

Milestone MS7 Digital training knowledge database and network of skilled trainers on taxonomy

Author:

Teddy Bruy (MNHN)

Contributors:

Magalie Castelin (MNHN), Athanasia Margetousaki (NHMC-UOC), Katerina Voreadou (NHMC-UOC), Iasmi Stathi (NHMC-UOC), Thomas Pape (NHMD)

TETTRIs

Transforming European Taxonomy through Training, Research, and Innovations

TETTRIs related product

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Author(s)	Teddy Bruy
Affiliation	MNHN
Contributors	Magalie Castelin (MNHN), Athanasia Margetousaki (NHMC-UOC), Iasmi Stathi (NHMC-UOC), Katerina Voreadou (NHMC-UOC), Thomas Pape (NHMD)
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Abstract: This document reflects the ongoing situation related to the presence of the network of skilled trainers and the training resources in taxonomy inventories on the CETAF-DEST infrastructure.

Keywords:

Skilled trainers, training resources, training knowledge database, repository, questionnaire, online survey, face-to-face interviews, CETAF-DEST infrastructure

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1. Introduction

This document presents the process of (1) Identifying training materials and digital tools used in the field of taxonomy, and (2) Assembling the data needed for reinforcing the network of skilled trainers in taxonomy. To achieve these two goals, we elaborated two questionnaires. The first one was designed to get a thorough inventory of training capacity at the scale of one institution, while the second one was designed to get a broader community within Europe and beyond.

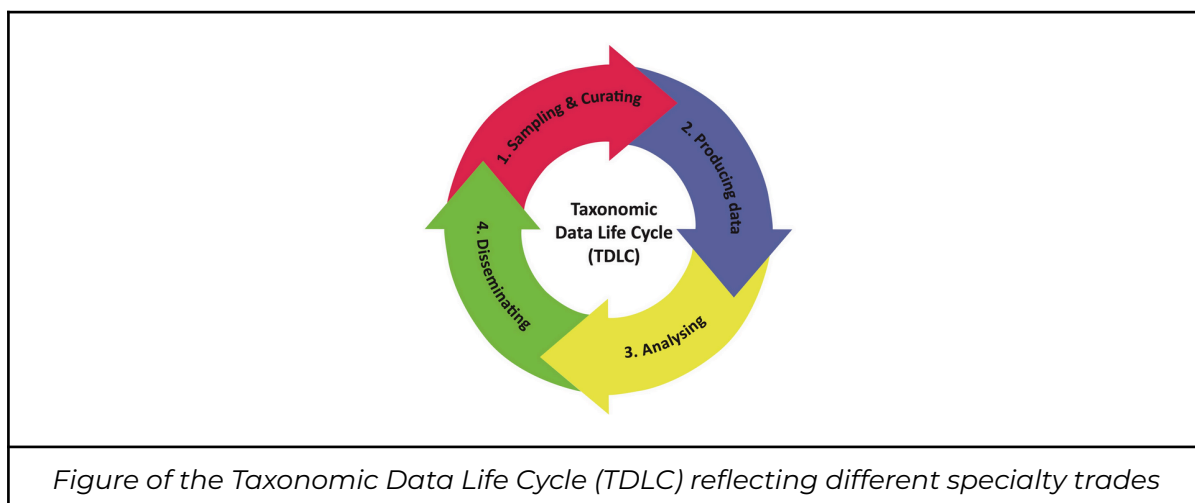
For the first questionnaire, the MNHN Paris Institution was selected. With 2350 members including 600 researchers, MNHN Paris is one of the largest institutions within TETTRIs community. This selected audience enabled through a detailed questionnaire to target a large array of taxa, skills and methods applied to taxonomy. To deepen the quantity and quality of collected answers, the questionnaire was performed through face-to-face interviews. This first experience enabled improving and refining the elaboration of the second questionnaire dedicated to virtual dissemination at the international scale.

The compilation of data collected from these surveys enabled gathering informative data about: the target taxa and the level of the taxonomic trainers; the nature of the training provided; and the tools used for training matters. Collected data were gathered in a contingency table, homogenized and deposited on the DEST-CETAF digital platform. The data collected are now publicly available on the DEST-CETAF infrastructure.

2. Questionnaires

The main objectives of the elaborated questionnaires were to gather data from a large taxonomic community, being able to get a uniform set of answers and collect both quantitative and qualitative data. In addition, the questionnaires enabled gathering information about training material and human resources for teaching taxonomy at the European scale and beyond in a short amount of time.

Because different taxonomic skills and competences can be required along the process of collecting, identifying, and describing species, the questionnaires were thought so that the diversity of skills within the field of taxonomy could be addressed. To that purpose, questionnaires were designed based on the Taxonomic Data Life Cycle (TDLC) (see Fig. below). This strategy enabled us to maximize taxonomy skills and resources inventories.



