

COPO

Alice Minotto

Alice.Minotto@earlham.ac.uk, @rosysnake

Felix Shaw

felix.shaw@earlham.ac.uk, @shaw2thefloor

Robert Davey

robert.davey@earlham.ac.uk, @froggleston



E Earlham
Institute

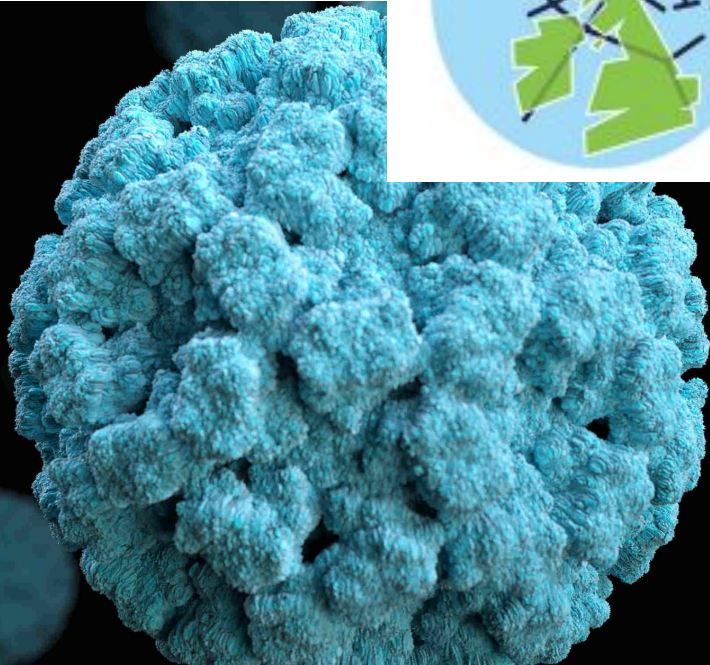
Decoding Living Systems



VISUAL DOCUMENTATION FOR MANIFEST SUBMISSION



Darwin
TREE
of
LIFE



What you need before starting:

- an ORCID account ([here](#) to register)
- contact El.COPO@earlham.ac.uk to be added to the DToL group
- make sure you have the latest version of the DToL manifest ([here](#))

To familiarize with the platform:

<https://demo.copo-project.org/>

IMPORTANT - Submissions to ENA through the demo server won't persist, any accessions will be deleted after 24 hours.

We also update this server quite frequently, so it may occasionally be unreachable and you may find we deleted your past uploads.

Once you are confident:

<https://copo-project.org/>

Log in with your ORCiD credentials:



Create a profile:

The screenshot displays the COPO Work Profiles interface. At the top, the COPO logo is on the left, and a search bar labeled 'Search COPO' is on the right. Below the logo, the text 'Work Profiles' is followed by an orange circle with a lightbulb icon and a blue circle with a plus icon. A red arrow points to the blue plus icon. Below these icons are buttons for 'Select all', 'Select none', '+ Add', and 'Edit'. A search bar labeled 'Search Work Profiles' is also present. The main content area shows 'Showing 1 to 1 of 1 entries' and a profile card for 'dtoI (DTOL)'. The card includes the text 'Created: Mon, 26 Oct 2020 17:38' and 'Description: test'. At the bottom of the card are six colored buttons with icons and counts: 'Samples' (0), 'Datafiles' (0), 'Submissions' (0), 'Publications' (0), 'Metadata Template' (0), and 'People' (1). On the right side, there is a sidebar with 'Info' and 'Help' tabs. The 'Help' tab is active, showing a 'Search Help' bar and a list of 'Help Topics' with plus icons: 'What is a COPO profile?', 'How do I create a profile?', 'How many profiles can I have in COPO?', 'What is a profile component?', and 'How do I create components within a profile?'. At the bottom of the sidebar, it says '1 to 5 of 5 topics' and has 'Previous', '1', and 'Next' buttons.

COPO

Search COPO

Work Profiles

Select all Select none + Add Edit

Search Work Profiles

Showing 1 to 1 of 1 entries

dtoI (DTOL)

Created:
Mon, 26 Oct 2020 17:38

Description:
test

Samples 0 Datafiles 0 Submissions 0 Publications 0 Metadata Template 0 People 1

Show 10 entries

Info Help

Search Help

Help Topics

- + What is a COPO profile?
- + How do I create a profile?
- + How many profiles can I have in COPO?
- + What is a profile component?
- + How do I create components within a profile?

