**STRATEGY** 2015-2025 **STRATEGY & STRATEGIC DEVELOPMENT PLAN** CETAF
CONSORTIUM OF EUROPEAN
TAXONOMIC FACILITIES **Exploring and Documenting Diversity in Nature** 

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The Consortium of European Taxonomic Facilities (CETAF) was founded in 1996 by 10 of the leading European natural science institutions. It currently consists of 33 members representing 57 natural history museums, biodiversity science centres and botanical gardens from 20 countries across Europe.

CETAF institutions manage over 1.5 billion natural history specimens and undertake research in a broad range of natural history sciences. The members of CETAF ensure the seamless stewardship of our collective knowledge on the origin and evolution of our planet and its life forms. CETAF works towards common goals for our natural history collections, shares research objectives in taxonomy and systematics, joins forces towards a shared science policy as well as collectively focusing on outreach, education and public engagement activities. The consortium guarantees that the essential skills needed to identify, describe, classify and protect the natural world remain at the service of science and society for future generations.

#### What is a Taxonomic Facility?

Any institution, such as natural history museums, natural science centres and botanical gardens, that manages collections of the world's biodiversity (natural science collections) for research purposes. The distributed networks of collections, scientists and expertise within CETAF institutions support the objectives of numerous user communities, including ecologists, conservationists, earth scientists and biologists as well as politicians and policy makers.

#### What is taxonomy?

Taxonomy is the science that deals with the discovery, naming and classifying of all living things, past and present. CETAF views taxonomy in a broad sense ranging from the fundamental recognition and description of species (alpha taxonomy) to establishing the relationships among living organisms in an evolutionary framework.

#### **CETAF SYNERGIES**

#### WHERE THE WHOLE IS MORE THAN THE SUM OF ITS PARTS

CETAF is a unique platform for natural history collections and natural history sciences within and across Europe. Its distributed natural history collection-based research infrastructure represents an unparalleled resource that is essential for answering fundamental research questions and understanding the biological and geological diversity on Earth. Moreover, natural science institutions have a unique role in society as they document biodiversity, and study life on Earth, the processes that shaped it, and the planet on which it evolved, thus contributing to the big research challenges of our time.

CETAF member institutions house about half of the world's natural history specimens and these cover around 80% of the known biological and geological diversity on Earth. These specimens tell the story of more than 400 years of Europe's scientific and cultural history. Our natural history collections are unique and irreproducible. The huge investment in the acquisition, enrichment and study of collections contributes to the tremendous value of these collections for current and future generations.

The information on biological and geological specimens (including fossils) that is interpreted, synthesised and disseminated by natural history scientists is the foundation for numerous other scientific disciplines. The research conducted by scientists from CETAF institutions also unlocks the diverse data that is essential in tackling societal challenges, such as human health issues, the management of mineral resources, the control of invasive species or pests, ensuring food security and responding to climate change issues. Natural history collections provide base-line data against which modern observations can be compared as each natural history specimen provides a physical record of a species or ecosystem at a particular point in time and/or in a particular location. Needless to say that in this molecular era our natural history collections are also a rich source of information that is contained within the DNA of the specimens themselves which can be used to explore changes in populations over time, or to reconstruct the relationships between organisms. Collections can also be used to assess the effects of pollutants (such as pesticides or heavy metals) on organisms and monitor changes in environmental quality to respond to conservation issues. Paleontological collections include organisms that have been fossilised and these permit the study of evolution over immense spans of time.





Other constituents of the specimens themselves can be used to explore changes in geological structures over time or to reconstruct the relationships between geological objects which influence life on Earth. Thanks to recent and future technological advances the collections will serve as a tool to respond to current and future questions in ways that have not yet been anticipated.

#### Information on biological specimens:

Species identifications, distribution and occurrences, morphological and molecular characters, natural variability, ecological, ethological, phenological, chronological, chemical composition, bioaccumulation data



#### **Information from geological specimens:**

Mineralogical, paleontological, petrological, geochemical, chronological data

CETAF has played a leading role in the promotion of the accessibility to both the collections and the data held within our natural history collections, as interpreted by researchers from across the globe. CETAF member institutions have developed, managed or contributed to many successful EU-funded collaborative projects or initiatives, such as BioCASE, GeoCASE, SYNTHESYS, EDIT, ViBRANT, EU-BON, LifeWatch. CETAF also integrates enterprises such as BHL-Europe, DEST and the EJT. Last but not least, CETAF contributes to major global initiatives such as GBIF, Species 2000 & ITIS CoL, SciColl, SPNCH, TDWG and IPBES.

For details on all acronyms, please see page 19.

#### **CETAF Vision & Mission**

CETAF is the leading body in taxonomy, systematics and natural history collections world-wide advocating the value of taxonomy to science and society.

Our mission: Exploring and Documenting Diversity in Nature





CETAF is at the forefront of key natural science and natural history collections issues in Europe. The activities of its various working bodies (governing board, executive committee, secretariat, working commissions, special interest groups, sub-committees) ensure that it fulfils its objectives, serves its members and contributes to European science, education and public engagement efforts.

