



March 17th 2021

Nils Hein



Federal Ministry
of Education
and Research



Node Report - Argentina

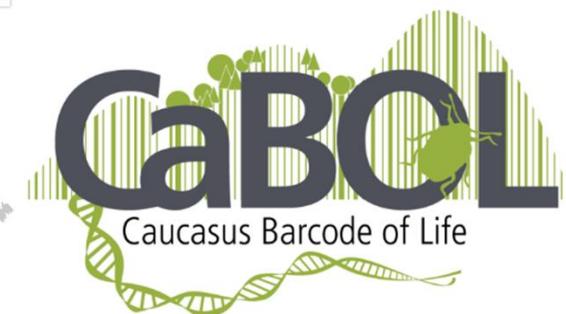
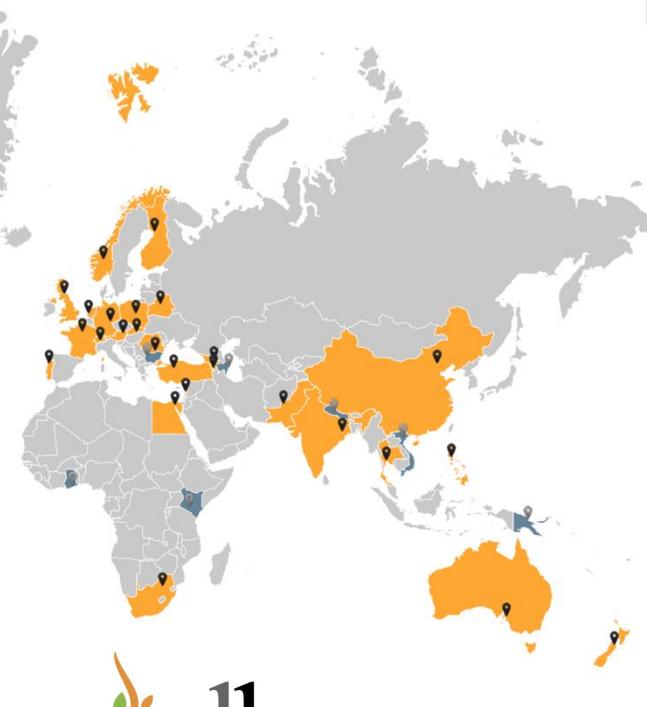
Scientific Steering Committee, October 13 & 14, 2018

<https://www.ibol.org>



Ministerium für Innovation,
Wissenschaft, Forschung
und Technologie des Landes
Nordrhein-Westfalen

NRW.