1 to 5 of 5 topics

Previous 1 Next

Create a profile:

Add Profile

Title required ⓘ

DTOL

Description required ⓘ

IMPORTANT: we use this information to submit a study to ENA





Profile Type ⓘ



Darwin Tree of Life

Cancel Save

IMPORTANT - If you can't select Darwin Tree of Life in the profile type drop down menu, you need to be added to the DTOL group. Please stop here and get in touch with EI.COPO@earlham.ac.uk

This is your new DToL profile:

    alice ▾

Work Profiles  


Select all Select none + Add Edit


Showing 1 to 2 of 2 entries


DTOL (DTOL)


Created:
Tue, 27 Oct 2020 15:46


Description:
IMPORTANT: we use this information to submit a study to ENA


 Samples 0

 Datafiles 0

 Submissions 0

 Publications 0

 Metadata Template 0

 People 1

dtol (DTOL)

Info Help

New profile record created! 

Upload a manifest:

The screenshot displays the COPO Work Profiles management interface. At the top, a dark header bar contains the COPO logo, a search bar labeled "Search COPO", and user controls for a search icon, notifications, a document icon, and the user name "alice". Below the header, the "Work Profiles" section features a light blue bar with a lightbulb icon and a plus icon. Action buttons include "Select all", "Select none", "+ Add", and "Edit". A search bar for "Search Work Profiles" is also present. A status bar indicates "Showing 1 to 2 of 2 entries". The first entry, "DTOL (DTOL)", is highlighted with a dark green header. It shows a creation date of "Tue, 27 Oct 2020 15:46" and a description: "IMPORTANT: we use this information to submit a study to ENA". A red arrow points to the "Samples" button in the bottom bar, which shows a count of 0. Other buttons in the bar include "Datafiles" (0), "Submissions" (0), "Publications" (0), "Metadata Template" (0), and "People" (1). A second entry, "dtol (DTOL)", is partially visible below. On the right, a sidebar with "Info" and "Help" tabs contains a green notification box stating "New profile record created!" with a close button.

COPO

Search COPO

alice

Work Profiles

Select all Select none + Add Edit

Search Work Profiles

Showing 1 to 2 of 2 entries

DTOL (DTOL)

Created:
Tue, 27 Oct 2020 15:46

Description:
IMPORTANT: we use this information to submit a study to ENA

Samples 0 Datafiles 0 Submissions 0 Publications 0 Metadata Template 0 People 1

dtol (DTOL)

Info Help

New profile record created!

Upload a manifest:

The screenshot displays the COPO web application interface. At the top, there is a dark header with the COPO logo on the left, a search bar labeled 'Search COPO' in the center, and user controls on the right including a bell icon, a document icon, and a user profile labeled 'alice'. Below the header, the main content area is titled 'Profile: DTOL' and 'Samples'. A row of four circular icons is shown: an orange lightbulb, a blue plus sign, a green grid, and a teal list icon. A red arrow points to the teal list icon. A tooltip above the icons reads 'Add Sample(s) from DTOL Spreadsheet'. On the right side, there is a 'Help' sidebar with a 'Search Help' input field and a list of 'Help Topics' including 'Describing samples' and 'Sample types'. At the bottom of the sidebar, it shows '1 to 2 of 2 topics' and navigation buttons for 'Previous', '1', and 'Next'.

COPO

Search COPO

alice

Profile: DTOL

Samples

Add Sample(s) from DTOL Spreadsheet

Samples - Getting started

The samples page provides a platform for describing and managing biological samples, obtained as part of a project.

The description functionality presents a wizard that guides the user through a step-by-step process of sample metadata attribution.

Use the to initiate sample description and follow the steps presented by the wizard.

Quick Tour: To explore the various controls available on this page, click the icon.