#### IN SUMMARY:

- CETAF is the largest **taxonomy and systematics network** in Europe: it unites over 5000 researchers from 57 institutions in 20 European countries. The consortium connects Europe's scientific experts who provide authoritative information on biological and geological specimens, and on the origin and evolution and understanding of life on Earth.
- CETAF is the largest **natural history science communication platform** in Europe: it acts as a hub for information exchange between its members. The consortium focuses on outreach on the importance of natural history collections and natural history collection-based research.
- CETAF is the largest **natural history collection infrastructure** in Europe: its members collaborate on collections management and access policies as well as international legislation and regulations, specimen digitisation, data-standards, data-storage, data-sharing and database interoperability issues.
- CETAF is the largest **training and education facility** in Europe for taxonomy and systematics: its members act as service providers and educators in delivering academic and non-academic courses, training programmes, capacity building and school-based educational activities.

#### **Core CETAF values**

Trans-national commitment to promoting diversity in nature – cooperation and transparency – science in society for the understanding and sustainable use of biodiversity – resilience – equality – responsible research





The four integral properties of the consortium and the strength of its collaborative network ensure that CETAF is the most significant European **natural history collection research infrastructure.** 

The synergies created between its member institutions (their directors, their heads of science, their collections managers, their informaticians, and their scientists), demonstrate that the benefits and added-value of knowledge and resource sharing, cooperation, and collaboration are greater than the sum of the institutions themselves.

## ADVANTAGES OF THE COLLABORATIVE APPROACH OF CETAF

- Critical mass of European natural science institutions, natural history collections and associated scientists formed by the growing consortium
- Europe-wide coverage, incorporating the cultural, linguistic and societal assets of member institutions, their collections and their scientists
- Collective influence and profiling leading to the ability to shape the future within Europe and facilitate collaboration in global natural science initiatives
- Sharing of resources, skills, expertise and knowledge within the network leading to collective cost savings
- Collaborative provision of services to science and society via the dissemination of knowledge on natural sciences
- Ability to collectively and collaboratively benefit from opportunities provided by funding bodies or via technological and digital advances
- Information exchange network with the ability to outreach to a large and diverse public
- Internal communication network to share news, events, actions and information between members
- Membership services and the fostering of cooperative relationships between members that lead to the development of collaborative initiatives

The equitable sharing of skills, resources, knowledge and information between CETAF member institutions within the distributed infrastructure has positive impacts on society within and across Europe, and beyond, as efforts can be coordinated, resources pooled and results disseminated efficiently.







#### **CETAF Objectives**



FIGURES 1-2. Thinophilus dongae sp. nov. habitus. 1, male; 2, female.

1

Promote scientific research and access to European natural history collections



Enable the formation of partnerships to exploit funding opportunities



To be a voice for taxonomy and systematic biology in Europe



#### **CETAF AND ITS STRATEGY 2015-2025**

CETAF, after becoming a legal body in 2010, refined its objectives, vision and mission for the future of natural history collections, natural sciences and taxonomy within and across Europe. By identifying the challenges faced by natural history science institutions as well as opportunities that may open up in the future, CETAF has developed its Strategy and Strategic Development Plan 2015-2025 that encompasses six key focus areas.



#### CETAF'S STRATEGIC KEY FOCUS AREAS

Research in systematics & taxonomy: integrating new tools and innovations

Science policy and key performance indexes

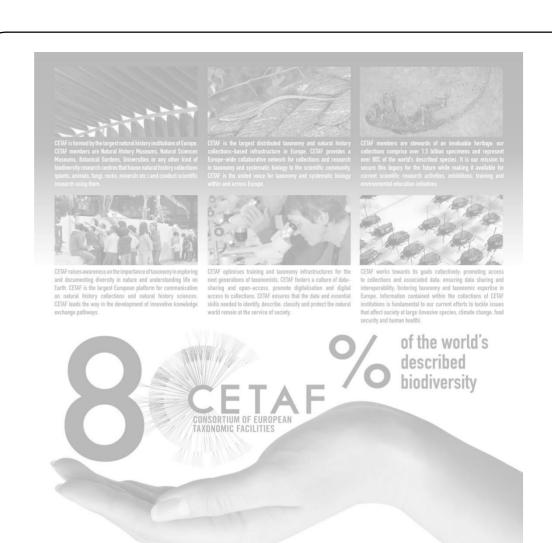
Natural history collection management and collection access

Biodiversity informatics and information technologies

Taxonomy training and e-learning

Communication, public outreach and societal relevance

For each focus areas, the major components have been identified and the activities to be undertaken within each component have been outlined to create the CETAF Strategic Development Plan for the next 10 years.



# CETAF STRATEGIC DEVELOPMENT PLAN 2015-2025

To ensure that CETAF and its members fulfil the actions and goals outlined within the following strategy, 25 targets have been set.

# FOCUS AREA # 1 - Research in systematics & taxonomy: integrating new tools and innovations

## **ACTIONS**

## **TARGETS**

#### Documenting the natural world

- i. Collating information on taxonomic activities
- **ii.** Undertaking gap analyses of taxonomic knowledge and expertise
- **iii.** Collating taxonomic expertise and know-how from the past
- **iv.** Developing a CETAF-wide taxonomy and species discovery initiative
- v. Ensuring the digitisation of natural history science literature (BHL)

## Contributing to the global taxonomic data backbone

- i. Contributing to the taxonomic backbone of the CoL and sourced nomenclatural databases
- ii. Developing innovative identification tools
- **iii.** Fostering taxonomy as the tool that provides the language for science (biology, ecology,...)

