



# Ictio Upload Instructions

## Introduction

In addition to the mobile app, **Ictio includes a database and upload tool to register fish observations in the Amazon basin.** Developed as part of the [Citizen Science for the Amazon project](#), the Ictio upload tool allows citizen scientists, natural resource managers, researchers, conservation practitioners and others, to share information on fish catches through a large database that integrates fish observations across the Amazon basin. Specifically, users can upload .csv tables that have information on species catches, location and date (for more details on specific variables see the variable descriptions). Data uploaded using the web-based tool can fit one of three protocols: catch protocol, market protocol and port protocol (for more details see the description of protocols below). By building a pan-Amazonian open access database, the project aims to catalyze the analyses of fish information that furthers our collective understanding and the conservation of Amazonian freshwaters.

## Ictio Upload Data Format

The Ictio Upload Tool allows you to upload large tables of records that include multiple checklists of data. Each row contains a single observation of a species (scientific name), plus all of the checklist level data like location and effort information. Ictio builds checklists from these data by grouping **Latitude, Longitude, Date, and Start Time**. Since checklist level information like location and effort are included for each observation in a checklist, you will see a lot of data repeated since they will be the same for each observation in that checklist. Also note that that you can only have one observation for each scientific name on a checklist, otherwise the upload will fail. The column headers are things like common name, date, location, and number (of individuals). Below are instructions for preparing your data in excel. If you are using another application, such as a text editor, then make sure you know how to properly format data.

## File Size Limitations

File sizes are limited to 1 MB/import. You can import as much data as you wish, but the records must be separated into different files no larger than 1 MB.

## Formatting your data in excel

1. Use the data template and the variables descriptions to format your data, both of which can be downloaded from Ictio.org. **The upload will not work unless each variable is in the correct column with the correct format.**



2. Make sure you have data for every field that is required.
3. Make sure you are using valid Ictio names or species codes (Column A). You can use either the scientific name or the species code on the list of valid names included below.
4. Double check your Latitude and Longitude. Make sure they have the (-) sign if they need it. All longitudes in South America should be negative!
5. Make sure your data is organized into checklists. Each row is a single observation of a species. **The upload tool will group all observations that have the same Latitude, Longitude, Date, and Start Time into single checklists. If you have multiple checklists with the same latitude, longitude, date, and start time, then you need to load them on separate upload files.**
6. **Make sure your checklist level fields (Columns K through Q) are all the same for each observation in a single checklist.** The upload tool will populate these fields with the first observation in the checklist that it loads, and will ignore these fields for all subsequent observations in the checklist.
7. **You can only have one observation for each scientific name on a single checklist.** If there is more than one observation for a scientific name on a checklist, then the upload will fail. If you have multiple observations for the same scientific name on the same checklist, then they need to be consolidated. This includes “fish sp.” To double-check this, you can sort your dataset by their coordinates and date.
8. Hard returns will be replaced with spaces. If you are using a text editor then hard returns may cause the upload to fail.
9. The upload tool assumes that row 1 is the header and will not try to upload this row. It does not matter what the headers are in row 1, but this row cannot be blank. All that matters is that you have headers, your data starts in row 2, and your data is in the correct columns.
10. Save your file as a .CSV file.
11. Make sure your csv file does not have any extra rows or columns. Your csv file should only have 17 columns (A-Q). Extra rows or columns will cause the upload to fail.
12. Upload!

## Data Format Troubleshooting and FAQs

### What to do if your file won't load properly.

If you get a message back saying that the “Upload Failed”, please go through the following checks to make sure your file is correct.

1. Make sure that your file is formatted as a .csv file and not an Excel (.xls) file or any other type of file. Ictio can only import files with saved as .csv files. You can do this by choosing "Save as" and then picking .csv as the file extension. Try opening the file in a text editor as a .txt file and checking the delimiter. If the values that separate the



columns are not commas (for example, if they are semicolons), please see our [Help Item on how to fix this issue](#).