Search Help

Help Topics

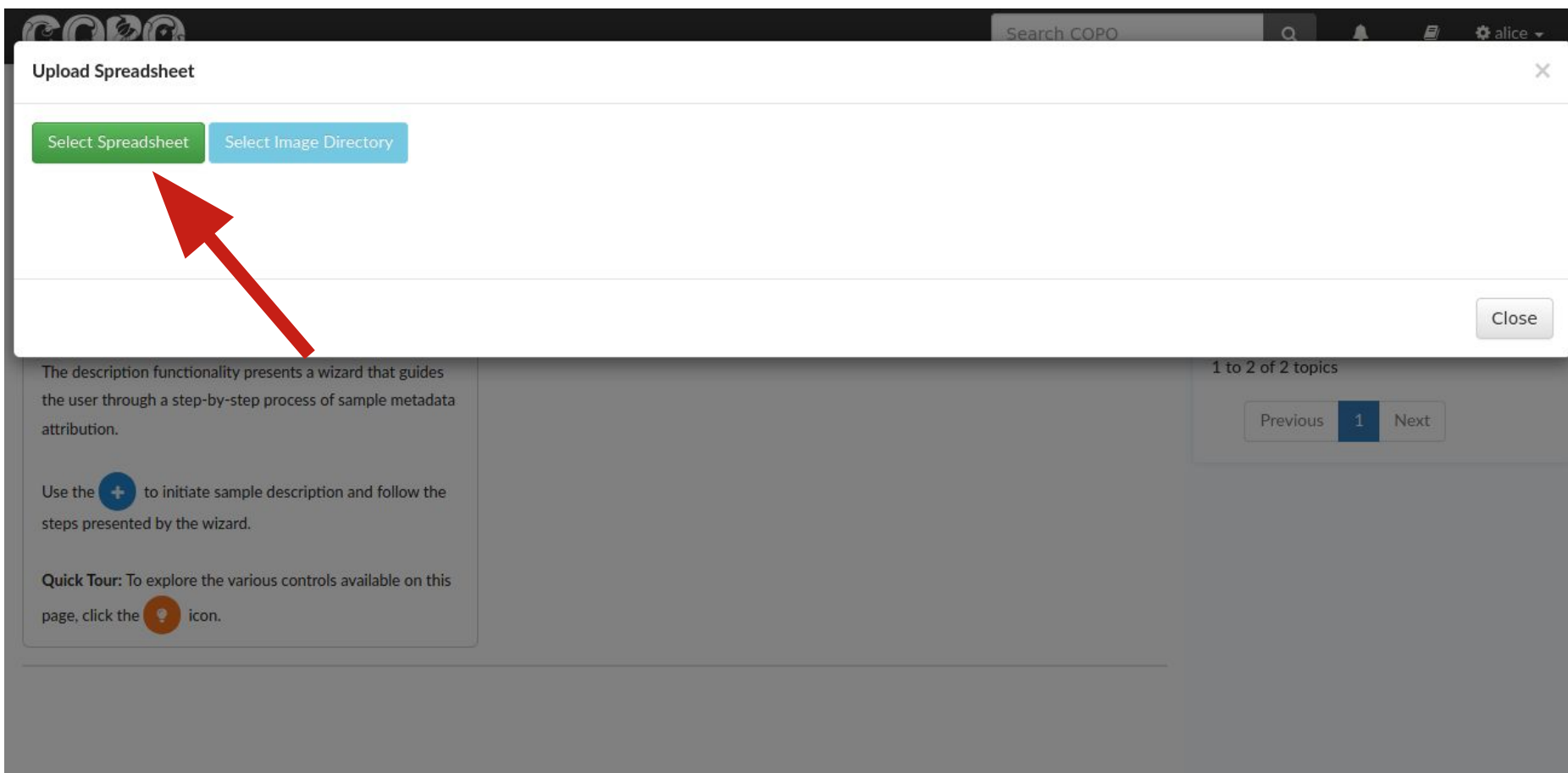
- + Describing samples
- + Sample types



1 to 2 of 2 topics

Previous 1 Next

*Only DToL sample managers will see the fourth light blue button next to the green one, if this is not your role don't worry about that, you won't need it

Upload a manifest:




The screenshot shows a web application interface with a dark header bar. On the left, there are four circular icons. The header contains a search bar with the text "Search COPO", a magnifying glass icon, a bell icon, a document icon, and a user profile icon labeled "alice". A white modal dialog box titled "Upload Spreadsheet" is open in the center. It has a close button (X) in the top right corner. Inside the dialog, there are two buttons: a green "Select Spreadsheet" button and a blue "Select Image Directory" button. A large red arrow points from the bottom left towards the "Select Spreadsheet" button. In the bottom right corner of the dialog is a "Close" button. The background of the application is dimmed. On the left side of the background, there is a text block: "The description functionality presents a wizard that guides the user through a step-by-step process of sample metadata attribution. Use the  to initiate sample description and follow the steps presented by the wizard. Quick Tour: To explore the various controls available on this page, click the  icon." On the right side of the background, there is a navigation bar showing "1 to 2 of 2 topics" and buttons for "Previous", "1" (selected), and "Next".


Upload Spreadsheet

Select Spreadsheet Select Image Directory

Close

The description functionality presents a wizard that guides the user through a step-by-step process of sample metadata attribution.