## Fostering taxonomy as a hypothesis-based science within an evolutionary framework

- **i.** Creating a CETAF wide scientific visitor programme
- **ii.** Providing evaluation criteria and guidelines on the recognition of taxonomists and taxonomic works
- iii. Linking taxonomy to the "-omics" sciences

- 30,000 new species described and 20,000 new impact factor articles, books and monographs published
- CETAF is a partner in two European funded projects and two multidisciplinary projects are launched
- 90% of the journals of our member institutions are digitised and digitally available
- CETAF undertakes a taxonomic expertise gap-analyses and initiates a collaborative taxonomy-based initiative

# FOCUS AREA # 2 - Science policy and key performance indexes

## **ACTIONS**

## **TARGETS**

#### Influencing science policy in Europe

- **i.** Promoting the understanding of the legal framework for collections management and mobility
- ${f ii.}$  Taking positions on taxonomic, nomenclatural and biodiversity issues
- **iii.** Implementing the European research agenda for taxonomy, systematics and collections, including societal relevance questions
- iv. Integrating the European research agenda into the European Research Area
- v. Attending events, meetings and consultations relevant for natural history sciences organised by the European Commission

## Advising on and representing taxonomy, systematics, collections and related legislation or regulations issues

- i. Implementing the CETAF ABS code of conduct and best practice guidelines and responding to the Nagoya protocol
- **ii.** Representing CETAF and its interests at major taxonomic events and in key initiatives
- iii. Actively engaging in outreach and profile-raising activities
- iv. Implementing data citation and source recognition policies

#### Building on the expertise in CETAF member institutions

- i. Identifying expertise and advisory potential in specific fields
- **ii.** Utilising the expertise for consultancy purposes and for addressing trans-disciplinary issues

## Strengthening the position and recognition of taxonomists and taxonomy

- i. Providing evaluation criteria for taxonomists and taxonomic works
- **ii.** Proposing guidelines on the citation of taxonomic data, taxonomists and taxonomic works
- iii. Improving scientific career attractiveness

## • CETAF position papers and statements published regularly

- CETAF outcomes and positions endorsed by CETAF members
- CETAF has a consultancy role within European decision making mechanisms
- CETAF participates in the development of the European Research Agenda concerning natural history sciences
- CETAF actively supports natural history scientists via its recommendations and guidelines

# FOCUS AREA # 3 - Natural history collection management and access to collections

## **ACTIONS**

## **TARGETS**

#### Creating common collection management and access policies

- i. Creating and managing the European repository for collections
- **ii.** Providing access to common collections management policies and best practice guidelines
- iii. Continuing to develop common policies and risk management strategies
- iv. Adopting and implementing best practice and common collections policies
- **v.** Undertaking regular assessment using the collections self-assessment tool developed under the SYNTHESYS initiative

#### Promoting the physical or digital accessibility to collections

- i. Developing a common portal for European natural history collections
- ii. Supporting and planning collections and staff mobility
- iii. Producing a regular collective survey of CETAF member collections
- iv. Contributing to global natural history collection-based initiatives (GBIF)
- v. Collaborating with major initiatives on specimen data sharing, data annotation and data-flow

#### Digitising and databasing collections

- i. Exploring methods and best practices in data storage and data curation
- ii. Supporting the development of digitisation policies, techniques and technology
- iii. Exploring the development of storage and digitisation infrastructures

#### **Enhancing natural history collections**

- **i.** CETAF is the platform for information on collecting activities, gap analysis and surveys inventories
- **ii.** Supporting or coordinating collaborative collecting, surveys and fieldwork initiatives

- 10% of our 1.5 billion natural history collections are databased, digitised and digitally available and scientific collection visits increase by 10%
- CETAF best practice and common collections policies are implemented in the majority of member institutions
- All CETAF institutions have self-assessed collections
- Five collaborative collecting, surveys or fieldwork initiatives are undertaken

# FOCUS AREA # 4 - Biodiversity informatics and information technologies

## **ACTIONS**

#### Moving taxonomy into the digital world

- **i.** Supporting shared database infrastructures and open access policies
- ii. Making taxonomy data digitally interpretable and retrievable
- iii. Increasing the use of collection data

## Ensuring retrievable, connected and interoperable biodiversity data

- **i.** Using commonly agreed 'stable identifiers' for the natural history collections
- ii. Implementing recognised collection metadata descriptions
- **iii.** Linking European, national and regional collections of specimens and data (checklists or databases)

## Disseminating data and data processing standards, thesauri and controlled vocabularies

- **i.** Continuing the development of compatible data standards
- ii. Adopting and implementing guidelines on standards
- **iii.** Collating and distributing interoperable standards for biodiversity data and natural history specimen databasing
- iv. Establishing and promoting specimen data and database citation standards (source recognition)

## Safeguarding long-term data storage, curation and longevity

- **i.** Organising the maintenance of a supported system for data storage
- ii. Adopting processes for orphan databases or digital information

