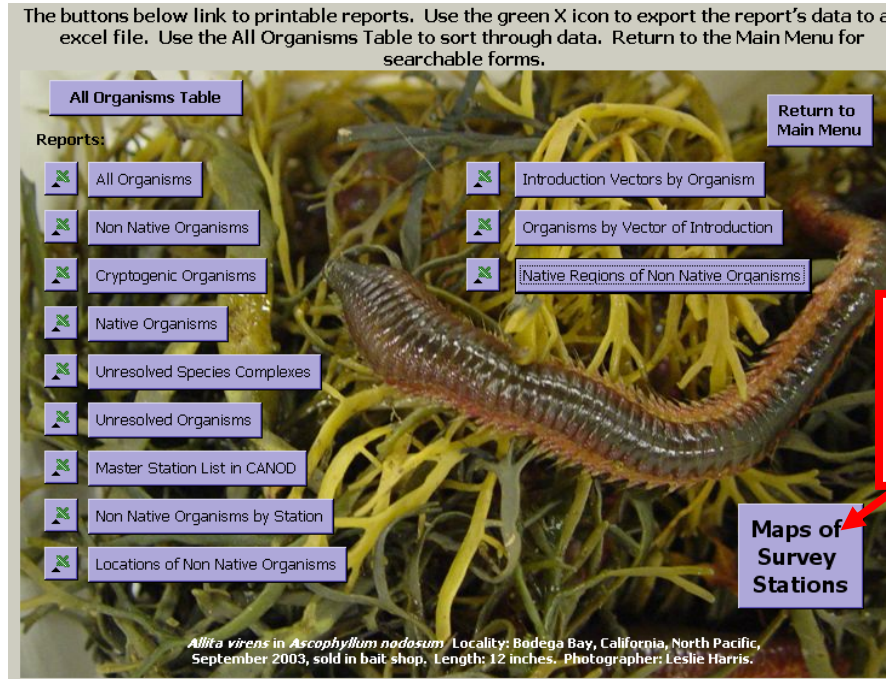
5. Select the format you would like to export the file to and click "OK".
6. Rename and save the file to your computer.
7. Click the "Return to Main Menu" button  to exit the "Reports and Maps" menu and return to the Main Menu.

Maps of Survey Stations

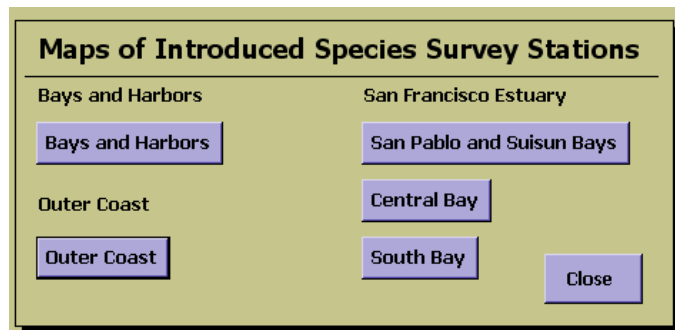
To view maps of MISP survey sites, click the “Maps of Survey Stations” button

Maps of
Survey
Stations

in the lower right hand corner of the screen. See figure below.




The “Maps of Introduced Species Survey Stations” menu will display automatically. See figure below.

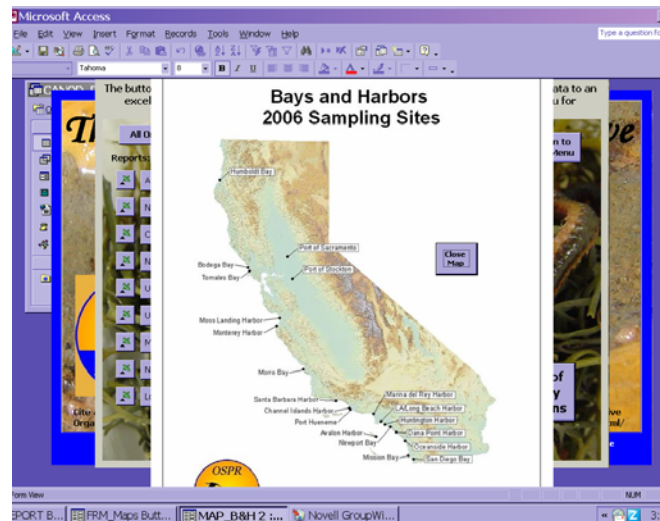



The screen allows you to choose from three surveys titled “Bays and Harbors” **Bays and Harbors**, “San Francisco Estuary” **San Francisco Estuary** and “Outer Coast” **Outer Coast**.