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In addition, to meet the needs of WP4.1, questionnaires were divided into four parts:

- How, when, and where did you learn taxonomy? (e.g. institution, academic background)
- What data do you use and produce when working in taxonomy? (e.g. taxon or taxa of expertise, nature of the data handled)
- How do you teach taxonomy? (e.g. participation in courses, conferences, field trips)
- Perspectives and discussion (e.g. list of impediments to the development of training activities in taxonomy)

To assemble the data needed for building the network of skilled trainers on taxonomy, we had to collect personal data such as the full name, business email address, professional skills, affiliated office or work status, etc. To comply with GDPR (General Data Protection Regulation) requirements, we collaborated with both TETTRIS' ethics advisors and MNHN's DPO (Data Protection Officer) to establish the privacy policy of the surveys. This document is accessible to the respondents to the questionnaires and authorizes us to collect the sensitive data required to complete our task.

2.1. Face-to-face interviews

A French version of the questionnaire was first established and spread out through the MNHN Paris by conducting face-to-face interviews. This questionnaire was intended for all users of and contributors to the field of taxonomy and related metadata, thus including professional and non-professional taxonomists. This expanded audience allowed acquiring taxonomy teaching resources from a large array of people, including curators, technicians, engineers, and stakeholders.

The duration of interviews ranged between 30 and 60 minutes, and provided an opportunity to tackle the diversity and complexity of the taxonomy and its teaching. Interviews started on June 15, 2023 (M7) and by November 22, 2023 (M12), 39 interviews had been carried out, involving a wide range of status (e.g. researcher, technician, volunteer) and taxon of interest (e.g. Ichthyologist, herpetologist, botanist, paleontologist, microbiologist). Interviews will continue to be carried out after the completion of the T4.1 to keep on feeding the DEST-CETAF repository.

Partie 1: A propos de vous et votre formation initiale

Nom :
Prénom :
Age :
Statut (Enseignant-chercheur/chercheur, technicien, ingénieur, contractuel/doctorant/post doc, bénévole):
Position actuelle :
Département ou direction :
Unité (ex.: CR2P, ISYEB) :
Institution de rattachement (ex.: CNRS, EPHE) :
Date d'entrée au MNHN :

Quel est votre plus haut degré d'étude ? (Niveaux européens entre parenthèses)

☐ Aucun diplôme
☐ Baccalauréat (Level 4)
☐ BTS, DUT, DEUG, DEUST (Level 5)

Screenshot of the first part of the face-to-face questionnaire

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2.2. Online survey

The second questionnaire was spread out to the international community using the [EUSurvey platform](#), which enables the collected data to be safely hosted by the European Commission's Department for digital services (DG DIGIT). This questionnaire targets a reduced spectrum of taxonomists that we have defined as the trainers in taxonomy who are also taxonomists.

To maximize response rates, the online questionnaire is a reduced version of the French one used for face-to-face interviews. It provides all the information needed to feed the inventories developed during this task, while taking only 10 to 20 minutes to complete. It has been online since October 27, 2023 (M11).

Questionnaire TETTRIs: resources and trainers in taxonomy

Fields marked with * are mandatory.

Disclaimer
The European Commission is not responsible for the content of questionnaires created using the EUSurvey service - it remains the sole responsibility of the form creator and manager. The use of EUSurvey service does not imply a recommendation or endorsement, by the European Commission, of the views expressed within them.

Whom it is addressed to?
For taxonomists who are also trainers in taxonomy.

Why do we ask you to complete this survey?
The European project TETTRIs (Transforming European Taxonomy through Training, Research and Innovations) aims at sustaining taxonomic research capacity by strengthening training and networking activities. For that purpose, we need your help, and this quick survey will give us important information on how the taxonomic workforce is involved in teaching and training activities.

Questionnaire's objectives:
I. Identify training materials and digital tools used in the field of taxonomy.
II. Assembling the data needed for building the network of skilled trainers on taxonomy.
III. Deposit and maintain a repository of resources and trainers on the CETAF-DEST (<https://cetaf.org/dest/>)

More at: <https://tettris.eu/>

Estimate duration: Approximately 10 to 20 minutes

Views
Standard [Accessibility Mode](#)

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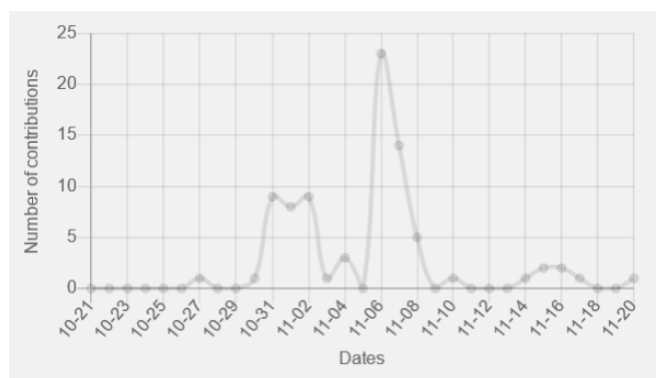
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Screenshot of the online questionnaire on the EUSurvey platform