## **TARGETS**

- CETAF interoperable standards for biodiversity data and natural history specimen databasing are adopted in 80% of CETAF institutions
- CETAF standard identifiers are adopted in 80% of CETAF institutions
- Digital data curation guidelines are produced and adopted
- Digital storage capacity infrastructure is established within the consortium

## FOCUS AREA # 5 - Taxonomy training and e-learning

## **ACTIONS**

## **TARGETS**

## Developing and strengthening training and education in taxonomy, systematics and collections management

- i. Promoting taxonomy and collection-based training initiatives
- ii. Ensuring the capacity to deliver training courses or programmes
- iii. Developing training and education certification processes

# Sharing the organisation and coordination of education and training partnerships for European biodiversity-based initiatives, projects and actions

- **i.** Supporting the development of education, training and elearning plans and programmes
- **ii.** Encouraging the provision of courses and training activities under the DEST initiative

# • Collaborative training capacity and infrastructure established, incorporating at least 50% of the CETAF members

- Training and e-learning offers by CETAF members increased by 50%
- Two collaborative training and elearning initiatives are undertaken involving Higher Education Institutions
- Taxonomy training and e-learning programme for Europe established

#### Promoting innovative ways of learning

- i. Fostering the development of e-learning tools
- ii. Organising workshops for taxonomists on integrative taxonomy

# FOCUS AREA # 6 - Communication, outreach and societal relevance

## **ACTIONS**

## **TARGETS**

## Demonstrating the value of natural history collections and collection-based research

- i. Promoting and sharing scientific knowledge via exhibitions, events, visits science cafes, information days, and others
- **ii.** Creating collective and collaborative exhibitions on taxonomy and collections

## Linking taxonomy to society: raising awareness of taxonomy and the taxonomic community

- i. Organising conferences, symposia and workshops
- **ii.** Developing a programme of CETAF prizes and awards for taxonomists and other outstanding efforts in raising awareness on biodiversity in society
- **iii.** Communicating on taxonomy, collections and associated research

#### **Encouraging citizen-science initiatives**

- i. Supporting and developing citizen science and crowd sourcing initiatives
- **ii.** Actively searching for alliances with existing initiatives in citizen's engagement in science

- Five communications on natural history collections and associated research are published
- CETAF organises four symposia on natural science issues
- Two collaborative exhibitions on natural science research are produced
- Two citizen science or crowdsourcing initiatives are undertaken

#### TARGETS OVERVIEW

#### Research in systematics & taxonomy, integrating new tools and innovations

- 30,000 new species described and 20,000 new impact factor articles, books and monographs published
- •CETAF is a partner in two European funded projects and two multidisciplinary projects are launched
- •90% of the journals of our member institutions are digitised and digitally available
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#### Science policy and key performance indexes

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- CETAF outcomes and positions are endorsed by all CETAF members
- CETAF has a consultancy role within European decision making mechanisms
- CETAF participates in the development of the European Research Agenda concerning natural history sciences
- •CETAF actively supports natural history scientists via its CETAF recommendations and guidelines

#### Natural history collection management and collection access

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- All CETAF institutions have self-assessed collections
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#### Biodiversity informatics and information technologies

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- CETAF standard identifiers are adopted in 80% of CETAF institutions
- Digital data curation guidelines are produced and adopted
- Digital storage capacity infrastructure is established within the consortium

#### Taxonomy training and e-learning

- •Collaborative training capacity and infrastructure established, incorporating at least 50% of the CETAF members
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#### Communication, outreach and societal relevance

- Five communications on natural history collections and associated research are published
- CETAF organizes four symposia on natural science issues
- Two collaborative exhibitions on natural science research are produced
- Two citizen science or crowd-sourcing initiatives are undertaken

## CETAF INTERNAL COHERENCE, COMMUNICATION AND OUTREACH

To ensure that CETAF undertakes strategic actions and conducts outreach for its members, and delivers services to its members, the consortium must also focus on its internal coherence, communication activities and outreach policies.

#### ✓ Advancing the CETAF strategy and strategic development plan

- i. Participating in CETAF bodies, initiatives, actions and meetings
- ii. Renewing commitment from members to the consortium and its objectives
- iii. Evaluating progress made towards achieving CETAF goals
- iv. Implementing processes, methodologies or tools to facilitate CETAF activities

## ✓ Facilitating and promoting information flow between CETAF members as well as between CETAF and third parties

- i. Promoting the awareness of CETAF and its activities within CETAF institutions
- ii. Disseminating information on CETAF activities punctually
- iii. Contributing to the information exchange flow to enhance connectivity within the CETAF community as well as with CETAF stakeholders
- iv. Creating stable channels of communication with stakeholder communities

#### ✓ Improving CETAF coverage and impact

- i. Developing and promoting the CETAF profile within Europe and beyond
- ii. Endorsing CETAF activities, decisions, documents and outcomes
- iii. Identifying and focusing CETAF activities on key issues concerning natural sciences
- iv. Ensuring the participation of CETAF in conferences, workshops, events or other activities in-line with CETAF's objectives