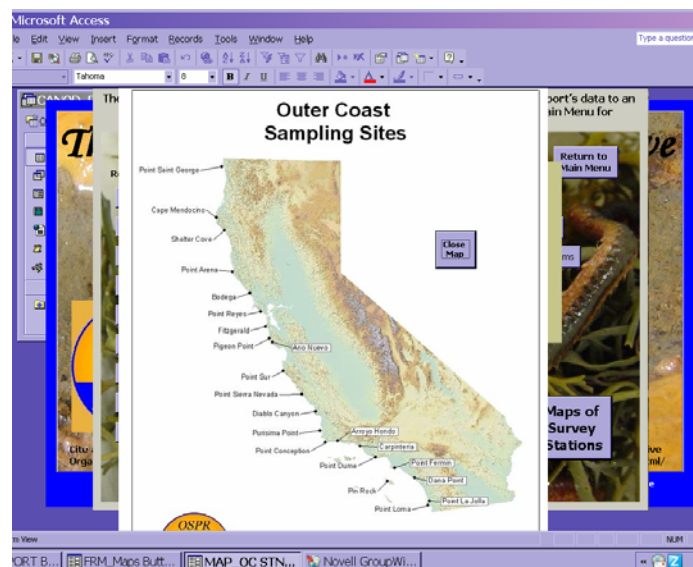
The “San Francisco Estuary” is divided into three maps including “San Pablo and Suisun Bays” **San Pablo and Suisun Bays**, “Central Bay” **Central Bay**, and “South Bay” **South Bay**. Click the purple buttons below the title of the survey to view maps.

For the purpose of CANOD the boundaries of “San Pablo and Suisun Bays” survey includes all sites north of the San Rafael/Richmond Bridge. “Central Bay” includes all sampling sites between the San Rafael/Richmond Bridge and the Bay Bridge. “South Bay” includes all sampling sites south of the Bay Bridge.


- **Bays and Harbors 2006 Sampling Sites** – This map shows the bays, ports and harbors sampled during a 2006 MISP survey. Click on the “Close Map” button  to return to the “Maps of Introduced Species Survey Stations” menu. See figure below.

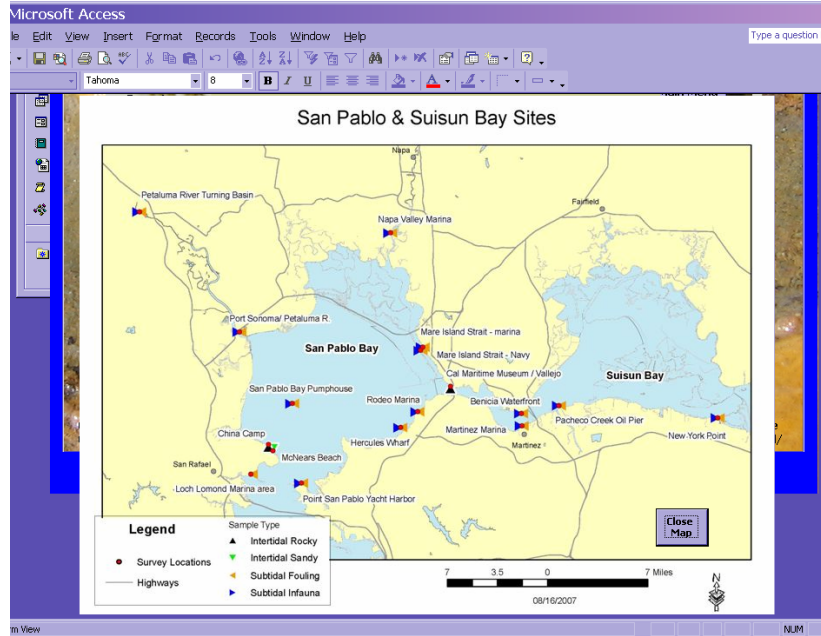



- **Outer Coast Sampling Sites**– This map shows the MISP Outer Coast sampling sites. Click on the “Close Map” button  to return to the “Maps of Introduced Species Survey Station” menu. See figure below.

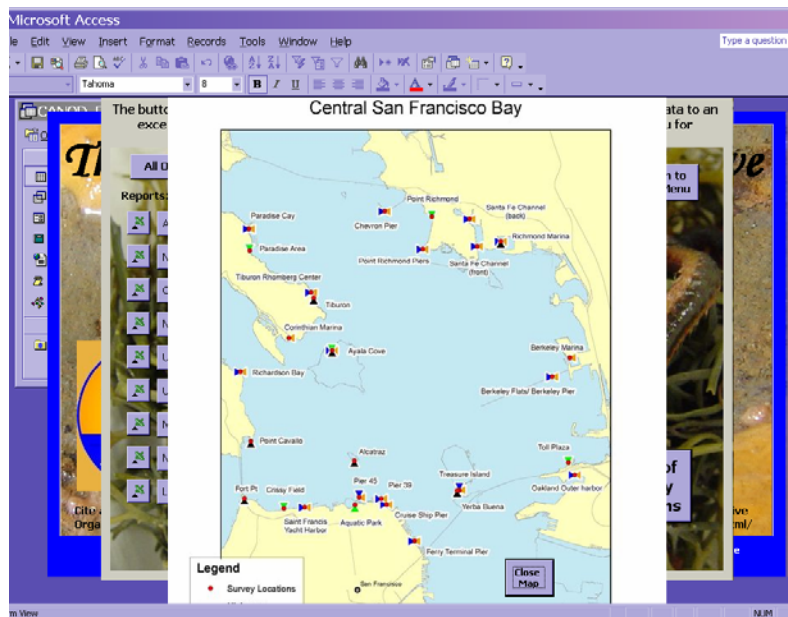



- **San Pablo and Suisun Bays** – This map shows the San Pablo and Suisun Bay sampling sites during the MISP San Francisco Bay survey.