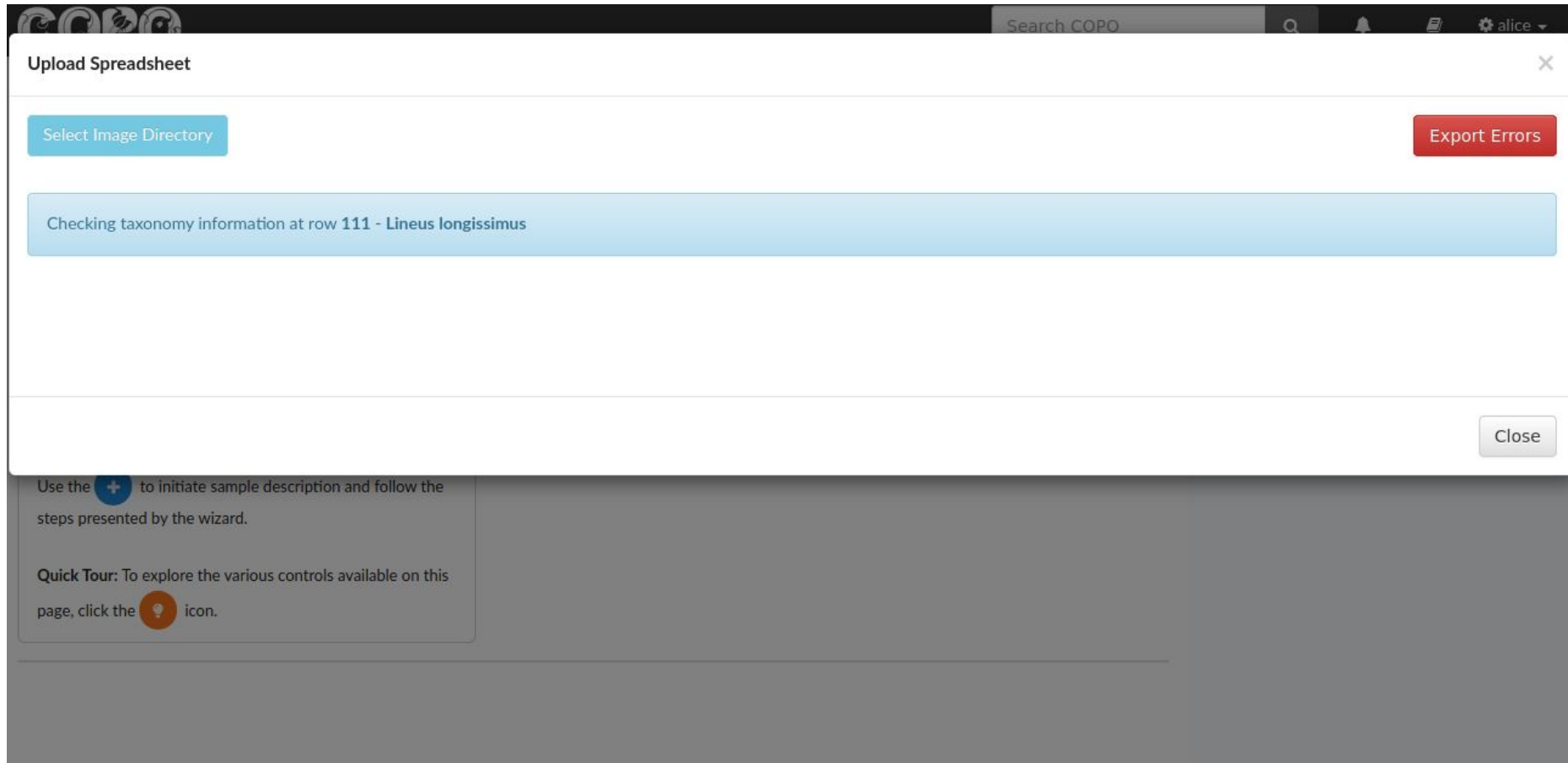
Use the  to initiate sample description and follow the steps presented by the wizard.

Quick Tour: To explore the various controls available on this page, click the  icon.

1 to 2 of 2 topics

Previous 1 Next

COPPO will validate taxonomy information and manifest format:



The screenshot displays the 'Upload Spreadsheet' window of the COPPO application. The window has a title bar with the COPPO logo and a search bar labeled 'Search COPPO'. Inside the window, there is a 'Select Image Directory' button on the left and an 'Export Errors' button on the right. A blue progress bar indicates the current status: 'Checking taxonomy information at row 111 - Lineus longissimus'. A 'Close' button is located in the bottom right corner of the window. Below the window, a grey sidebar contains instructions: 'Use the + icon to initiate sample description and follow the steps presented by the wizard.' and 'Quick Tour: To explore the various controls available on this page, click the icon.' with a lightbulb icon.