#### CETAF BODIES AND THEIR CURRENT FOCUS AREAS

Collections Policy Board

Common collection management and collections access policies

CETAF Digitisation Group

Discussion of specimen digitising, digital data storage and curation issues, Digi-wiki

CETAF Earth Sciences Group Discussion on better integrating Earth sciences into CETAF and its activities

European Initiatives Advisory Group

Reviewing of European funding initiatives

Information Science and Technology Commission

CETAF Stable Identifiers for biological collections, biodiversity data standards

Legislations and Regulations Group

Nagoya protocol implementation, CETAF Access and Benefit Sharing Code of conduct and Best practices guidelines

CETAF Research Assessment Group

CETAF guidelines for the assessment of taxonomists and taxonomic works

CETAF Strategy Group

CETAF strategy and strategic development plan

CETAF Taxonomy Training and elearning Group

Discussion of training and e-learning opportunities

## CETAF INITIATIVES, PARTNERSHIPS AND COLLABORATIONS



#### COLLABORATIONS

- **BGCI** –Botanic Gardens Conservation International
- **BIOSYST** Federation of European Biological Systematic Societies
- IPBES Intergovernmental Platform on Biodiversity and Ecosystems Services
- **RDA** Research Data Alliance
- TDWG- Biodiversity Information Standards
- GSF Global Science Forum

#### CETAF COLLABORATIONS

#### **PARTNERSHIPS**

- EU BON Building the European Biodiversity
  Observation Network
- **GBIF** Global Biodiversity Information Facility
- SciColl Scientific Collections International
- LIFEWATCH European e-Science infrastructure for biodiversity and ecosystem research
- CoL Catalogue of Life
- ECSA European Citizen Science Association

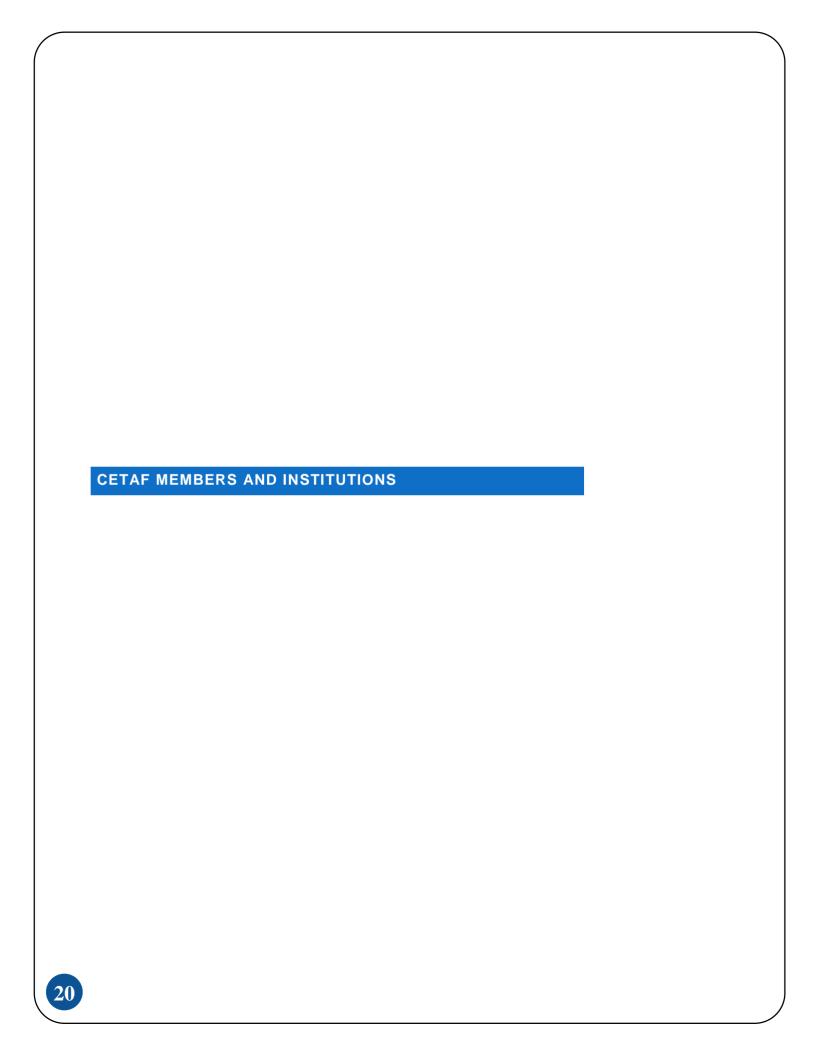
#### CETAF PARTNERSHIPS

#### CETAF INITIATIVES

## **CETAF**

#### <u>INITIATIVES</u>

- EJT European Journal of Taxonomy
- DEST Distributed European School of Taxonomy
- BHL-Europe Biodiversity Heritage Library for Europe
- SYNTHESYS Synthesis of Systematic Resources
- BioCASE Biological Collections Access
  Service for Europe
- OpenUP! Opening up the Natural History
  Heritage for Europeana