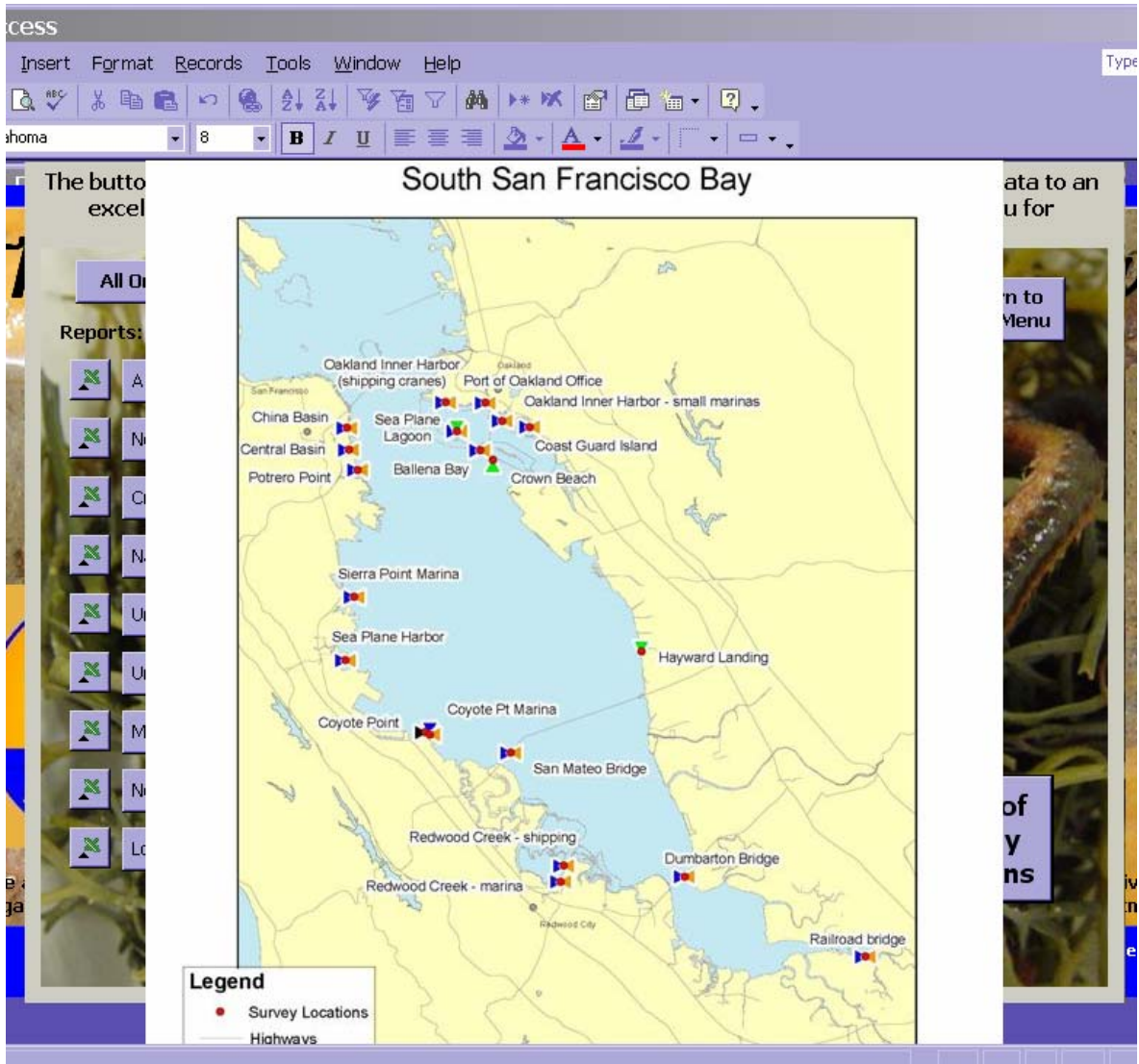
Click on the “Close Map” button  to return to the “Maps of Introduced Species Survey Station” menu. See figure below.



- **Central Bay** - This map shows the Central Bay sampling sites during the MISP San Francisco Bay survey. Click on the “Close Map” button  to return to the “Maps of Introduced Species Survey Station” menu. See figure below.



- **South Bay** - This map shows the South Bay sampling sites during the MISP San Francisco Bay survey. Click on the “Close Map” button  to return to the “Maps of Introduced Species Survey Station” menu. See figure below.