Federal Ministry
of Education
and Research

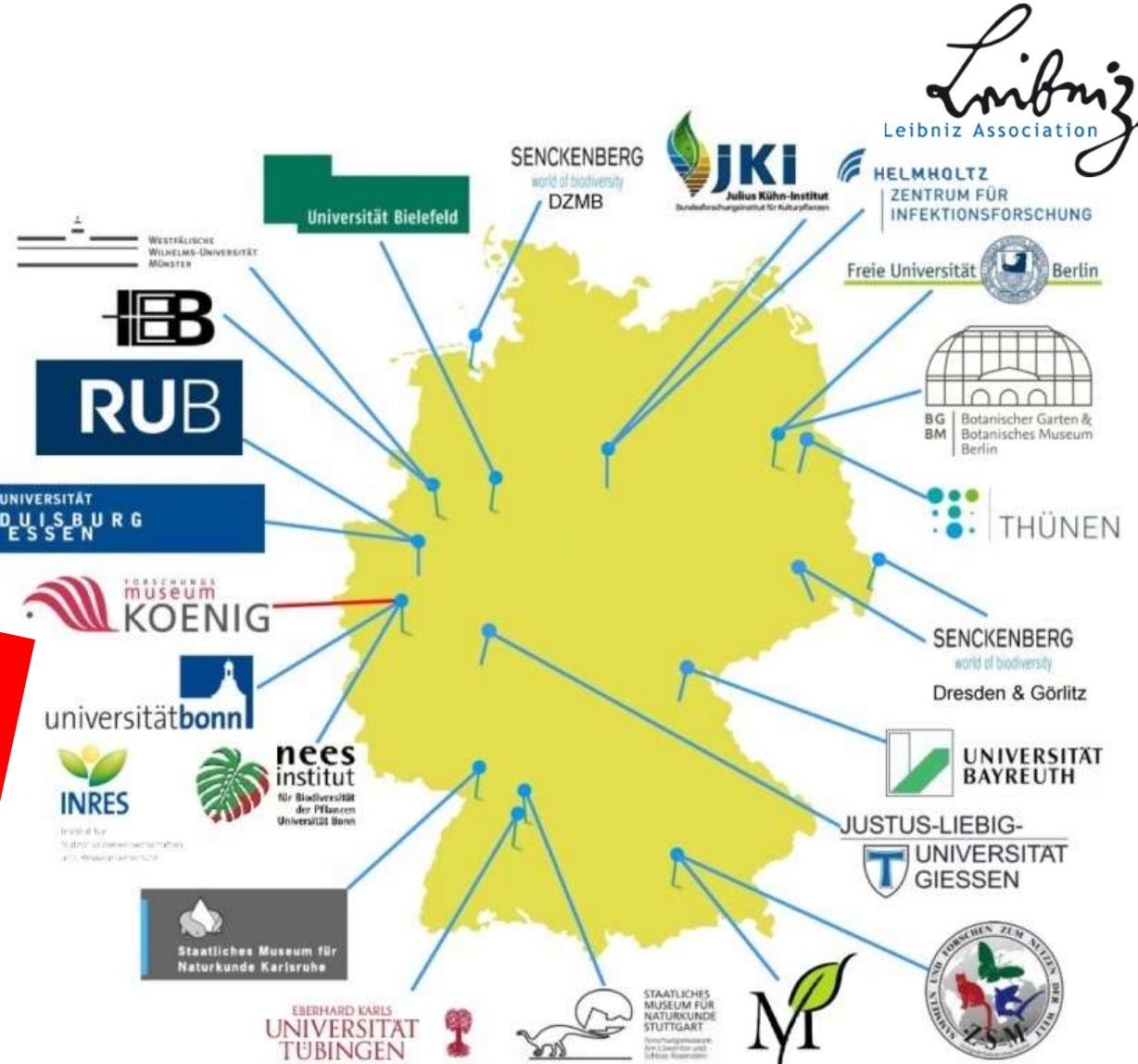


GBOL

German Barcode

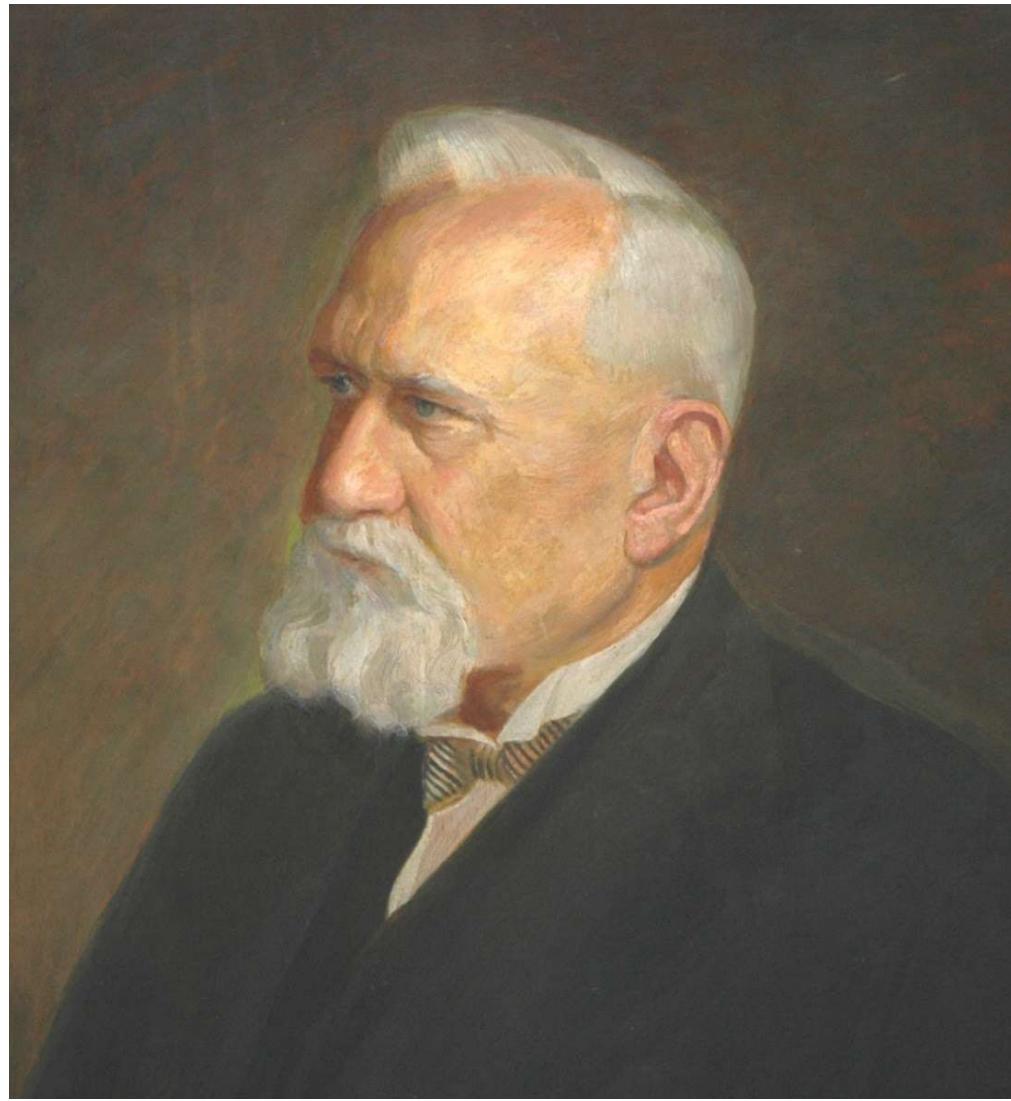
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und Forschung





The Zoological Research Museum Alexander Koenig



Alexander Koenig 1858 - 1940



Algeria 1893



1912 Groundbreaking ceremony, **1914** Confiscated, **1934** Museum opens it's doors, **1948** Parliamentary council

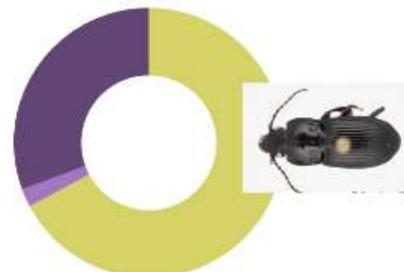
Leibniz Institute for Animal Biodiversity

- Collection-based work on terrestrial and freshwater animal biodiversity, taxonomy, systematics, evolution
- approx. 7 Million voucher specimens in the collection
- since 2010 methodological focus: Center for Molecular Biodiversity (bioinformatics, genomics, DNA barcoding, biobanking)

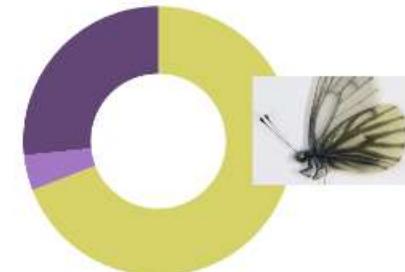


GBOL I & II – DNA Reference Database

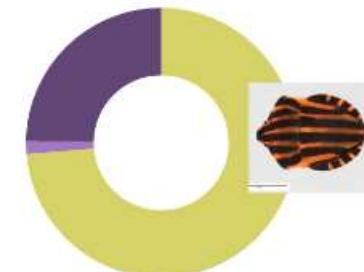
Coleoptera (6738 spp.)