#### Austria

#### Biology Centre of Upper Austria State Museums 🖪

Biologiezentrum Der Oberösterreichischen Landesmuseen

Johann-Wilhelm-Klein-Straße 73 4040 - Linz - Dornach **AUSTRIA** 

#### Official CETAF representative:

Michael Malicky



naturhistorisches

■ I museum wien

#### Natural History Museum Vienna @

Naturhistorisches Museum Wien

Burgring 7 1010 - Wien **AUSTRIA** 

#### Official CETAF representative:

Ernst Vitek



#### Belgium

#### Botanic Garden Meise 🔯

Botanic Garden Meise

Domaine de Bouchout Nieuwelaan 38 1860 - Meise BELGIUM

#### Official CETAF representative:

Steven Dessein



#### **Botanic Garden** Meise

#### Royal Belgian Institute of Natural Sciences

Muséum des Sciences Naturelles

 Rue Vautier 29 - 1000 Bruxelles (Belgium) 1000 - Bruxelles BELGIUM

#### Official CETAF representative:

Patrick Grootaert:



#### Royal Museum for Central Africa 📴

Musée royal de l'Afrique centrale

Leuvensesteenweg 13 3080 - Tervuren BELGIUM

#### Official CETAF representative:

Guido Gryssels



#### Bulgaria

#### Bulgarian Academy of Sciences, Institute of Biodiversity and Ecosystem Research 12

Институт по биоразнообразие и екосистемни изследвания - Българска академия на науките

Gagarin Street 2 1113 - Sofia BULGARIA

Official CETAF representative:

Pavel Stoev

This institute is part of the CETAF member: Bulgarian Consortium



#### National Museum of Natural History of Sofia 🙆

Националният природонаучен музей

Tsar Osvoboditel Blvd 1 1000 - Sofia BULGARIA

Official CETAF representative:

Pavel Stoev

This institute is part of the CETAF member: Bulgarian Consortium



#### Czech Republic

#### National Museum, Prague - Natural History Museum 🙆

Národní Muzeum

 Václavské Náměstí 68 11579 - Praha 1 CZECH REPUBLIC

Official CETAF representative:

Jiři Kvaček



#### - Denmark

#### Natural History Museum of Denmark @

Statens Naturhistoriske Museum

Østervoldgade 5-7 1350 - Copenhagen DENMARK

Official CETAF representative:

Nikolaj Scharff



#### Estonia

#### Estonian University of Life Sciences 🖪

Eesti Maaülikool

Kreutzwaldi 1 51014 - Tartu

**ESTONIA** 

Official CETAF representative:

Urmas Köljalg

This institute is part of the CETAF member: Estonian Consortium: Estonian Academy of Sciences

#### Natural History Museum - University of Tartu @

Tartu Ülikooli loodusmuuseum

46 Vanemuise Str. 51014 - Tartu

**ESTONIA** 

Official CETAF representative:

This institute is part of the CETAF member: Estonian Consortium: Estonian Academy of Sciences

#### Tallin University of Technology

Tallinna Tehnikaülikool

Ehitajate tee 5
 19086 - Tallinn
 ESTONIA

Official CETAF representative:

This institute is part of the CETAF member: Estonian Consortium: Estonian Academy of Sciences

#### University of Tartu

Tartu Ülikool

Ülikooli 1850090 - Tartu ESTONIA

Official CETAF representative:

This institute is part of the CETAF member: Estonian Consortium: Estonian Academy of Sciences

#### + Finland

#### Finnish Museum of Natural History - LUOMUS @

Luonnontieteellinen keskusmuseo on Helsingin

 Pohjoinen Rautatiekatu 13 - University Of Helsinki 00014 - Helsinki FINLAND

Official CETAF representative:

Leif Schulman







INIVERSITY OF TARTU



#### France

#### French National Natural History Museum @

Muséum National d'Histoire Naturelle

57 Rue Cuvier 75005 - Paris FRANCE

Official CETAF representative:

Michel Guiraud



#### Germany

#### Bavarian Natural History Collections 📵

Staatliches Naturwissenschaftliche Sammlungen Bayerns

Menzinger Strasse 71 80638 - Munich **GERMANY** 

Official CETAF representative:

Gerhard Haszprunar



#### Berlin Natural History Museum

Museum Für Naturkunde

Invalidenstrasse 43 10115 - Berlin **GERMANY** 

Official CETAF representative:

☑ Johannes Vogel

## museum für naturkunde berlin

#### Botanic Garden and Botanical Museum Dahlem (B)

Botanischer Garten Und Botanisches Museum Dahlem- Berlin

Königin-Luise-Strasse 6-8 14191 - Berlin **GERMANY** 

Official CETAF representative:

☑ Thomas Borsch

# Botanisches Museum

#### Senckenberg Natural History Museum 🖪

Senckenberg, Forschungsinstitut und Naturmuseum

Senckenberganlage 25 60325 - Frankfurt **GERMANY** 

Official CETAF representative:

Volker Mosbrugger

## SENCKENBERG

world of biodiversity

#### Stuttgart State Museum of Natural History @

Staatliches Museum für Naturkunde Stuttgart

 Rosenstein 1
 70191 - Stuttgart GERMANY

Official CETAF representative:

Johanna Eder



#### Zoological Research Museum Alexander Koenig 🔞

Zoologisches Forschungsmuseum Alexander König

Adenauerallee 16053113 - BonnGERMANY

Official CETAF representative:

m Wolfgang Wägele



#### NORe. CeNaK - Centre of Natural History - University of Hamburg 📴

CeNak - Centrum für Naturkunde

Martin-Luther-King-Platz 3 20146 - Hamburg GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region

#### NORe. German Oceanographic Museum Straslund 📴

Deutsches Meeresmuseum - Stralsund

Katharinenberg 14/20 18439 - Stralsund GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region





#### NORe. Müritzeum 📴

Müritzeum

Zur Steinmole 1 17192 - Waren GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member; NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region

#### NORe. Museum of Nature and Environment Lübeck @

Museum für Natur und Umwelt

 Kulturstiftung Hansestadt Lübeck die Lübecker Museen, Musterbahn 8 23552 - Lübeck GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region

#### NORe. Natural History Museum Namu Bielefeld 🔯

Naturkunde-Museum Bielefeld

Kreuzstr. 2033602 - Bielefeld GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region



Museum für Natur und Umwelt

MÜRITZEUM

natur | mensch | umwelt

#### NORe. State Museum of Natural History Braunschweig 📴

Staatliches Naturhistorisches Museum Braunschweig

 Pockelsstraße 10 38106 - Braunschweig GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e, V. Association of German Natural History Museums in the North Sea and Baltic Sea Region



#### NORe. State Museum of Nature and Men Oldenburg - 🙆

Landesmuseum Natur und Mensch Oldenburg - Niedersächsische Landesmuseen Oldenburg

Damm 38 - 4426135 - OldenburgGERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region

#### NORe. Übersee - Museum of Bremen @

Übersee-Museum Bremen

Bahnhofsplatz 13 28195 - Bremen GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region

#### NORe. Zoological Collection of the University of Rostock 🙆

Zoologische Sammlung der Universität Rostock

 Institut für Biowissenschaften, Lehrstuhl Allgemeine & Spezielle Zoologie, Universitätsplatz 2 18055 - Rostock GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region



Natur und

ÜBERSEE

MUSEUM

BREMEN

Mensch

ZSRO

#### NORe. Zoological Institute and Museum Greifswald 📴

Zoologisches Institut und Museum Greifswald

Johann-Sebastian-Bach-Str. 11/12
17489 - Greifswald
GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e, V. Association of German Natural History Museums in the North Sea and Baltic Sea Region

#### NORe. Zoological Museum Kiel 📴

Zoologisches Museum Kiel

Hegewischstraße 3
 24105 - Kiel
 GERMANY

Official CETAF representative:

Angelika Brandt

This institute is part of the CETAF member: NORe e. V. Association of German Natural History Museums in the North Sea and Baltic Sea Region





#### Greece

#### Natural History Museum of Crete @

Μουσείο Φυσικής Ιστορίας Κρήτης

University of Crete. Knossou Ave. P.O. Box 2208 71409 - Heraklion. Crete GREECE

Official CETAF representative:

Catherina Voreadou



## Hungary

#### Hungarian Natural History Museum 📴

Magyar Természettudományi Múzeum

 Baross U. 13
 1088 - Budapest HUNGARY

Official CETAF representative:

Beáta Papp





#### Natural History Museum of Genova 📴

Museo Civico Di Storia Naturale Di Genova

 Via Brigata Liguria 9
 16121 - Genova ITALY

Official CETAF representative:

■ Luca Bartolozzi

This institute is part of the CETAF member: Italian Consortium



#### Natural History Museum, University of Florence 🔯

Museo di Storia Naturale dell'Università degli Studi di Firenze

Via Romana 17 50125 - Firenze ITALY

Official CETAF representative:

Luca Bartolozzi

This institute is part of the CETAF member: Italian Consortium



#### Netherlands

#### Fungal Biodiversity Centre (CBS-KNAW) @

Centraalbureau Voor Schimmelcultures CBS-KNAW

O Uppsalalaan 8 3584 CT - Utrecht **NETHERLANDS** 

Official CETAF representative:

Pedro J Crous



#### Naturalis Biodiversity Center

Naturalis Biodiversity Center

Darwinweg 2 2333 CR - Leiden **NETHERLANDS** 

Official CETAF representative:

Erik Smets



#### Natural History Museum - University of Oslo @

Naturhistorisk Museum, Universiteetet I Oslo

Sars gate 1 0562 - Oslo NORWAY

Official CETAF representative:

Fridtjof Mehlum

#### Poland

#### Museum And Institute of Zoology - Polish Academy of Sciences @

Muzeum i Instytutu Zoologii (Polskiej Akademii Nauk)

Wilcza 64 00-679 - Warszawa POLAND

Official CETAF representative:

Wieslaw Bogdanowicz







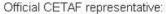


#### Slovakia

#### Comenius University - Faculty of Natural Sciences - Botany @

Univerzity Komenského. Prírodovedecká fakulta - Katedra botaniky

Révová 39. Herbár.
 811 02 - Bratislava 1
 SLOVAKIA



Marhold Marhold

This institute is part of the CETAF member: Slovak consortium: Slovak National Taxonomic Facility (NaTAF)