2. Make sure your file does not exceed to 1 MB file size limit.
3. Make sure the columns are formatted properly (in the right order) as any shift out of place will result in an incorrigible file.
4. Make sure latitude and longitude are correct and that you have included the appropriate (-) symbol before a value for longitude in South America (e.g., -122.33456). Also make sure that these values are entered in decimal degrees, not degrees, minutes, seconds.
5. Make sure your date is formatted correctly. Dates must adhere to the following format: month/day/year (e.g., 12/27/2007). When formatting your date in excel you can use either m/d/yyyy or mm/dd/yyyy.
6. Make sure your start time is properly formatted. It should be in either military time (e.g., 08:00 or 14:50) or in this format (e.g., 8:00 AM or 2:50 PM; note the space between the hours and the periods).
7. Make sure you do not have multiple observations of the same species on the same checklist.
8. Make sure you use only the three character code for your protocol (e.g., P77, P78, or P79).
9. Make sure your value for duration is in minutes, not hours.
10. All observations reported should simply be "Y" or "N", not yes or no.
11. If you are using a text editor, then make sure you know how to format a csv file. Misplaced quotation marks, hard returns, or commas can make the upload fail.

## Description of Protocols:

1. Catch Protocol Assumptions: You should only use catch protocol when *you know when and where the fish were caught*.
  - a. **Code** is P77 (Fishing, after the fishing event)
  - b. **Location** is where fish were caught.
  - c. **Date** is when fish were caught
  - d. **Start time** is when the fishing effort started.
  - e. **Checklist** should be marked as complete only if all of the fish caught are reported. If only some of the species are not reported then it is an incomplete checklist. If the taxa is not a valid taxa for upload, then add that quantity to "fish sp."
  - f. **Price** is 1st point of sale (i.e., the price fisherman sells for).
    - i. Price per Kg is in local national currency
  - g. Single checklist involves a single fishing effort and date



2. Market Protocol Assumption: You should only use catch protocol when registering fish surveyed in a market, therefore a single checklist can involve fish from multiple fishing efforts at different locations and dates
  - a. Code is P78 (Market Survey)
  - b. Location is of market where survey was conducted. Include the name of the market in location name
  - c. Date when survey was conducted
  - d. Checklist should be marked as complete if all species of the available taxa observed at the market are reported.
  - e. Start time is when the survey took place.
  - f. Price is the price at the market
    - i. Price per Kg is in local national currency
  
3. Port Protocol Assumptions: You should only use port protocol when you know (generally) when and where the fish were caught. If you do not know where the fish are coming from then you should use the market survey. At the port, you are recording what is brought to port, not everything that was actually caught.
  - a. Code is P79 (Port Survey)
  - b. Data is collected at a port, and data collector may not know who caught the fish.
  - c. Location is where fish were caught. The location might be a community or a waterbody.
  - d. Date is when fish were caught.
  - e. Start time is when the fishing effort started, although this data is probably not usually available at port.
  - f. Checklist comments: you can add notes on uncertainty in location and date
  - g. The checklist should be marked as complete if all of the fish brought to port are being reported.
  - h. Price is 1st point of sale, the price fisherman sells for.
    - i. Price per Kg is in local national currency
  - i. A single checklist might document the catch from multiple fishers over multiple days in a general location. Fish from different locations or different dates should be recorded as different checklists when possible.



## Variable Descriptions

Column	Name	DATATYPE (MAX LENGTH)	Required?	Description/Instructions
A	Scientific Name	STRING(64) DEFAULT NULL	Y	The scientific name or species code for the taxa. Name must be a valid Ictio name or Ictio species code, which are detailed in the list of valid names. You can only have one observation for each scientific name on a single checklist. All observations with the same Latitude, Longitude, Date, and Start Time will form a single checklist.
B	Number	NUMBER(0<x<999999) DEFAULT 'present'	Y	The number of observed individuals of this specific species. If you do not have this number, then you must put an "X" for present.
C	Weight	DECIMAL(999999.99) DEFAULT NULL	N	This is the total weight of all individuals observed for this species in kg.
D	Price	DECIMAL(999999.99) DEFAULT NULL	N	The is the price per kilogram for this species that the fishers sell their catch for. (For Market Survey, use the price at market). Use the currency for the country where the checklist is assigned.
E	Species Comments	STRING(4000) DEFAULT NULL	N	Free text comments about the observation for this species
F	Location Name	TEXT(254 characters max)	N	User-defined name of the location. For Port and point of catch, this is the name of the location where the fish were caught. For Market Survey, this is the name of the market.
G	Latitude	NUMBER (-90<x<90)	Y	Latitude of the location, in decimal degrees. Positive values are in the northern hemisphere; negative south of the equator. All observations with the same Latitude, Longitude, Date, and Start Time will form a single checklist.
H	Longitude	NUMBER (-180<=x<=180)	Y	Longitude of the location, in decimal degrees. Negative values are in the western hemisphere. All longitudes in the Amazon should be negative! All observations with the same Latitude, Longitude, Date, and Start Time will form a single checklist.
I	Date	DATE MM/dd/yyyy	Y	The date these observations were made (e.g., 01/26/2006; or 5/13/2004). For port and point of catch surveys, use the date when fish were caught. For Market surveys, use the date of the survey. Make sure this field is in the correct format. All observations with the same Latitude, Longitude, Date, and Start Time will form