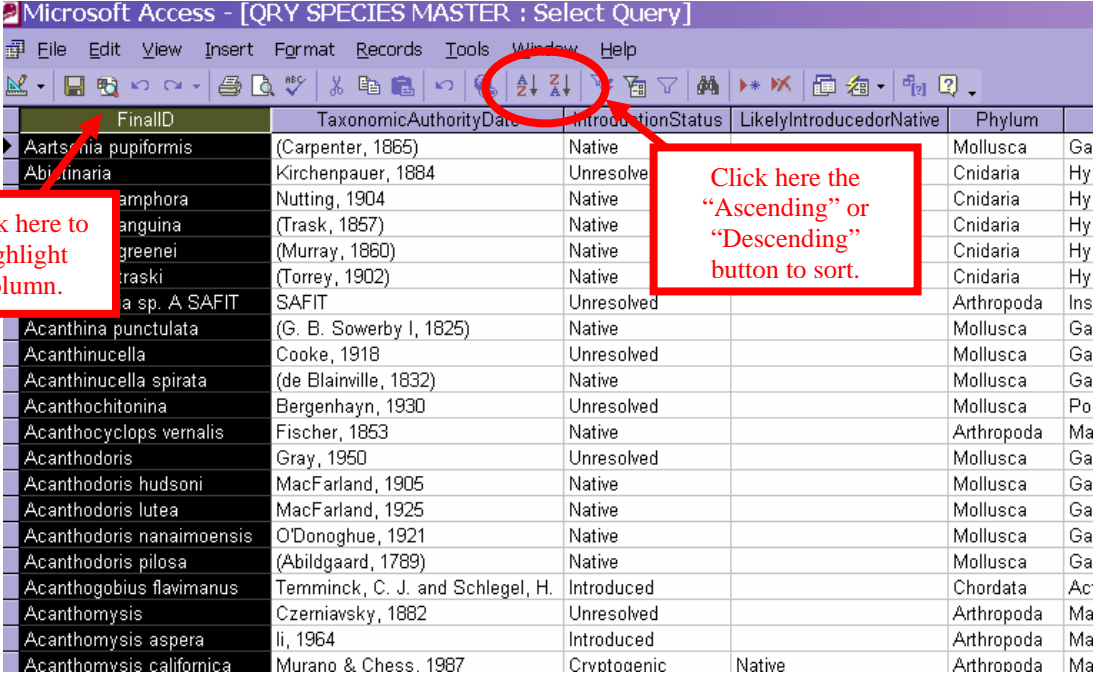
Click the “Return to the Main Menu” button  to return to the “Searchable Forms” menu or to exit CANOD.

Sort, Filter and Find Function in Datasets

Sort

You can use a sort property to arrange data in alphabetical order ascending or descending in a dataset.

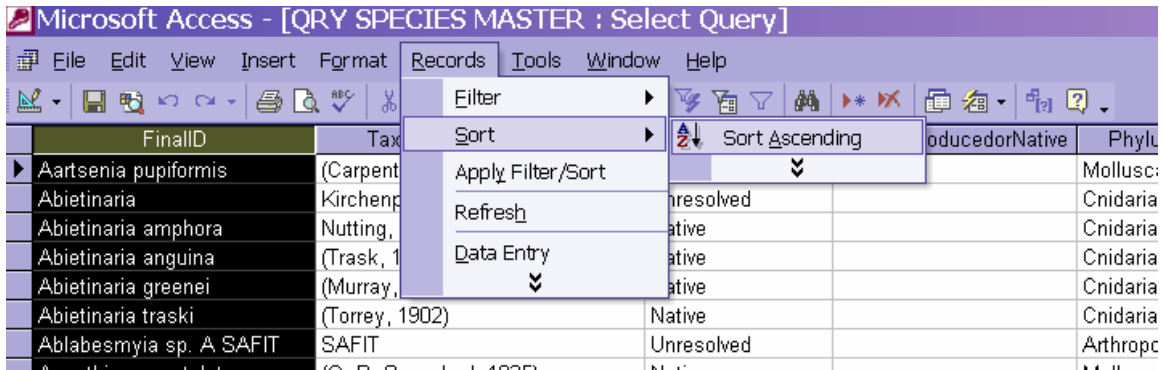
1. Click the heading of the column you would like to sort. This will highlight the entire column.
2. To highlight multiple columns, click the heading of the first column you would like to sort. Hold down the Shift key and click the heading of the last column. The sort is always preformed from left to right.
3. Use the sort button to sort ascending  or descending . Ascending sorts your records alphabetically from top to bottom, so records that begin with A are at the beginning, and records that begin with Z are at the end. Sort descending does just the opposite. Records that begin with Z are at the top, and records that begin with A are at the bottom of the list. See figure on top of page 41