Upload Spreadsheet

Select Image Directory

Export Errors

Checking taxonomy information at row 111 - Lineus longissimus

Close

Use the + icon to initiate sample description and follow the steps presented by the wizard.

Quick Tour: To explore the various controls available on this page, click the icon.


What's happening (part 1):

- COPO is retrieving information from NCBI (National Center for Biotechnology Information) to check the taxonomy information provided is correct
- If some of the taxonomy fields are missing (excluding SCIENTIFIC_NAME) COPO will make an educated guess about what these fields should be and will display warnings about what is going to be filled in.





The taxonomy checks will be much quicker if you fill in TAXON_ID.

- COPO will substitute scientific name synonyms with the official scientific name. It will display a warning and also record the change in OTHER_INFORMATION
- If any taxonomy field is incorrect COPO will display an error and reject the manifest. You can download the error list with the red “Export Errors” button on the top right.
- **If you are unhappy with any of the warning/errors DO NOT press finish. Instead contact NCBI to discuss the taxonomy**

Manifest uploaded -taxonomy warnings:-



Search COPO

alice

Upload Spreadsheet

Select Image DirectoryExport Errors

Synonym warning: *Asterina gibbosa* at row 294 is a synonym of *Asterina gibbosa* (Pennant, 1777). COPO will substitute the official scientific name.

Synonym warning: *Asterina gibbosa* at row 295 is a synonym of *Asterina gibbosa* (Pennant, 1777). COPO will substitute the official scientific name.

Synonym warning: *Asterina gibbosa* at row 296 is a synonym of *Asterina gibbosa* (Pennant, 1777). COPO will substitute the official scientific name.

Synonym warning: *Asterina gibbosa* at row 297 is a synonym of *Asterina gibbosa* (Pennant, 1777). COPO will substitute the official scientific name.

Synonym warning: *Aglais io* at row 336 is a synonym of *Inachis io*. COPO will substitute the official scientific name.

Synonym warning: *Aglais io* at row 337 is a synonym of *Inachis io*. COPO will substitute the official scientific name.

Synonym warning: *Aglais io* at row 338 is a synonym of *Inachis io*. COPO will substitute the official scientific name.

Synonym warning: *Satyrrium walbum* at row 359 is a synonym of *Satyrrium w-album*. COPO will substitute the official scientific name.

Synonym warning: *Aglais io* at row 385 is a synonym of *Inachis io*. COPO will substitute the official scientific name.

Synonym warning: *Melitaea athalia* at row 450 is a synonym of *Mellicta athalia*. COPO will substitute the official scientific name.

Synonym warning: *Colias crocea* at row 498 is a synonym of *Colias croceus*. COPO will substitute the official scientific name.

Synonym warning: *Colias crocea* at row 499 is a synonym of *Colias croceus*. COPO will substitute the official scientific name.

Synonym warning: *Colias crocea* at row 500 is a synonym of *Colias croceus*. COPO will substitute the official scientific name.

Synonym warning: *Colias crocea* at row 501 is a synonym of *Colias croceus*. COPO will substitute the official scientific name.

Synonym warning: *Colias crocea* at row 502 is a synonym of *Colias croceus*. COPO will substitute the official scientific name.

Synonym warning: *Colias crocea* at row 503 is a synonym of *Colias croceus*. COPO will substitute the official scientific name.

Synonym warning: *Colias crocea* at row 504 is a synonym of *Colias croceus*. COPO will substitute the official scientific name.

Synonym warning: *Melitaea athalia* at row 516 is a synonym of *Mellicta athalia*. COPO will substitute the official scientific name.

This is a warning:
COPO will make
these changes

SAN.xlsx

Manifest uploaded -taxonomy errors-:

The screenshot shows a web browser window with the COPO interface. A modal titled "Upload Spreadsheet" is open. Inside the modal, there is a blue button labeled "Select Image Directory" and a red button labeled "Export Errors". A red error message box contains the text: "1row_updated_ashdiebacksyn_wrongtaxid2.xlsx" and "1. Invalid data: couldn't retrieve TAXON_ID 7893 at row 2". To the right of the error box, a large text overlay reads: "This is an error: COPO won't accept the manifest". A "Close" button is located at the bottom right of the modal. In the background, a "Quick Tour" box is visible with the text: "Quick Tour: To explore the various controls available on this page, click the icon." and a lightbulb icon.