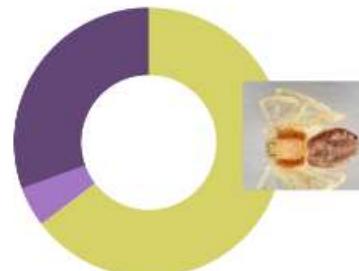
Lepidoptera (3791 spp.)



Heteroptera (892 spp.)



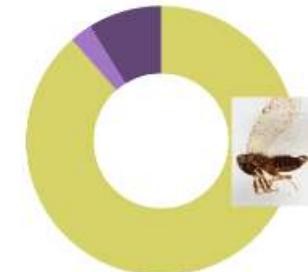
Araneae (1100 spp.)



Chordata (802 spp.)



Auchenorrhyncha (635 spp.)



Barcode

Failed

Missing

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GBOL III *Dark Taxa*

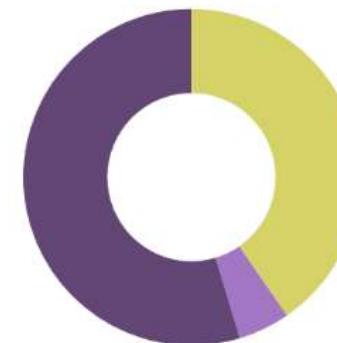


Hymenoptera (9833 spp.)

- Barcode
- Failed
- Missing



Diptera (9451 spp.)



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GGBC Exploring Biodiversity of the Caucasus in a Multinational Approach

Georgian-German Biodiversity Center

GGBC Capacity building DNA Barcoding Kintrishi Project Forestry Projects News

GGBC

We plan to set up a **Georgian-German Biodiversity Center** (GGBC) as a multinational approach to explore the biodiversity of the Caucasus area.

The research center will be located at Ilia State University (Tbilisi, Georgia) and is to be jointly established and used by scientists from Germany and from Georgia as well as from neighboring countries, and will be open to researchers worldwide who are interested in Caucasian biota.

The center is meant to foster international collaboration, will improve science infrastructures, engage in education, and explore Caucasian biodiversity, with a strong, but not exclusive focus on molecular methods. The current (pilot) project phase is an institutional partnership grant, financed by the German Federal Ministry of Education and Research (www.bmbf.de) under grant number 01DK17048. One of the main initial project targets is to start a Georgian Barcode of Life database.

Current project partners are:

Ilia State University, Tbilisi, Georgia¹
Zoological Research Museum Alexander Koenig, Bonn, Germany²
Faculty of Forest Sciences and Forest Ecology, Forest Inventory and Remote Sensing, Göttingen, Germany³

We are in the process of adding project partners (University of Bonn, Nees Institute for Botany, Agricultural University of Georgia, Tbilisi). Please contact us if you are interested to collaborate:

1 (Tbilisi): D. Tarkhnishvili, C. Anderson, L. Mumladze, G. Chaladze
2 (Bonn): B. Misof (project PI), J. Astrin, B. Rulif, turs: E. Bärmann
3 (Göttingen): C. Kleinn, L. Fehrmann (forestry)