FinalID	TaxonomicAuthorityDate	IntroductionStatus	LikelyIntroducerorNative	Phylum	
Aartsenia pupiformis	(Carpenter, 1865)	Native		Mollusca	Ga
Abirinaria	Kirchenpauer, 1884	Unresolved		Cnidaria	Hy
amphora	Nutting, 1904	Native		Cnidaria	Hy
anguina	(Trask, 1857)	Native		Cnidaria	Hy
greenei	(Murray, 1860)	Native		Cnidaria	Hy
traski	(Torrey, 1902)	Native		Cnidaria	Hy
a sp. A SAFIT	SAFIT	Unresolved		Arthropoda	Ins
Acanthina punctulata	(G. B. Sowerby I, 1825)	Native		Mollusca	Ga
Acanthinucella	Cooke, 1918	Unresolved		Mollusca	Ga
Acanthinucella spirata	(de Blainville, 1832)	Native		Mollusca	Ga
Acanthochitonina	Bergenhayn, 1930	Unresolved		Mollusca	Po
Acanthocyclops vernalis	Fischer, 1853	Native		Arthropoda	Ma
Acanthodoris	Gray, 1950	Unresolved		Mollusca	Ga
Acanthodoris hudsoni	MacFarland, 1905	Native		Mollusca	Ga
Acanthodoris lutea	MacFarland, 1925	Native		Mollusca	Ga
Acanthodoris nanaimoensis	O'Donoghue, 1921	Native		Mollusca	Ga
Acanthodoris pilosa	(Abildgaard, 1789)	Native		Mollusca	Ga
Acanthogobius flavimanus	Temminck, C. J. and Schlegel, H.	Introduced		Chordata	Ac
Acanthomysis	Czerniavsky, 1882	Unresolved		Arthropoda	Ma
Acanthomysis aspera	li, 1964	Introduced		Arthropoda	Ma
Acanthomysis californica	Murano & Chess. 1987	Crvotoenic	Native	Arthropoda	Ma

1. Another way to sort is by clicking on the “Records” button on the Tool Bar
2. Highlight “Sort”

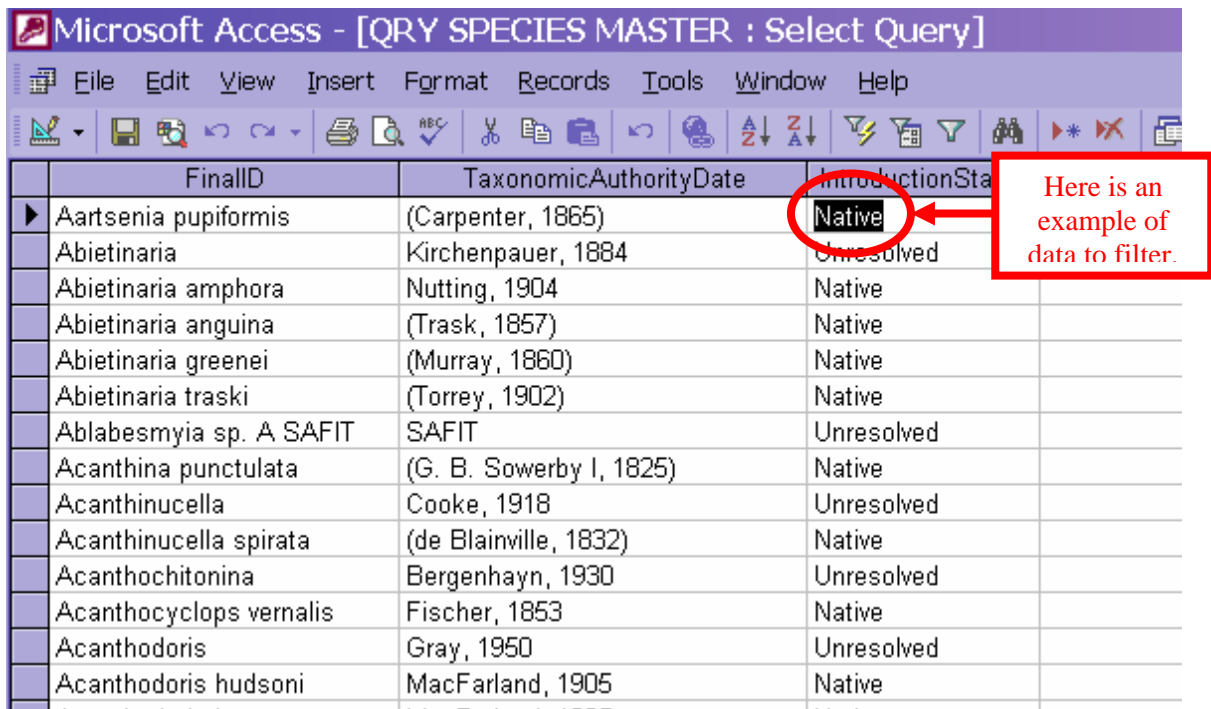
3. Highlight “Sort Ascending” or “Sort Descending”. See figure below.




Filter

You can use a Filter command to display a subset of records. The filter allows you to view a group of records that share a common value in a field. For example, if you are viewing the “IntroductionStatus” field and every status is listed but you only want to view native species, you can use the Filter command to do so.

1. To Filter by Selection, click on the record within the field that has the information you would like to view. See figure on the top of page 42.