Upload Spreadsheet

Select Image Directory

Export Errors

1row_updated_ashdiebacksyn_wrongtaxid2.xlsx

1. Invalid data: couldn't retrieve TAXON_ID 7893 at row 2

This is an error: COPO won't accept the manifest

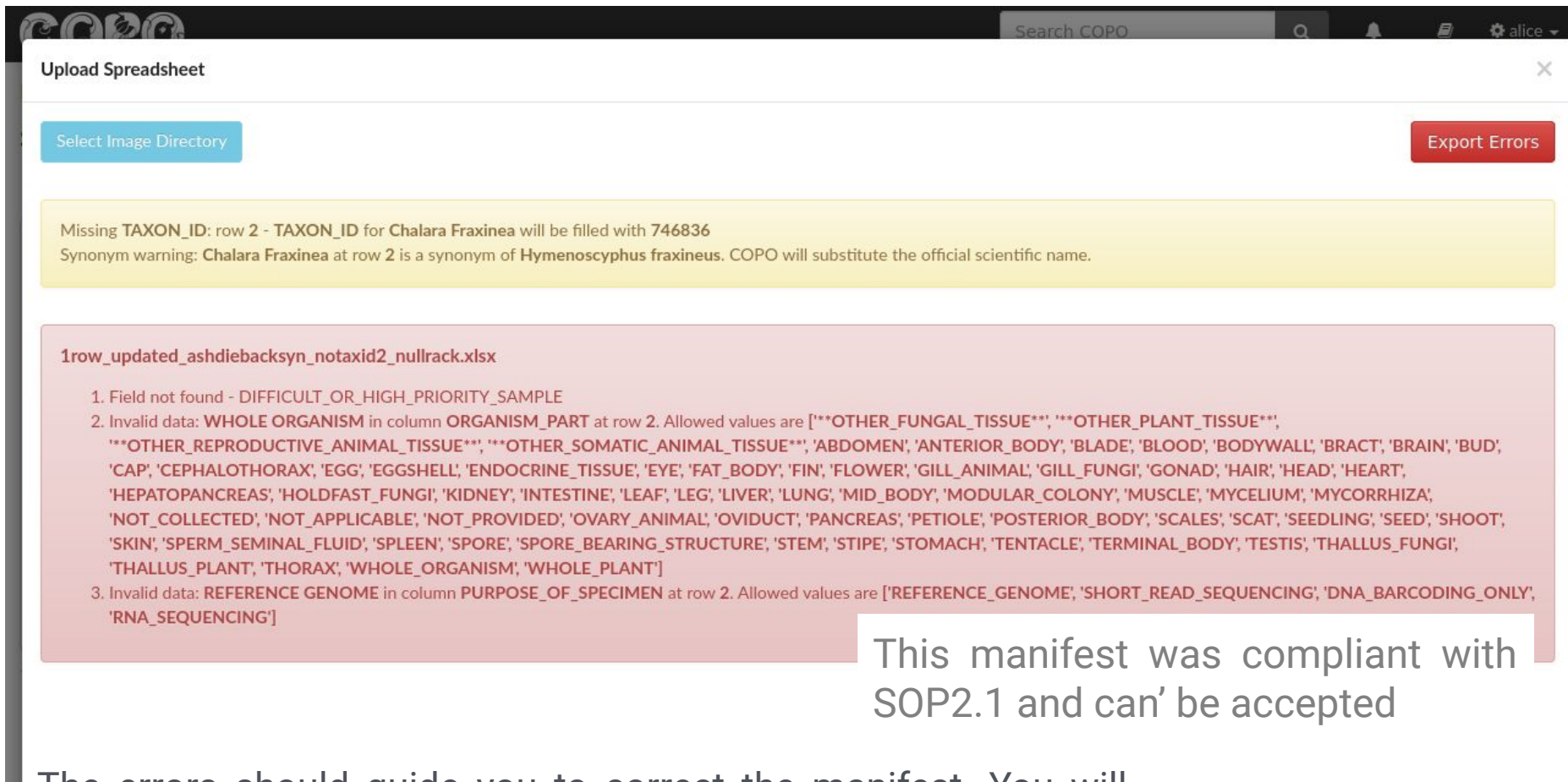
Close

Quick Tour: To explore the various controls available on this page, click the icon.

What's happening (part 2):

- **ONLY IF** the taxonomy validation was successful and produced no errors, will COPO check the manifest against SOP specifications. This includes checks for general format, missing data, cells that have restricted values, etc.