Recent Posts

Illustrated Field Guide to Georgian Flora January 29, 2019

BioBlitz 2019 January 28, 2019

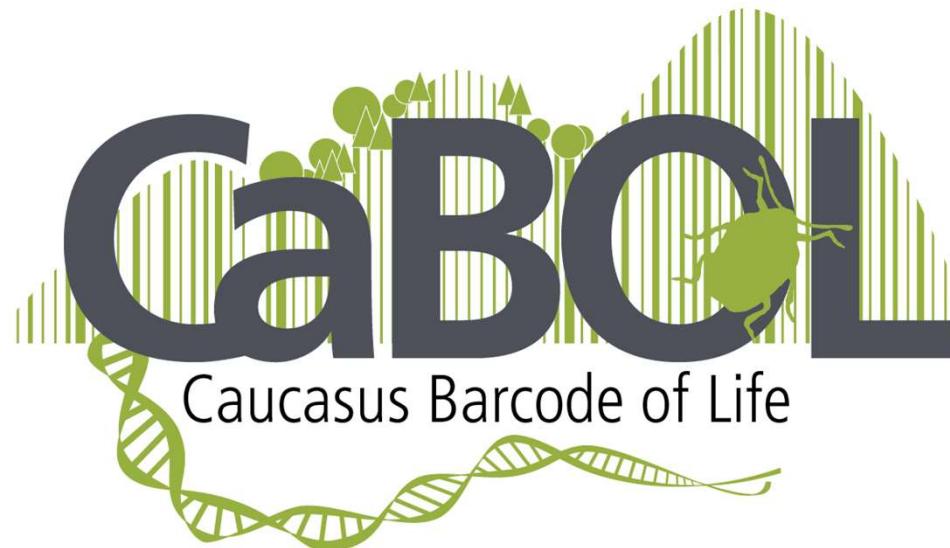
BioBlitz in Kintrishi October 5, 2018

Type your search

GGBC Project Funding

SPONSORED BY THE

Project Partners



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Caucasus Barcode of Life -- <https://ggbc.eu/>



[CaBOL](#) [Biodiversity](#) [DNA Barcoding](#) [Results](#) [News](#) [History/GGBC](#) ▾ [Contact](#)

CaBOL

The BMBF-funded project Caucasus Barcode of Life (CaBOL) aims to catalogue numerous animal and plant species of the Caucasus. The Caucasus region is one of our planet's biodiversity hotspots containing a vast amount of animal and plant species. The DNA barcodes of these species will be stored in a reference database and made publicly available. Initially, the project focus lies on the

English



Username

Password

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CaBOL Workflow

1. Sampling



2. Collection data



3. Photographs



6. PCR



5. DNA Extraction



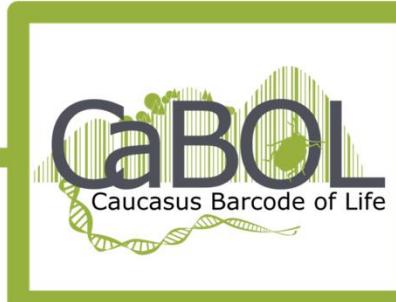
4. Collection



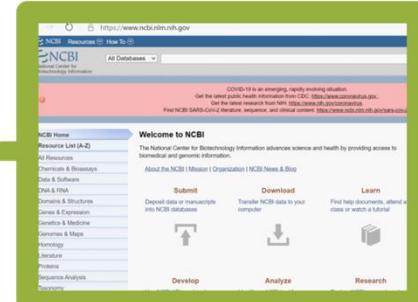
7. Sequencing



8. Data validation



9. NCBI



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Sampling



Thormann et al. 2020 // Bonn Zoological Bulletin 68 (2): 275–296.