2. Then click on the “Filter by Selection” button . See figure on page 45.

Microsoft Access - [QRY SPECIES MASTER : Select Query]

FinalID	TaxonomicAuthorityDate	Intr	Filter By Selection	Lik	Phylu
Aartsenia pupiformis	(Carpenter, 1865)	Native			Mollusca
Abietinaria	Kirchenpauer, 1884	Unresolved			Cnidaria
Abietinaria amphora	Nutting, 1904	Native			Cnidaria
Abietinaria anguina	(Trask, 1857)	Native			Cnidaria
Abietinaria greenei	(Murray, 1860)	Native			Cnidaria
Abietinaria traski	(Torrey, 1902)	Native			Cnidaria
Ablabesmyia sp. A SAFIT	SAFIT	Unresolved			Arthropo
Acanthina punctulata	(G. B. Sowerby I, 1825)	Native			Mollusca
Acanthinucella	Cooke, 1918	Unresolved			Mollusca
Acanthinucella spirata	(de Blainville, 1832)	Native			Mollusca
Acanthochitonina	Bergenhayn, 1930	Unresolved			Mollusca
Acanthocyclops vernalis	Fischer, 1853	Native			Arthropo
Acanthodoris	Gray, 1950	Unresolved			Mollusca
Acanthodoris hudsoni	MacFarland, 1905	Native			Mollusca


Filter by Selection button

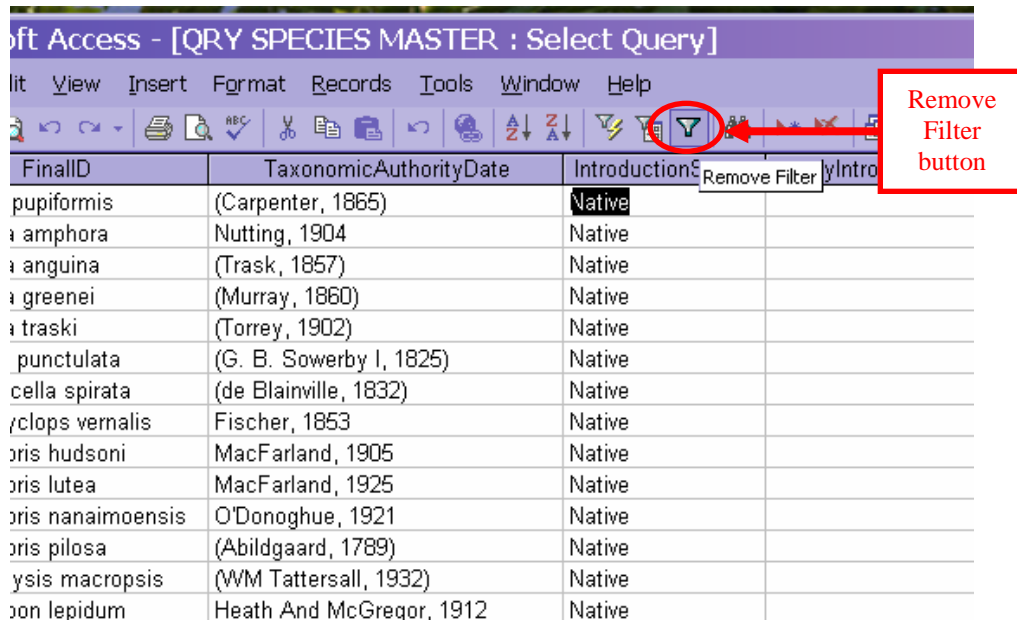
3. View results below.

Microsoft Access - [QRY SPECIES MASTER : Select Query]

FinalID	TaxonomicAuthorityDate	Intr	Filter By Selection	LikelyIntroducedorNative	Phylum	Class
Aartsenia pupiformis	(Carpenter, 1865)	Native			Mollusca	Gastropo
Abietinaria amphora	Nutting, 1904	Native			Cnidaria	Hydrozoa
Abietinaria anguina	(Trask, 1857)	Native			Cnidaria	Hydrozoa
Abietinaria greenei	(Murray, 1860)	Native			Cnidaria	Hydrozoa
Abietinaria traski	(Torrey, 1902)	Native			Cnidaria	Hydrozoa
Acanthina punctulata	(G. B. Sowerby I, 1825)	Native			Mollusca	Gastropo
Acanthinucella spirata	(de Blainville, 1832)	Native			Mollusca	Gastropo
Acanthocyclops vernalis	Fischer, 1853	Native			Arthropoda	Maxillopc
Acanthodoris hudsoni	MacFarland, 1905	Native			Mollusca	Gastropo
Acanthodoris lutea	MacFarland, 1925	Native			Mollusca	Gastropo
Acanthodoris nanaimoensis	O'Donoghue, 1921	Native			Mollusca	Gastropo
Acanthodoris pilosa	(Abildgaard, 1789)	Native			Mollusca	Gastropo
Acanthomysis macropsis	(WM Tattersall, 1932)	Native			Arthropoda	Malacost
Acanthozoon lepidum	Heath And McGregor, 1912	Native			Platyhelminth	Turbellari
Acarus erithacus	de Laubenfels, 1927	Native			Porifera	Demospc
Acartia californiensis	Trinast, 1976	Native			Arthropoda	Maxillopc
Acartia danae	Giesbrecht, 1889	Native			Arthropoda	Maxillopc
Acartia hudsonica	Pinhey, 1926	Native			Arthropoda	Maxillopc
Acartia longiremis	(Lilljeborg, 1853)	Native			Arthropoda	Maxillopc
Acartia tonsa	Dana, 1849	Native			Arthropoda	Maxillopc
Accedomoera melanophthalm	Gurjanova, 1938	Native			Arthropoda	Malacost
Accedomoera vagor	Barnard, 1969	Native			Arthropoda	Malacost
Achelia alaskensis	(Cole, 1904)	Native			Arthropoda	Pycnogo
Achelia chelata	(Hilton, 1939)	Native			Arthropoda	Pycnogo
Achelia gracilipes	(Cole, 1904)	Native			Arthropoda	Pycnogo
Achelia nudiuscula	Barnard, 1959	Native			Arthropoda	Pycnogo