				a single checklist. When formatting your date in excel you can use either m/d/yyyy or mm/dd/yyyy.
J	Start Time	TIME HH:mm a; kk:mm;	N	Time when the fishing started. (e.g., 11:35 PM; or 19:27). Use the time when fishers started fishing. All observations on the same checklist should have the same start time! All observations with the same Latitude, Longitude, Date, and Start Time will form a single checklist. For the market protocol, start time is when the survey took place. For the port protocol, this is when the fishers started fishing, although this information might not be always available.
K	Protocol	Three valid options: P77, P78, or P79	Y	Select one of three valid protocol codes: Fishing = P77, Market = P78, Port = P79. Just use the three character code, ex "P77".
L	Name of Port	TEXT(100 characters max)	N	This is the name of the port where data was collected during a port survey. This field should only be used with the Port Survey Protocol.
M	Number of Observers	NUMBER(x>0) DEFAULT NULL	N	Number of fishers that participated in the fishing event.
N	Duration	NUMBER(0<x<60,000) DEFAULT 0	N	How long, in minutes, was the fishing effort? The maximum duration is 60,000 minutes, or 1,000 hours.
O	All observations reported?	TEXT (1 character max) DEFAULT 'N'	Y	Were all species caught reported on this fishing event? 'Y' = yes, 'N' = no. If you are not sure, mark 'N' = no
P	Effort Distance	NUMBER(x>0) DEFAULT NULL	N	This is the distance in kilometers of the fishing effort.
Q	Submission Comments	TEXT (4000 characters max) DEFAULT NULL	N	Checklist comments, free text comments about the submission for entire fishing event.



## Valid Names:

Scientific name	Species Code
<i>Acestrorhynchus falcirostris</i>	acefal1
<i>Achirus achirus</i>	achach1
<i>Adontosternarchus balaenops</i>	adobal1
<i>Aequidens tetramerus</i>	aeqtet1
<i>Ageneiosus inermis</i>	ageine1
<i>Ageneiosus</i> sp.	agenei1
<i>Amblydoras</i> sp.	amblyd1
<i>Anodus elongatus</i>	f-anoelo1
<i>Anodus</i> sp.	anodus1
Anostomidae sp.	f-anosto1
<i>Anostomoides laticeps</i>	anolat1
<i>Arapaima gigas</i>	f-aragig1
<i>Astronotus crassipinnis</i>	astcra1
<i>Astronotus ocellatus</i>	astoce1
<i>Astyanax</i> sp.	astyan1
<i>Auchenipterus nuchalis</i>	aucnuc1
<i>Boulengerella</i> sp.	boulen1
<i>Brachyplatystoma filamentosum</i>	brafil1
<i>Brachyplatystoma juruense</i>	f-brajur1
<i>Brachyplatystoma platynemum</i>	f-brapla1
<i>Brachyplatystoma rousseauxii</i>	f-brarou1
<i>Brachyplatystoma tigrinum</i>	bratig1
<i>Brachyplatystoma vaillantii</i>	f-bravai1
<i>Brycon amazonicus</i>	bryama1
<i>Brycon cephalus</i>	brycep1
<i>Brycon melanopterus</i>	brymel1