Collection data

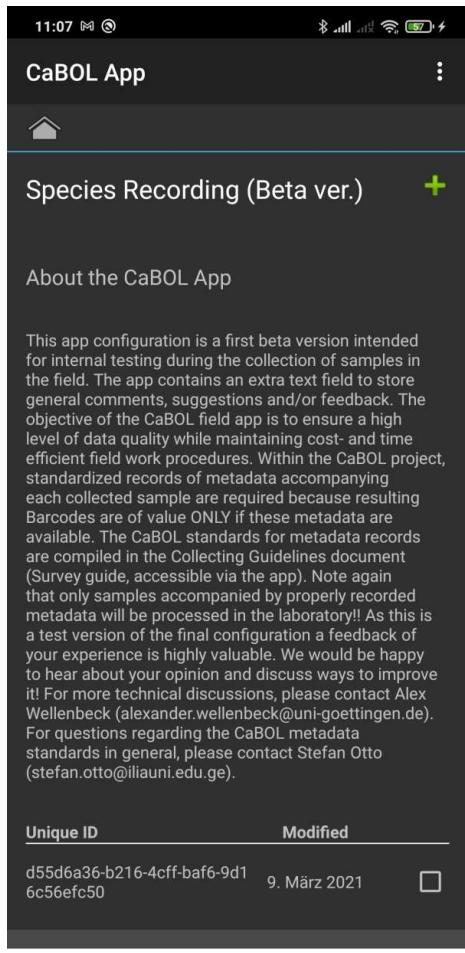


Sammelinfos

Fundortbeschreibung	Ortsangaben		Bundesland	Land	Datum	Sammelmethode	Breitengrad	Längengrad
	Region	Ort						
Grainfield east of Butzheim, Butzheim Bruchstraße	Butzheim, Romerskirchen	Kintrishi NR	Nordrhein-Westfalen	Deutschland	26.07.20	hand collecting	51,045100	6,713490
rainforest, riverside,		Adjara		Georgia	29.07.2018	hand collecting	41,736940	41,983890
rainforest	Kintrishi NR, Khino monestry	Adjara		Georgia	29.07.2018	hand collecting	41,728610	42,078060
rainforest	Kintrishi NR, picnic spot	Adjara		Georgia	21.07.2018	hand collecting	41,731940	41,975280
rainforest	Kintrishi NR, picnic spot	Adjara		Georgia	21.07.2018	hand collecting	41,731940	41,975280
rainforest	Kintrishi NR, picnic spot	Adjara		Georgia	21.07.2018	hand collecting	41,731940	41,975280
rainforest	Kintrishi NR, picnic spot	Adjara		Georgia	21.07.2018	hand collecting	41,731940	41,975280
rainforest	Kintrishi NR, picnic spot	Adjara		Georgia	21.07.2018	hand collecting	41,731940	41,975280
beach	Grigoleti, Ilia State Universt	Guria		Georgia	18.07.2018	hand collecting	42,052910	41,727180
beach	Grigoleti, Ilia State Universt	Guria		Georgia	18.07.2018	hand collecting	42,052910	41,727180
beach	Grigoleti, Ilia State Universt	Guria		Georgia	18.07.2018	hand collecting	42,052910	41,727180
beach	Grigoleti, Ilia State Universt	Guria		Georgia	18.07.2018	hand collecting	42,052910	41,727180
beach	Grigoleti, Ilia State Universt	Guria		Georgia	18.07.2018	hand collecting	42,052910	41,727180
beach	Grigoleti, Ilia State Universt	Guria		Georgia	18.07.2018	hand collecting	42,052910	41,727180

