

Species

Records in PISCES are associated to "species" or "bins". Species in PISCES can refer to several taxonomic resolution including families, subspecies, ESUs (evolutionarily significant unit) or DPSs (distinct population segments). Bins are used to temporarily store records of unknown or unresolved taxonomy.

Species Table

The species table stores primary information about each species. Additional species can be added to the table in needed but each new species must have an unique FID that has not been used previously. The species code is typically derived from first letter of family, first letter of genus and first letter of scientific name plus two digits. Unknown or unresolved taxonomy for records can be temporary placed in bins. Data in bins is not included in data collections, queries or exports.

Species

Add a New Species

1. Open **Species** Table in SQLiteStudio
2. Data tab
3. **Add new row**
4. Fill in table with information about new species
 - FID must be unique - three letters and two digits (derived from first letter of family, first letter of genus and first letter of scientific name plus two digits).
5. Make sure to Commit changes
6. Add the new species to **Species_Aux** table (optional)

SQLiteStudio (v2.1.5) [species (pisces.sqlite)]

Grid view Form view

Total rows: 338

# object	far	genus	species	subspecies	scientific_name	taxonomic_unit	common_name	notes	native	in
1	PET01	Entosphenus	tridentata		Entosphenus tridentata	subspecies	Pacific lamprey		1	
2	PET02	Petromyzontidae	tridentata		Entosphenus tridentata	subspecies	Goose Lake lamprey		1	
3	PES01	Petromyzontidae	similis		Entosphenus similis	species	Klamath River lamprey		1	
4	PLA01	Petromyzontidae	ayersi		Lampetra ayersi	species	River lamprey		1	
5	PLH01	Petromyzontidae	hubbsi		Lampetra hubbsi	species	Kern brook lamprey		1	
6	PLR01	Petromyzontidae	richardsoni		Lampetra richardsoni	species	Western brook lamprey		1	
7	PLL01	Petromyzontidae	lethophaga		Lampetra lethophaga	species	Pit-Klamath brook lamprey		1	
8	AAM01	Acipenseridae	medirostris		Acipenser medirostris	DPS	Northern green sturgeon		1	
9	AAM02	Acipenseridae	medirostris		Acipenser medirostris	DPS	Southern green sturgeon		1	
10	AAAT01	Acipenseridae	transmontanus		Acipenser transmontanus	species	White sturgeon		1	
11	CSC01	Cyprinidae	crassicauda		Siphatales crassicauda	species	Thicktail chub		1	
12	CST01	Cyprinidae	thalassinus	thalassinus	Siphatales thalassinus thalassinus	subspecies	Goose Lake tui chub		1	im
13	CST02	Cyprinidae	thalassinus		Siphatales thalassinus subspecies	subspecies	Pit River tui chub		1	im
14	CST03	Cyprinidae	thalassinus	vaccaceps	Siphatales thalassinus vaccaceps	subspecies	Cow Head tui chub		1	im
15	CSB01	Cyprinidae	bicolor	bicolor	Siphatales bicolor bicolor	subspecies	Klamath tui chub		1	im
16	CSB02	Cyprinidae	bicolor		Siphatales bicolor subspecies	subspecies	High Rock Springs tui chub		1	im
17	CSB03	Cyprinidae	bicolor	pectinifer	Siphatales bicolor pectinifer	subspecies	Lahontan lake tui chub		1	im
18	CSB04	Cyprinidae	bicolor	obesus	Siphatales bicolor obesus	subspecies	Lahontan stream tui chub		1	im
19	CSB05	Cyprinidae	bicolor		Siphatales bicolor subspecies	subspecies	Eagle Lake tui chub		1	im
20	CSB06	Cyprinidae	bicolor	snyderi	Siphatales bicolor snyderi	subspecies	Owens tui chub		1	im
21	CSM01	Cyprinidae	mohavensis		Siphatales mohavensis	species	Mojave tui chub		1	im
22	CGE01	Cyprinidae	elegans		Gila elegans	species	Bonytail		1	
23	CGC01	Cyprinidae	coerulea		Gila coerulea	species	Blue chub		1	
24	CGO01	Cyprinidae	orcutti		Gila orcutti	species	Arroyo chub		1	
25	CRE01	Cyprinidae	Richardsonius	egregius	Richardsonius egregius	species	Lahontan redside		1	im
26	CLE01	Cyprinidae	Lavinia	exilicauda	Lavinia exilicauda exilicauda	subspecies	Sacramento hftch		1	

Species_Aux

The **Species_Aux** table stores auxiliary information about each species. Species are identified by their species code (FID). The information in the table is customizable and can be expanded as needed. The user can add additional columns with new information about the life history, conservation status, habitat requirements, etc. for each species. Please see the **Database Tutorial** for more information about adding columns to existing tables.