Manifest uploaded -compliance errors-:



The screenshot shows a web interface for uploading a spreadsheet to COPO. At the top, there's a search bar and a user profile 'alice'. Below the header, the main area is titled 'Upload Spreadsheet'. On the left, there's a blue button 'Select Image Directory'. On the right, there's a red button 'Export Errors'. A yellow warning box states: 'Missing TAXON_ID: row 2 - TAXON_ID for Chalara Fraxinea will be filled with 746836. Synonym warning: Chalara Fraxinea at row 2 is a synonym of Hymenoscyphus fraxineus. COPO will substitute the official scientific name.' Below this, a red error box titled '1row_updated_ashdiebacksyn_notaxid2_nullrack.xlsx' lists three errors: 1. Field not found - DIFFICULT_OR_HIGH_PRIORITY_SAMPLE. 2. Invalid data: WHOLE ORGANISM in column ORGANISM_PART at row 2. Allowed values are [***OTHER_FUNGAL_TISSUE***, ***OTHER_PLANT_TISSUE***, ***OTHER_REPRODUCTIVE_ANIMAL_TISSUE***, ***OTHER_SOMATIC_ANIMAL_TISSUE***, ABDOMEN, ANTERIOR_BODY, BLADE, BLOOD, BODYWALL, BRACT, BRAIN, BUD, CAP, CEPHALOTHORAX, EGG, EGGSHELL, ENDOCRINE_TISSUE, EYE, FAT_BODY, FIN, FLOWER, GILL_ANIMAL, GILL_FUNGI, GONAD, HAIR, HEAD, HEART, HEPATOPANCREAS, HOLDFAST_FUNGI, KIDNEY, INTESTINE, LEAF, LEG, LIVER, LUNG, MID_BODY, MODULAR_COLONY, MUSCLE, MYCELIUM, MYCORRHIZA, NOT_COLLECTED, NOT_APPLICABLE, NOT_PROVIDED, OVARY_ANIMAL, OVIDUCT, PANCREAS, PETIOLE, POSTERIOR_BODY, SCALES, SCAT, SEEDLING, SEED, SHOOT, SKIN, SPERM_SEMINAL_FLUID, SPLEEN, SPORE, SPORE_BEARING_STRUCTURE, STEM, STIPE, STOMACH, TENTACLE, TERMINAL_BODY, TESTIS, THALLUS_FUNGI, THALLUS_PLANT, THORAX, WHOLE_ORGANISM, WHOLE_PLANT]. 3. Invalid data: REFERENCE_GENOME in column PURPOSE_OF_SPECIMEN at row 2. Allowed values are [REFERENCE_GENOME, SHORT_READ_SEQUENCING, DNA_BARCODING_ONLY, RNA_SEQUENCING].

This manifest was compliant with SOP2.1 and can't be accepted

The errors should guide you to correct the manifest. You will have to correct and re-upload the updated spreadsheet

Manifest uploaded -correct manifest-:

Search COPO

alice

Upload Spreadsheet

Select Image DirectoryFinishExport Errors

Missing TAXON_ID: row 2 - TAXON_ID for Chalara Fraxinea will be filled with 746836
Synonym warning: Chalara Fraxinea at row 2 is a synonym of Hymenoscyphus fraxineus. COPO will substitute the official scientific name.

Sample MetadataSample Images

Show 10 entriesSearch:

SERIES	RACK_OR_PLATE_ID	TUBE_OR_WELL_ID	SPECIMEN_ID	ORDER_OR_GROUP	FAMILY	GENUS	TAXON_ID	SCIENTIFIC_NAME
1	null	FF06763795	SAN0000100	HELOTIALES	HELOTIACEAE	HYMENOSCYPHUS	746836	HYMENOSCYPHUS FRAXINEUS

check the warnings if
present

Manifest uploaded -correct manifest-:

Search COPO

alice

Upload Spreadsheet

Select Image DirectoryFinishExport Errors

Missing TAXON_ID: row 2 - TAXON_ID for Chalara Fraxinea will be filled with 746836
Synonym warning: Chalara Fraxinea at row 2 is a synonym of Hymenoscyphus fraxineus. COPO will substitute the official scientific name.