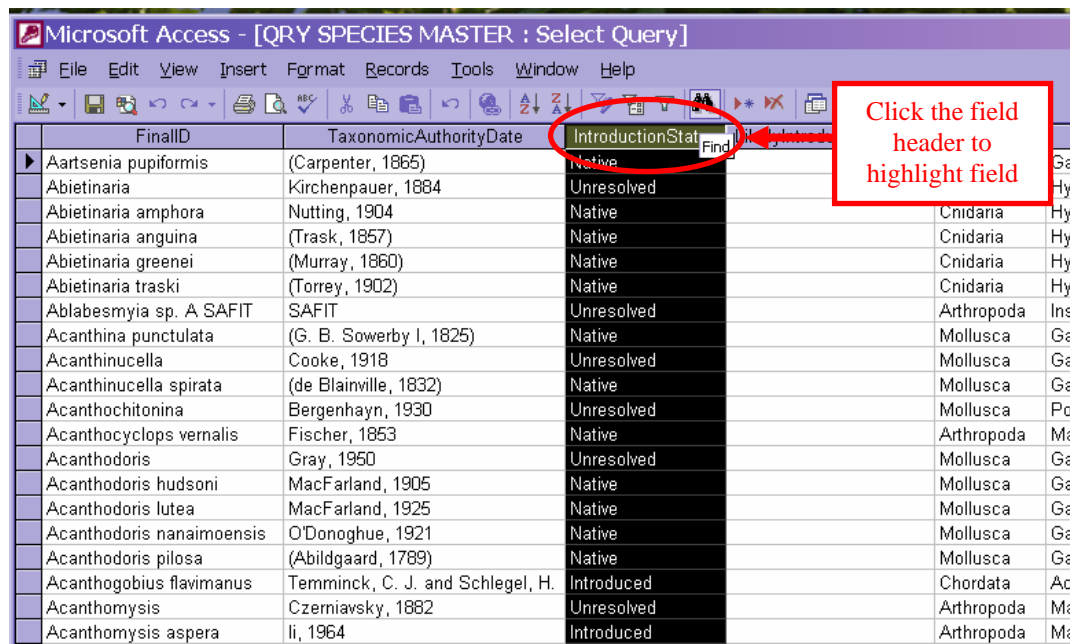
View Results


4. To remove the filter, click the "Remove Filter" button.  See figure on page 46.

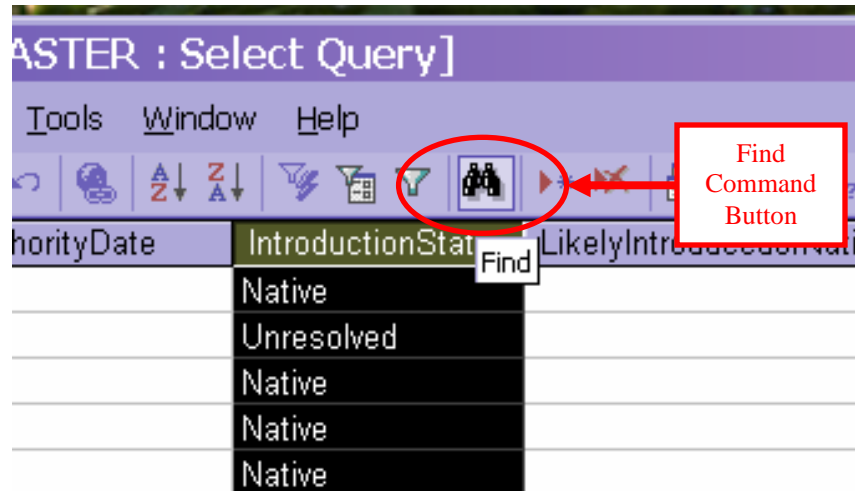


Find: You can quickly and easily find a specific record in your query by using the Find command.