Species Groups

Groups are simply lists of species codes the user wants to organize together. Groups are lists of species that can be used for creating and classifying assemblages. Often, species groups are created to group species that all share a common characteristic (such as flow sensitive species or anadromous fish). Groupings are a useful way to organize species into many different categories. Species can belong to many different groups.

Create new species group

To create a new species group:

1. Open **defs_species_groups** in SQLiteStudio
2. Data view
3. **Add new record**
4. Fill the new row with a unique group name and abbreviation as well as a description
 - Avoid using spaces in the `group_name` or `short_name` fields. Please use underscores.

Species

5. Commit changes to save

SQLiteStudio (v2.1.5) [defs_species_groups (pisces.sqlite)]

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Structure Data Indexes Triggers DDL

Grid view view Total rows: 23

#	id	group_name	short_name	description
1	1	Fish	fish	Species that are fish
2	2	Amphibians	amphibs	Species that are amphibians
3	3	Reptiles	rep	Species that are reptiles
4	4	Meadows_Indicators	meadows	Indicator species for the meadows project
5	5	Dams_Indicators	dams	Ted Grantham's 5937 Assemblage
6	6	USFS_R5	r5	Species delivered to USFS R5 in December 2011
7	7	Native_Fish	natives	All Native Fish Species
8	8	Resident_Natives	resident	Resident Native Species - all but anadromous
9	9	Paper_Species	paper	Species Analyzed for the PISCES Paper
10	10	FSFC_2012	fsfc	Fish Species of Special Concern for 2013
11	11	Non_Native_Fish	nonnatives	Non-natives established in California
12	12	Herps	herp	Aquatic herps (amphibians + reptiles) for zonation
13	13	Flow_Sensitive	flow	Flow sensitive species
14	15	Anadromous	anad	Anadromous species (Salmon, Steelhead, Sturgeon, Pacific Lamprey but not rainbo...
15	20	Herps_Lotic	lotic	Herps in lotic ecosystems (flowing water)
16	21	Herps_Lentic	lentic	Herps found in lentic ecosystems (still water)
17	22	Herps_Lotic_Lentic	herps_both	Herps found in both lotic and lentic ecosystem
18	23	Narrow_25	narrow_25	Native fish with range ≤ 25 HUC12s
19	24	Wide_Ranging	wide	Native Fish that are not in anadromous or narrow 25 group
20	25	Invertebrate	inverts	Sensitive Invertebrate Families
21	26	Mollusks	moll	Sensitive Mollusk Families
22	27	Arthropods	arthro	Sensitive Arthropod Families
23	28	Crustacean	crust	Sensitive Crustacean Families
24	28	Test	test	A new species group

Species

Add Species to a Species Group

To add species to a group:

1. Find group ID in **defs_species_group**
2. Open **species_groups** table in SQLiteStudio
3. **Add custom number of rows**
4. Create a new row for each species to be added
5. For every row, enter a species FID code and the group_id for the group
 - Species FID codes can be looked up in the **Species** Table
6. **Commit changes.**

The screenshot shows the SQLiteStudio interface with the 'species_groups' table open in 'Form view'. The table has two columns: 'fid' and 'group_id'. A dialog box titled 'Add rows' is open, prompting the user to 'Enter number of rows to add:' with the value '10' entered. The table data is as follows:

#	fid	group_id
1	AAA01	1
2	AAC01	12
3	AAC01	21
4	AAG01	12
5	AAG01	21
6	AAM01	1
7	AAM01	6
8	AAM01	7
9	AAM01	9
10	AAM01	10
11	AAM01	13
12	AAM01	15
13	AAM01	1
14	AAM02	5
15	AAM02	7
16	AAM02	13
17	AAM02	15
18	AAM03	2
19	AAM03	12
20	AAM03	21
21	AAM04	2
22	AAT01	1
23	AAT01	6
24	AAT01	7