#### Comenius University - Faculty of Natural Sciences - Zoology @

Univerzity Komenského. Prírodovedecká fakulta - Katedra zoológie

 Mlynská dolina. Pavilion B-1 842 15 - Bratislava 4 SLOVAKIA

#### Official CETAF representative:

Karol Marhold

This institute is part of the CETAF member: Slovak consortium: Slovak National Taxonomic Facility (NaTAF)

#### Pavol Jozef Šafárik University in Košice - Faculty of Science @

Univerzita Pavla Jozefa Šafárika v Košiciach. Prírodovedecká fakulta

 Šrobárova 2
 041 54 - Košice SLOVAKIA

#### Official CETAF representative:

Marhold Marhold

This institute is part of the CETAF member: Slovak consortium: Slovak National Taxonomic Facility (NaTAF)







#### Slovak Academy of Sciences - Institute of Botany @

Botanický ústav - Slovenskej akadémie vied (SAV)

Dúbravská cesta 9845 23 - BratislavaSLOVAKIA

#### Official CETAF representative:

Karol Marhold

This institute is part of the CETAF member: Slovak consortium: Slovak National Taxonomic Facility (NaTAF)



#### Slovak Academy of Sciences - Institute of Zoology 🔯

Ústav Zoológie - Slovenskej akadémie vied (SAV)

Dúbravská cesta 9
 845 06 - Bratislava
 SLOVAKIA

Official CETAF representative:

Karol Marhold

This institute is part of the CETAF member: Slovak consortium: Slovak National Taxonomic Facility (NaTAF)



#### Slovak National Museum - Museum of National History 🖪

Slovenské Národné Múzeum

Vajanského nábrežie 2
 810 06 - Bratislava
 SLOVAKIA

Official CETAF representative:

Karol Marhold

This institute is part of the CETAF member: Slovak consortium: Slovak National Taxonomic Facility (NaTAF)



#### Spain

#### CSIC. National Museum of Natural Sciences @

Museo Nacional de Ciencias Naturales

Calle José Gutiérrez Abascal 2
 28006 - Madrid
 SPAIN

Official CETAF representative:

Santiago Merino

This institute is part of the CETAF member: Spanish Consortium



#### CSIC. Royal Botanic Garden of Madrid @

Real Jardin Botánico de Madrid

Plaza de Murillo 2
 28014 - Madrid
 SPAIN

Official CETAF representative:

🕮 Jesus Muñoz

This institute is part of the CETAF member: Spanish Consortium



#### Sweden

#### Swedish Museum of Natural History @

Naturhistoriska riksmuseet

 Frescativägen 40 10405 - Stockholm SWEDEN

Official CETAF representative:

Per Ericson



## Department of Biology and Environmental Sciences, Gothenburg University 🙆

Göteborgs Universitet - Biologi och Miljövetenskap

 Carl Skottsbergs Gata 22 B 40530 - Göteborg SWEDEN

Official CETAF representative:

Göran Nilson

This institute is part of the CETAF member: Gothenburg Consortium

#### Gothenburg Botanic Garden 🖪

Göteborgs Botaniska Trädgården

Carl Skottsbergs Gata 22 A
 413 19 - Göteborg
 SWEDEN

Official CETAF representative:

Göran Nilson

This institute is part of the CETAF member: Gothenburg Consortium

## GÖTEBORGS BOTANISKA TRÄDGÅRD

#### Gothenburg Natural History Museum 🙆

Göteborgs Naturhistoriska Museum

 Museivägen 10 40235 - Göteborg SWEDEN

Official CETAF representative:

Göran Nilson

This institute is part of the CETAF member: Gothenburg Consortium

naturhistoriska museum

## Switzerland

Conservatory and Botanic Gardens of the City of Geneva 📴

Conservatoire et Jardin Botaniques de la Ville de Genève

 1 Chemin de l'Impératrice 1292 - Chambésy - Genève SWITZERLAND

Official CETAF representative:

Pierre-André Loizeau

This institute is part of the CETAF member: Geneva Consortium



#### Natural History Museum of the City of Geneva @

Muséum d'histoire naturelle Route de Malagnou, 1 1208 - Genève SWITZERLAND

Official CETAF representative:

Jacques Ayer

This institute is part of the CETAF member: Geneva Consortium



#### United Kingdom

#### London Natural History Museum @

London Natural History Museum

 Cromwell Road SW7 5BD - London UNITED KINGDOM

Official CETAF representative:

Norman Macleod



#### Royal Botanic Garden of Edinburgh 🙆

Royal Botanic Garden of Edinburgh

 20a Inverleith Row EH3 5LR - Edinburgh UNITED KINGDOM

Official CETAF representative:

Simon Milne



#### Royal Botanic Garden of Kew @

Royal Botanic Garden, Kew

Richmond
 TW9 3AE - Surrey
 UNITED KINGDOM

Official CETAF representative:

Alan Paton



The CETAF has the skills, resources, infrastructure, commitment, motivation and expertise required to reach its targets. The consortium is ready to rise to the occasion and proactively shape the future for natural history collections and natural history sciences in Europe over the next 10 years.

CETAF is the European voice for natural history collections and natural history sciences!





Consortium of European Taxonomic Facilities AISBL

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In collaboration with the membership of CETAF

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