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The „CaBOL App“



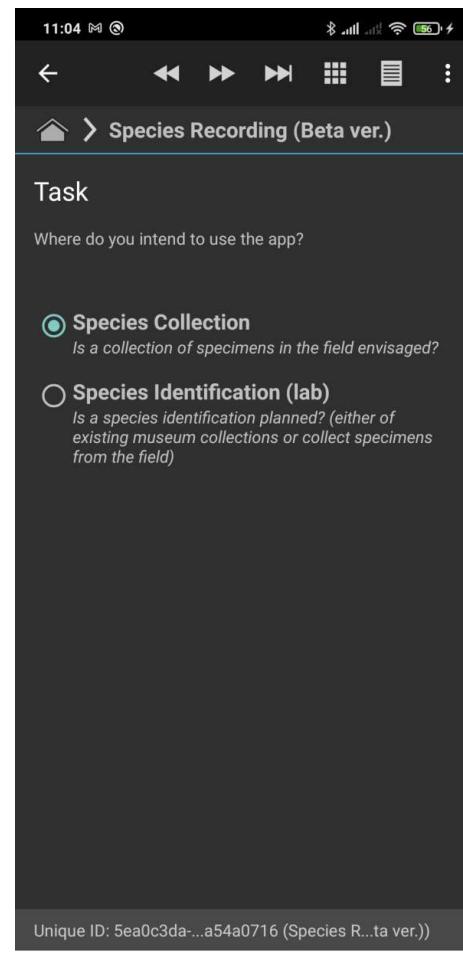
CaBOL App

Species Recording (Beta ver.) +

About the CaBOL App

This app configuration is a first beta version intended for internal testing during the collection of samples in the field. The app contains an extra text field to store general comments, suggestions and/or feedback. The objective of the CaBOL field app is to ensure a high level of data quality while maintaining cost- and time efficient field work procedures. Within the CaBOL project, standardized records of metadata accompanying each collected sample are required because resulting Barcodes are of value ONLY if these metadata are available. The CaBOL standards for metadata records are compiled in the Collecting Guidelines document (Survey guide, accessible via the app). Note again that only samples accompanied by properly recorded metadata will be processed in the laboratory!! As this is a test version of the final configuration a feedback of your experience is highly valuable. We would be happy to hear about your opinion and discuss ways to improve it! For more technical discussions, please contact Alex Wellenbeck (alexander.wellenbeck@uni-goettingen.de). For questions regarding the CaBOL metadata standards in general, please contact Stefan Otto (stefan.otto@iliauni.edu.ge).

Unique ID	Modified
d55d6a36-b216-4cff-baf6-9d1 6c56efc50	9. März 2021



Species Recording (Beta ver.)

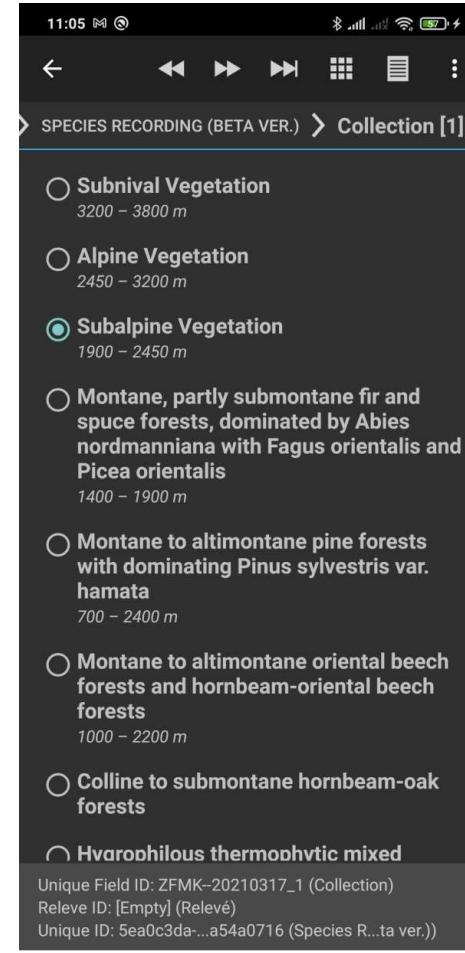
Task

Where do you intend to use the app?

Species Collection
Is a collection of specimens in the field envisaged?

Species Identification (lab)
Is a species identification planned? (either of existing museum collections or collect specimens from the field)

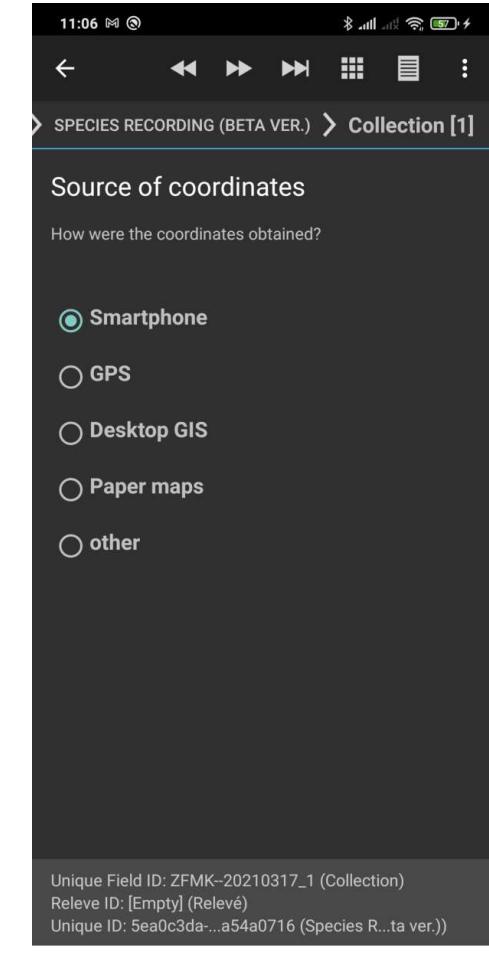
Unique ID: 5ea0c3da...a54a0716 (Species R...ta ver.)