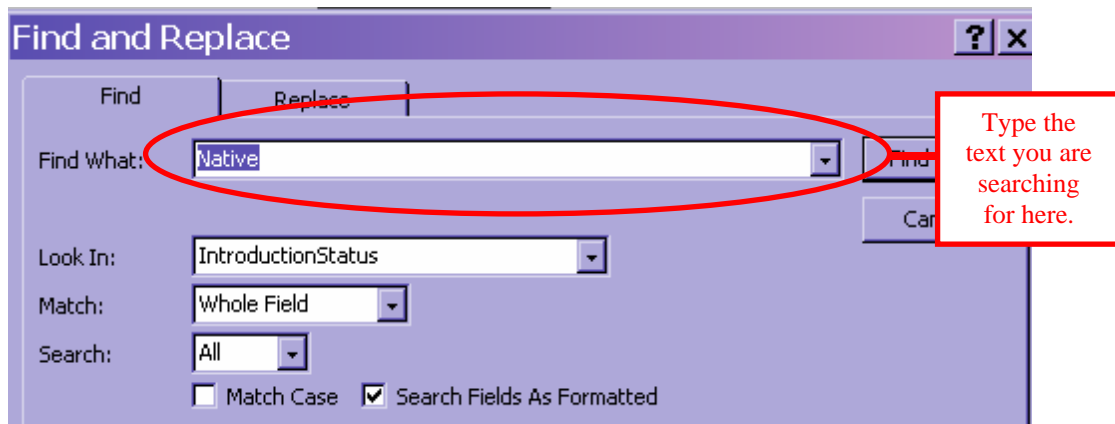
1. Highlight the field that you want to search. The Find command searches the records in the field you have selected. See figure below.



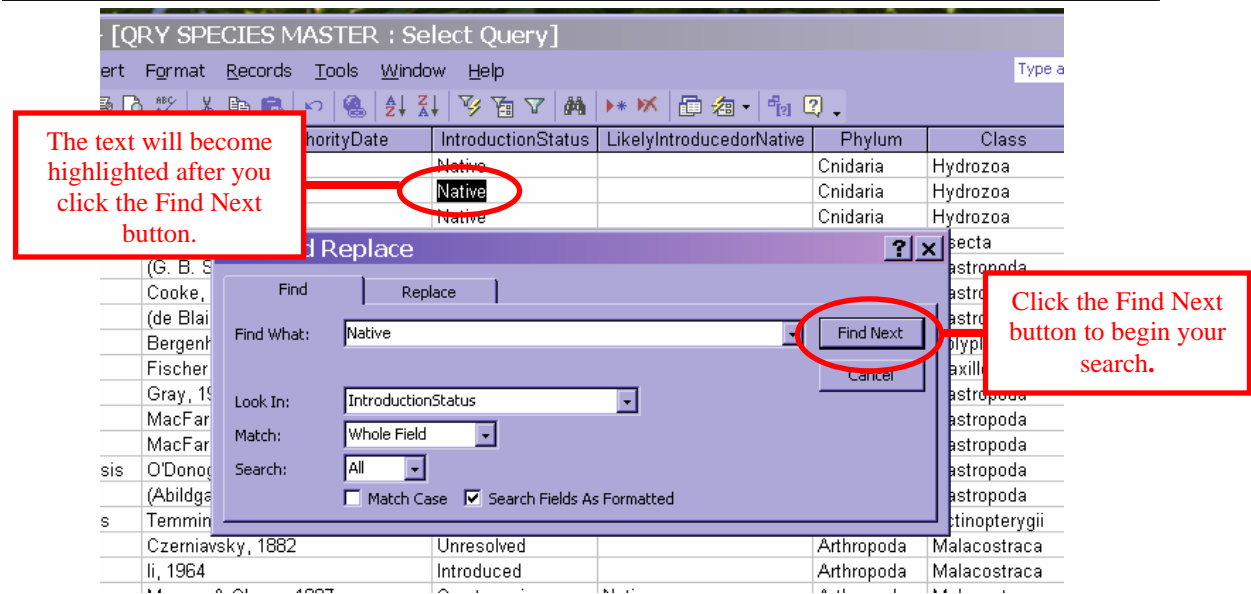
2. Start the Find command by clicking the "Find" button . See figure below.



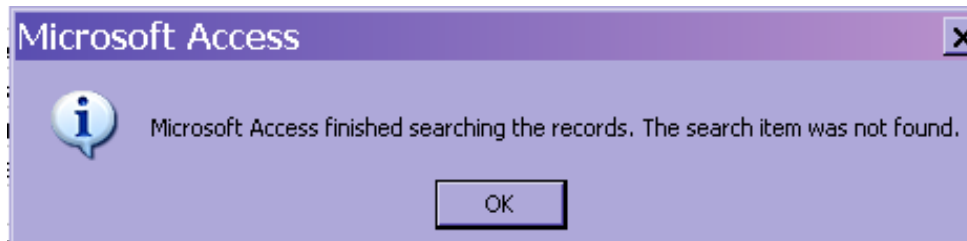
2. The "Find and Replace" dialogue box will display on the screen. Type the text you are looking for in the "Find What" box. See figure below.



4. Click the "Find Next" button **Find Next** to begin your search. The cursor will then move to the record you are searching for and highlight the matching text. Click "Find Next" button to continue your search. See figure below.



- If the Find command doesn't find any matches, an error message will display on your screen. See figure below.



- Click "OK" to close the dialog box. Make sure you clicked in the correct field and spelled everything correctly in the "Find What" box.
- Click the "Find Next" button again.
- To close the query, click the icon. The "Reports and Maps" or "Station Information Lookup" form will display on screen.
- Click the "Return to the Main Menu" button to return to the "Searchable Forms" menu or to exit CANOD.

Exit CANOD

Click the "Exit CANOD" button on the Main Menu to exit the database application.