Brycon sp.	f-brycon1
Calophysus macropterus	calmac1
Charax sp.	charax1
Cichla monoculus	cicmon1
Cichla pleiozona	cicple1
Cichla sp.	cichla1
Cichla temensis	cictem1
Colossoma macropomum	f-colmac1
Corydoras sp.	corydo1
Crenicichla reticulata	creret1
Curimata inornata	curino1
Curimata vittata	curvit1
Cynodon gibbus	cyngib1
Cyphocharax abramoides	cypabr1
Electrophorus electricus	eleele1
Erythrinus erythrinus	eryery1
Fish sp.	f-fish1
Geophagus proximus	geopro1
Hemiodus sp.	hemiod1
Hemisorubim platyrhynchos	hempla1
Heros efasciatus	herefa1
Hoplerythrinus unitaeniatus	hopuni1
Hoplias malabaricus	hopmal1
Hoplosternum littorale	hoplit1
Hoplosternum sp.	hoplos1
Hydrolycus armatus	hydarm1
Hydrolycus scomberoides	hydsco1
Hypophthalmus edentatus	hypede1
Hypophthalmus fimbriatus	hypfim1





Hypophthalmus marginatus	f-hypmar1
Hypostomus sp.	hypost1
Leiarius marmoratus	leimar1
Leporinus friderici	lepfri1
Leporinus trifasciatus	leptri1
Loricariinae sp.	lorica1
Megalodoras uranoscopus	megura1
Megalonema platycephalum	megpla1
Metynnis hypsauchen	methyp1
Myleus sp.	myleus1
Myloplus rubripinnis	mylrub1
Myloplus schomburgkii	mysch1
Mylossoma aureum	mylaur1
Mylossoma duriventre	f-myldur1
Osteoglossum bicirrhosum	ostbic1
Oxydoras niger	oxynig1
Parodon buckleyi	parbuc1
Parodon pongoensis	parpon1
Pellona castelnaeana	pelcas1
Pellona flavipinnis	pelfla1
Perrunichthys perruno	perper1
Petilipinnis grunniens	petgru1
Phractocephalus hemioliopterus	phrhem1
Piaractus brachypomus	f-piabra1
Pimelodina flavipinnis	pimfla1
Pimelodus blochii	pimblo1
Pimelodus sp.	f-pimelo1
Pinirampus pirinampu	pinpir1
Plagioscion montei	plamon1



Plagioscion squamosissimus	plasqu1
Plagioscion surinamensis	plasur1
Platynematchthys notatus	planot1
Platysilurus mucosus	plamuc1
Platystomatichthys sturio	plastu1
Potamorhina altamazonica	potalt1
Potamorhina latior	potlat1
Potamorhina sp.	f-potamo1
Potamorrhaphis guianensis	potgui1
Potamotrygon sp.	potamo1
Prochilodus nigricans	f-pronig1
Psectrogaster amazonica	pseama1
Psectrogaster rutiloides	pserut1
Psectrogaster sp.	f-psectr1
Pseudoplatystoma fasciatum	f-psefas1
Pseudoplatystoma punctifer	psepun1
Pseudoplatystoma sp.	pseudo1
Pseudoplatystoma tigrinum	f-psetig1
Pterodoras granulosus	ptegra1
Pterygoplichthys disjunctivus	ptedis1
Pterygoplichthys pardalis	ptepar1
Pygocentrus nattereri	pygnat1
Rhaphiodon vulpinus	rhavul1
Satanoperca jurupari	satjur1
Schizodon fasciatus	schfas1
Schizodon vittatus	schvit1
Semaprochilodus insignis	f-semins1
Semaprochilodus sp.	semapr1
Semaprochilodus taeniurus	semtae1



Serrasalmus rhombeus	serrho1
Serrasalmus sp.	serras1
Serrasalmus spilopleura	serspi1
Sorubim elongatus	sorelo1
Sorubim lima	sorlim1
Sorubim maniradii	sorman1
Sorubimichthys planiceps	sorpla1
Steindachnerina bimaculata	stebim1
Trachelyopterus galeatus	tragal1
Triportheus angulatus	triang1
Triportheus auritus	triaur1
Triportheus sp.	f-tripor1
Zungaro zungaro	f-zunzun1