VISUAL DOCUMENTATION FOR MANIFEST SUBMISSION

Collaborative OPen Omics <u>ei.copo@earlham.ac.uk</u>, @copo-project



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Decoding Living Systems



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Earlham Institute

Prerequisites:

- An ORCid account
- Contact <u>ei.copo@earlham.ac.uk</u> to be added to a project manifest group
- Ensure that you have the latest version of the manifest if you are submitting samples as part of -
 - → Aquatic Symbiosis Genomics (ASG) project, please refer to the latest metadata manifest
 - → Darwin Tree of Life (DToL) project, please refer to the latest metadata manifest <u>here</u>
 - → European Reference Genome Atlas (ERGA) project, please refer to the latest metadata manifest <u>here</u>
- The latest manifest templates can also be found in our <u>documentation</u>.



COPO's home page:



Once you are confident

IMPORTANT - Submissions to European Nucleotide Archive (ENA) through the demo server will not persist, accessions created will be deleted after 24 hours.

The demo server is frequently updated so it may occasionally be unreachable and you may find that we have deleted your past uploads.



Click "Submit Data" button to log in with your ORCiD credentials:



An ORCiD sign-in form will be displayed after you click the **Submit Data** button.

Enter your ORCiD credentials to proceed to the COPO **Work Profiles** web page.



Create a profile:



An **Add Profile** form will be displayed after you click the blue button that has a white plus sign in its centre.



Create a profile:



IMPORTANT - If you cannot see the project that you are associated with in the Profile Type dropdown menu of the Add Profile form, you need to be added to the relevant group.

Please stop here and get in touch with ei.copo@earlham.ac.uk.



Add associated profile type:

Add Profile	
Title required 1	
Profile1	
Description required (
A collection of fish found in Oulton Broad, UK.	
Profile Type 🚯	
European Reference Genome Atlas (ERGA) 🗸 🗸	
Associated Profile Type 🚯	
Select associated type(s)	
Aquatic Symbiosis Genomics (ASG)	
Biodiversity Genomics Europe (BGE)	
Darwin Tree of Life (DTOL)	1
Darwin Tree of Life Environmental Samples (DTOL_ENV)	s
European Reference Genome Atlas - Pilot (ERGA_PILOT)	
European Reference Genome Atlas - Satellites (ERGA_SATELLITES)	
Cancel Save	

NOTE - for ERGA profile types only

- If your desired profile type is a part of a larger project, select the associated type from the Associated Profile Type dropdown menu.
- More than one associated type can be selected from the dropdown menu for the profile type.



Add sequencing centre:

Add Profile	
Title required 1	
Profile1	
Description required	
A collection of fish found in Oulton Broad, UK.	
	11.
Profile Type 🕕	
European Reference Genome Atlas (ERGA)	~
Associated Profile Type 1	
× Biodiversity Genomics Europe (BGE)	
Sequencing Centre required ()	
Select sequencing centre	
UNIVERSITY OF BARI	
DNA SEQUENCING AND GENOMICS LABORATORY, HELSINKI GENOMICS CORE FACILITY	1
CENTRO NACIONAL DE ANÁLISIS GENÓMICO	
FUNCTIONAL GENOMIC CENTER ZURICH	
GENOSCOPE	.2:4
LAUSANNE GENOMIC TECHNOLOGIES FACILITY	

NOTE - for ERGA profile types only

• Select the the centre where your samples will be sequenced at from the **Sequencing Centre** dropdown menu.



New profile created:

≜COPO		ê 2 Z	🕄 🌣 tester 1 👻
Work Profiles 😲 🕂		Info	
	Sort by: Date Created 🗸 🗸		
Profile1 (PROFILE1TYPE)		Profile Types Legend	
Created: Mon, 05 Dec 2023 15:04		PROFILE1TYPE	
Description: A collection of fish found in Oulton Broad, UK.			
View more			
Actions - Components -			
Showing: 1 / 1 profiles			





Edit or Delete profile:

Delete

f you would like to edit or delete a profile that you have created, click the white vertical ellipsis (:) located at the top right of the desired profile panel to view the profile options to do so



Upload a manifest:



• The colour and wording of this profile panel will differ depending on which project you are submitting a manifest for.