Sample MetadataSample Images

Preview of the manifest

Show 10 entriesSearch:

SERIES	RACK_OR_PLATE_ID	TUBE_OR_WELL_ID	SPECIMEN_ID	ORDER_OR_GROUP	FAMILY	GENUS	TAXON_ID	SCIENTIFIC_NAME
1	null	FF06763795	SAN0000100	HELOTIALES	HELOTIACEAE	HYMENOSCYPHUS	746836	HYMENOSCYPHUS FRAXINEUS

Upload images:



Search COPO

alice

Upload Spreadsheet

Select Image DirectoryFinishExport Errors

Missing TAXON_ID: row 2 TAXON_ID for Chalar Fraxinea will be filled with 746836
Synonym warning: Chalar Fraxinea at row 2 is a synonym of Hymenoscyphus fraxineus. COPO will substitute the official scientific name.

Sample MetadataSample Images

Show 10 entries

Search:

SERIES	RACK_OR_PLATE_ID	TUBE_OR_WELL_ID	SPECIMEN_ID	ORDER_OR_GROUP	FAMILY	GENUS	TAXON_ID	SCIENTIFIC_NAME
1	null	FF06763795	SAN0000100	HELOTIALES	HELOTIACEAE	HYMENOSCYPHUS	746836	HYMENOSCYPHUS FRAXINEUS

File names of any associated images must be the same as "SPECIMEN_ID" with the extension ".jpg" or ".png"

Upload images:

Search COPO

alice

Upload Spreadsheet

Select Image Directory

Finish

Export Errors


Missing TAXON_ID: row 2 - TAXON_ID for *Chalara Fraxinea* will be filled with 746836
Synonym warning: *Chalara Fraxinea* at row 2 is a synonym of *Hymenoscyphus fraxineus*. COPO will substitute the official scientific name.

Sample Metadata

Sample Images

Show 10 entries

Search:

Specimen ID	Image File	Image
SAN0000100	SAN0000100.png	


Showing 1 to 1 of 1 entries

Previous

1

Next

Create the samples in COPO by clicking “Finish”:



Search COPO

alice

Upload Spreadsheet

Select Image Directory

Finish

Export Errors


Missing TAXON_ID: row 2 - TAXON_ID for *Chalara Fraxinea* will be filled with 746836
Synonym warning: *Chalara Fraxinea* at row 2 is a synonym of *Hymenoscyphus fraxineus*. COPO will substitute the official scientific name.

Sample Metadata

Sample Images

Show 10 entries

Search:

Specimen ID	Image File	Image
SAN0000100	SAN0000100.png	

Showing 1 to 1 of 1 entries

Previous

1

Next

Uploaded samples:



Search COPO



alice

Profile: DTOL

Samples



Select all

Select filtered

Clear selection

Export CSV

Source list

Describe

Edit

Search Samples

Showing 1 to 1 of 1 records Click beside a record to view extra details

Name	Collected By	Date of Collection	Sex	Lifestage	Identified By	Identifier Affiliation	Common Name	Speci Id
	JULIE AHRINGER RICHARD DURBIN	2020-08-22	MALE	SPORE_BEARING_STRUCTURE	MARK BLAXTER	SANGER INSTITUTE	lugworm	SANC

Info

Help

Search Help

Help Topics

- + Describing samples
- + Sample types

1 to 2 of 2 topics


Previous 1 Next

DToL Sample Managers:





- At this point the DToL sample managers will be emailed that a new manifest has been uploaded. They will be able to accept or reject each sample after inspection.

After samples are approved by a sample manager they will be submitted to ENA (European Nucleotide Archive). Accessions can be inspected by scrolling right in the previous view.

Accepted samples:







Search COPO

alice

Profile: DTOL

Samples



Select all

Select filtered

Clear selection


Export CSV

Source list

Describe

Edit

Search Samples

Showing 1 to 1 of 1 records Click  beside a record to view extra details

Voucher ID	Manifest ID	Biosample Accession	SRA Accession	Submission Accession	Status	Public Name	Date Modified
NOT APPLICABLE	1943d3d2-7976-4563-859e-6877fb1d2560	SAMEA7491029	ERS5247681	ERA3031374	accepted	gyHymFrax1	[object Object]

InfoHelp

Search Help

Help Topics

+ Describing samples

+ Sample types

1 to 2 of 2 topics

Previous

1

Next



If you encounter any error or unexpected behaviour please email EI.COPO@earlham.ac.uk or open a github issue in the repository at the bottom of the page.

If you have a feature request for future releases please open an issue in the github repository.



collaborative-open-plant-omics /COPO



CyVerseUK is supported by the BBSRC through strategic funding and the capital grant BB/M018431/1.

CyVerse is supported by the National Science Foundation under Award Numbers DBI-0735191 and DBI-1265383. URL: www.cyverse.org



Decoding Living Systems