The questionnaire was distributed at several levels:

- **October 27, 2023:** TETTRIs Teamwork for distribution throughout the TETTRIs community.
- **October 27, 2023:** WP8 members (Michael Magee & Alessandro Marchi) for spreading through TETTRIs' social networks.
- **October 30, 2023:** CETAF-DEST trainers' network.
- **October 30, 2023:** One referent per TETTRIs partner institutions has been contacted for dissemination within their establishment.



Distribution of the contributions to the EUSurvey questionnaire over time

By November 22, 2023, we registered 82 answers. The questionnaire is still ongoing until the end of the month in order to maximize the number of answers. We are planning a second iteration in 2024 with the aim of improving the completion of the data deposited on the CETAF-DEST infrastructure.

3. Data collected so far: list of taxonomic resources

3.1. List of trainers in taxonomy

Combining these two questionnaires, 121 answers including 103 taxonomy trainers (thus excluding non-professional taxonomists) from 15 countries were obtained. These trainers are characterized by their affiliated institution and their taxon of expertise. The private policy aforementioned authorizes us to publish these professional data. The list is now available under the "trainers" tab of the CETAF infrastructure: <https://cetaf.org/dest/trainers/>

These data will notably be used to spread the questionnaire developed in the context of the T5.2 aiming to inventory taxonomic training and roadmap for taxonomic facility contribution to university curricula.

dest@cetaf.org

DEST CETAF

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Course providers

Taxonomic Trainers

TETTRIs Grant Agreement n 101081903

This List of trainers has been produced under TETTRIs WP 4 "Develop external taxonomic research capacity and digital networking for species identification" – [Get the list!](#)

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The list of trainers in taxonomic is deposited on the CETAF-DEST infrastructure

3.2. List of taxonomic training resources

From December 2022 (M1) to May 2023 (M6) the WP4 team jointly defined what could be considered a resource for taxonomy training. It was decided to include identification tools (e.g. mobile applications), taxonomic data compilers (e.g. taxonomic databases) and data generators (e.g. species delimitation platforms). We considered that, although not all of these tools are directly useful for learning taxonomy, they can be used as teaching support tools. These resources are categorized according to :

- Their nature: mobile application, taxonomic database, taxonomic tool etc.
- The targeted audience: large public, amateurs and researchers, or researchers
- The taxon: generalist, botany, zoology etc.

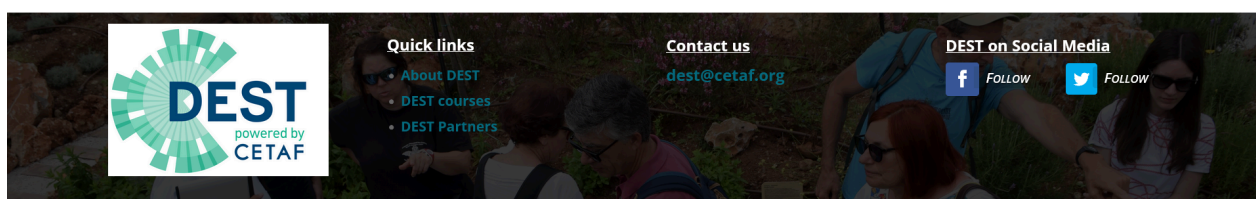
These data were collected through responses to questionnaires, internet searches and discussions with colleagues. In total, we gathered 89 training tools. The list is now available under the "courses" tab of the CETAF infrastructure <https://cetaf.org/dest/courses/>

These data will be employed within the framework of the topic 6 of the 3PP, under the umbrella of WP4, which aims to the development of training programs for taxonomic research.

List of Taxonomic Resources

TETTRIs Grant Agreement n 101081903

This list of Taxonomic Resources has been produced under WP 4 "Develop external taxonomic research capacity and digital networking for species identification" – Get your Lists of Taxonomic Resources DEST here!



The list of taxonomic resources is deposited on the CETAF-DEST infrastructure

APPENDIX 1 – Reference to related documents

ID	Reference or Related Document	Source or Link/Location
1	<i>face-to-face questionnaire</i>	LINK
2	<i>EUSurvey questionnaire</i>	LINK
3	<i>Private policy face-to-face interviews</i>	LINK
4	<i>Private policy online survey</i>	LINK
5	<i>face-to-face interviews answers</i>	LINK
6	<i>Online survey answers</i>	LINK