Upload a manifest:



The colour and wording of the Samples web page will differ depending on which project you are submitting a manifest for.



Upload a manifest:

Upload Spreadsheet	A alice ×
Upload Sample Manifest Upload Images Upload Permits	
	Close
user through a step-by-step process of sample metadata attribution.	Previous 1 Next
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.	



COPO will validate taxonomy information and manifest format:

Upload Spreadsheet	×
Upload Images Upload Permits	
Checking taxonomy information at row 111 - Lineus longissimus	
	Close
presented by the wizard.	
Quick Tour: To explore the various controls available on this page, click the various controls available on this	



What's happening (part 1):

- COPO is retrieving information from National Centre for Biotechnology Information (NCBI) to check that the taxonomy information provided is correct. We also check that the TAXON_ID is submittable to ENA.
- 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 warnings or errors, DO NOT click the finish button instead, contact NCBI to discuss the taxonomy.



Manifest uploaded -taxonomy warnings-:

Upload Spreadsheet	×
Upload Images Upload Permits	Export 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: 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: Aglais io at row 338 is a synonym of Inachis io. COPO will substitute the official scientific name. Synonym warning: Satyrium walbum at row 359 is a synonym of Satyrium 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.	This is a warning: COPO will make these changes
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: 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.	
SAN vice	



Manifest uploaded -taxonomy errors-:

Upload Spreadsheet	×
Upload Images Upload Permits	Export Errors
1row_updated_ashdiebacksyn_wrongtaxid2.xlsx 1. Invalid data: couldn't retrieve TAXON_ID 7893 at row 2	This is an error: COPO will not accept the manifest
	Close
Quick Tour: To explore the various controls available on this page, click the controls available on this page, click the controls available on this page.	



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 - with compliance errors-:

Upload Spreadsheet	
Upload Images Upload Permits	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 substi	itute the official scientific name.
 1row_updated_ashdiebacksyn_notaxid2_nullrack.xlsx 1. Field not found - DIFFICULT_OR_HIGH_PRIORITY_SAMPLE 2. Invalid data: WHOLE ORGANISM in column ORGANISM_PART at row 2. Allowed values are [***OT "**OTHER_REPRODUCTIVE_ANIMAL_TISSUE**', '**OTHER_SOMATIC_ANIMAL_TISSUE**', 'ABDC 'CAP', 'CEPHALOTHORAX', 'EGG', 'EGGSHELL', 'ENDOCRINE_TISSUE', 'EYE', 'FAT_BODY', 'FIN', 'FLC 'HEPATOPANCREAS', 'HOLDFAST_FUNGI', 'KIDNEY', 'INTESTINE', 'LEAF', 'LEG', 'LIVER', 'LUNG', 'M 'NOT_COLLECTED', 'NOT_APPLICABLE', 'NOT_PROVIDED', 'OVARY_ANIMAL', 'OVIDUCT', 'PANC 'SKIN', 'SPERM_SEMINAL_FLUID', 'SPLEEN', 'SPORE', 'SPORE_BEARING_STRUCTURE', 'STEM', 'ST 'THALLUS_PLANT', 'THORAX', 'WHOLE_ORGANISM', 'WHOLE_PLANT'] 3. Invalid data: REFERENCE GENOME in column PURPOSE_OF_SPECIMEN at row 2. Allowed values a 'RNA_SEQUENCING'] 	HER_FUNGAL_TISSUE**', "**OTHER_PLANT_TISSUE**', DMEN; 'ANTERIOR_BODY', 'BLADE', 'BLOOD', 'BODYWALL', 'BRACT', 'BRAIN', 'BUD', DWER', 'GILL_ANIMAL', 'GILL_FUNGI', 'GONAD', 'HAIR', 'HEAD', 'HEART', IID_BODY', 'MODULAR_COLONY', 'MUSCLE', 'MYCELIUM', 'MYCORRHIZA', REAS', 'PETIOLE', 'POSTERIOR_BODY', 'SCALES', 'SCAT', 'SEEDLING', 'SEED', 'SHOOT', IPE', 'STOMACH', 'TENTACLE', 'TERMINAL_BODY', 'TESTIS', 'THALLUS_FUNGI', are ['REFERENCE_GENOME', 'SHORT_READ_SEQUENCING', 'DNA_BARCODING_ONLY', This manifest was compliant with SOP2.1 and cannot 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-:





Manifest uploaded -correct manifest-:

U	Upload Spreadsheet								
	Upload Images Upload Permits								
	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.								
Sa	mple Metadata	Sample Images Samp	le Permits		Preview	of the	manifest		
	Show 10	✓ entries					5	Search:	
	SERIES ↓	RACK_OR_PLATE_ID	TUBE_OR_WELL_ID 1	SPECIMEN_ID	ORDER_OR_GROUP 1	FAMILY J1	GENUS 11	TAXON_ID ↓↑	SCIENTIFIC_NAME
	1	nuli	FF06763795	SAN0000100	HELOTIALES	HELOTIACEAE	HYMENOSCYPHUS	746836	HYMENOSCYPHUS FRAXINEUS



Upload images:

Upload Spreadsheet									
Upload Images Upload Permits									
Missing TAXON_IL_0.2.2 - TAXON Synonym warning: Chalara axinea	Missing TAXON_ID_02_2 - TAXON_ID for Chalara Fraxinea will be filled with 746836 Synonym warning: Chalara: exinea at row 2 is a synonym of Hymenoscyphus fraxineus. COPO will substitute the official scientific name.								
Sample Metadata Sample Images	Sample Metadata Sample Images Sample File names of any associated images								
Show 10 • entries with the extension ".ipg" or ".png"									
SERIES	↓† TUBE_OR_WELL_ID ↓†	SPECIMEN_ID 1	ORDER_OR_GROUP	FAMILY J1	GENUS ↓↑	TAXON_ID ↓↑	SCIENTIFIC_NAME		
1 null	FF06763795	SAN0000100	HELOTIALES	HELOTIACEAE	HYMENOSCYPHUS	746836	HYMENOSCYPHUS FRAXINEUS		



Uploaded images:

Upload Spreadsheet				×
Upload Images Upload Permits				
Missing TAXON_ID: row 2 - TAXON_ID for Chalara Fraxing Synonym warning: Chalara Fraxinea at row 2 is a synonym	ea will be filled with 746836 of Hymenoscyphus fraxineus . COPO will substitute the official scientific	name.		
Sample Metadata Sample Images Sample Permits				
Show 10 • entries			Search:	
Specimen ID	Image File	Image		11
SAN0000100	SAN0000100-1.png	COPO		
Showing 1 to 1 of 1 entries			Previous 1 Next	



Upload permits:

Upload Spreadsheet		X
Upload Images Upload Permits		
Missing TAXON_ID: row 2 - TAXON_ID for Chalara Fraxinea with 5 fled with 7 Synonym warning: Chalara Fraxiena at row 2 is a synonym of Hymenost, flus f	746836 fraxineus. COPO will substitute the official scientific name.	
Sample Metadata Sample Images Sample Permits	File names (including the extension) of any associated permits must be in the format identified in the "Permit type"_FILENAME	
	column in the spreadsheet	Close

IMPORTANT - If you have more than one permit file to upload, they must be uploaded at the same time i.e. after you have clicked the "Upload Permits" button, navigate to the directory where the permits are stored and **CTRL** + **click** all of the permits so that all the permits are highlighted and uploaded at the same time.

All permit files have to be selected/opened from the directory and uploaded together not one after the other.



Uploaded permits:

Upload Spreadsheet		×
Upload Images Upload Permits Finish		
Missing TAXON_ID: row 2 - TAXON_ID for Chalara Fraxinea will Synonym warning: Chalara Fraxiena at row 2 is a synonym of Hyn	be filled with 746836 nenoscyphus fraxineus. COPO will substitute the official scientific name.	
Sample Metadata Sample Images Sample Permits		
Show 10 v entries	Search:	
Specimen ID	Permit Files	Notes 🔶
ERGA_DS_382X_01_01	ERGA_DS_382X_01_01_SAMPLING_PERMITS.pdf	
ERGA_TD_5269_01	ERGA_TD_5269_01_SAMPLING_PERMITS.pdf	
Showing 1 to 2 of 2 entries	Previous	1 Next
		Close



f If there are any errors with the permit upload process, they will be displayed in the Notes table column of the Sample Permits tab



Create the samples in COPO by clicking "Finish":





Uploaded samples:

‡ СОРО												۴	8	0	\$ tester1 +
Profile: Profile1						÷ 1		-	Z		Info				
Samples 😲 🔳	🛓 🛃														
Select all Select filtered	Clear selection Expo	ort CSV	nple manifest 🕹 Download permits 🛛 👁 Vie	ew images											
			11.77 B.		Sear	ch Sample	S								
Showing 1 to 25 of 417 recor	ds Click 📀 beside a re	cord to view extra details													
Tube or Well Identifier	Specimen Identifier	Purpose of Specimen 🗧	Sample Coordinator (ERGA Ambassador)	Sample Coordinator (ERGA Ambassador) Affiliation	Sam	nple Coordi	nator (E	RGA /	Ambass	ador) OR					
• FF16867824	ERGA_FOS_9317_002	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	38-570	5							
• FF16867825	ERGA_FOS_9317_003	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	38-570	5							
G FF16867826	ERGA_FOS_9317_004	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	88-570	5							
G FF16867827	ERGA_FOS_9317_005	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	38-570	6							
G FF16867828	ERGA_FOS_9317_006	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	88-570	5							
G FF16867829	ERGA_FOS_9317_007	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	38-570	5							
• FF16867830	ERGA_FOS_9317_008	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	88-570	5							
• FF16867831	ERGA_FOS_9317_009	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	88-570	5							
• FF16867832	ERGA_FOS_9317_010	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	38-570	5							
• FF16867833	ERGA_FOS_9317_011	REFERENCE_GENOME	JANE DOE	EARLHAM_INSTITUTE	000	00-0001-968	88-570	5							
show 25 v records															
				Previous 1 2 3 4 5 17 N	lext										



Sample Managers:

• At this point, the 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 accepted by a sample manager, they will be submitted to European Nucleotide Archive (ENA).

Accessions can be inspected by:

- Scrolling right in the previous view
- Clicking the 📥 button on the **Samples** web page to access the

Accessions web page for the desired profile

- Accessions

- Clicking the

component button associated with

the desired profile on the **Work Profiles** web page to access the

Accessions web page



Accepted samples:

Profile: Profile1 Samples						#	й - Ш	ľ	Z	•	Info	•	8	0	✿ tester1 -
Select all Select f	filtered Clear selection Export CSV	& Download sample r	manifest Download permits View ima	ges		Sear	ch Samples								
Showing 1 to 25 of 43	17 records Click 💿 beside a record to	view extra details													
Other Information	Associated TOL (Tree of Life) Project	Biosample Accession	Manifest Identifier	Manifest Version	Public Name	SRA Accession	Status	Submi	ission Ac	cession					
		SAMEA130812875	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari27	ERS27722072	accepted	ERA27	7745811						
		SAMEA130812877	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari28	ERS27722074	accepted	ERA27	7745813						
		SAMEA130812879	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari29	ERS27722076	accepted	ERA27	7745815						
		SAMEA130812881	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari30	ERS27722078	accepted	ERA27	7745817						
		SAMEA130812883	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari31	ERS27722080	accepted	ERA27	7745819						
		SAMEA130812885	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari32	ERS27722082	accepted	ERA27	7745821						
		SAMEA130812887	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari33	ERS27722084	accepted	ERA27	7745823						
		SAMEA130812889	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari34	ERS27722086	accepted	ERA27	7745825						
		SAMEA130812891	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari35	ERS27722088	accepted	ERA27	7745828						
		SAMEA130812982	6d7f4a0b-989a-429b-aa40-a61bacfaad02	2.5	wuAreMari36	ERS27722179	accepted	ERA27	7745838						
show 25 v rec	ords		Prev	ious 1 2 3	4 5	17 Next									



Updating samples:

• To update samples, reupload a manifest with the amended changes. The new value will be detected and updated automatically once the resubmission is successfully completed.

More information regarding sample updates can be found <u>here</u>.

 Not all field values of existing samples can be updated by resubmitting a manifest with the amendments.

The fields that can be updated are listed here.





If you encounter any errors or unexpected behaviour, please email <u>ei.copo@earlham.ac.uk</u> or open a GitHub issue in the <u>COPO repository</u>.

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

For detailed information regarding manifest submission and COPO, please see our <u>documentation</u>.







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Decoding Living Systems