SPECIES RECORDING (BETA VER.) > Collection [1]

- Subnival Vegetation
3200 – 3800 m
- Alpine Vegetation
2450 – 3200 m
- Subalpine Vegetation
1900 – 2450 m
- Montane, partly submontane fir and spruce forests, dominated by *Abies nordmanniana* with *Fagus orientalis* and *Picea orientalis*
1400 – 1900 m
- Montane to altimontane pine forests with dominating *Pinus sylvestris* var. *hamata*
700 – 2400 m
- Montane to altimontane oriental beech forests and hornbeam-oriental beech forests
1000 – 2200 m
- Colline to submontane hornbeam-oak forests
- Hvarophilous thermophilic mixed

Unique Field ID: ZFMK-20210317_1 (Collection)
Relevé ID: [Empty] (Relevé)
Unique ID: 5ea0c3da...a54a0716 (Species R...ta ver.)



SPECIES RECORDING (BETA VER.) > Collection [1]

Source of coordinates

How were the coordinates obtained?

Smartphone

GPS

Desktop GIS

Paper maps

other

Unique Field ID: ZFMK-20210317_1 (Collection)
Relevé ID: [Empty] (Relevé)
Unique ID: 5ea0c3da...a54a0716 (Species R...ta ver.)

Photographs



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Collection



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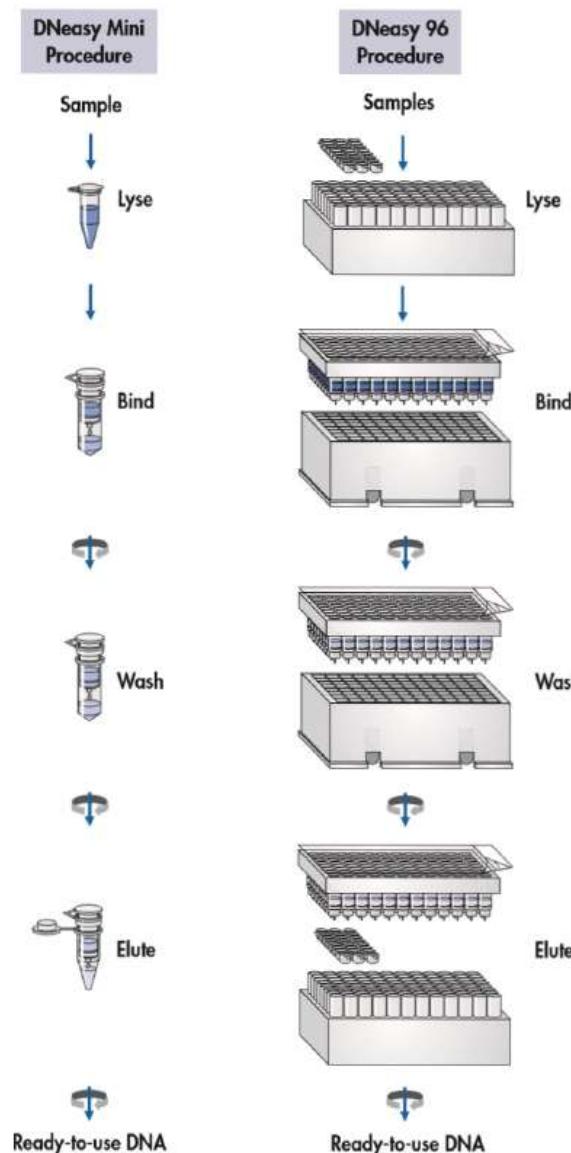


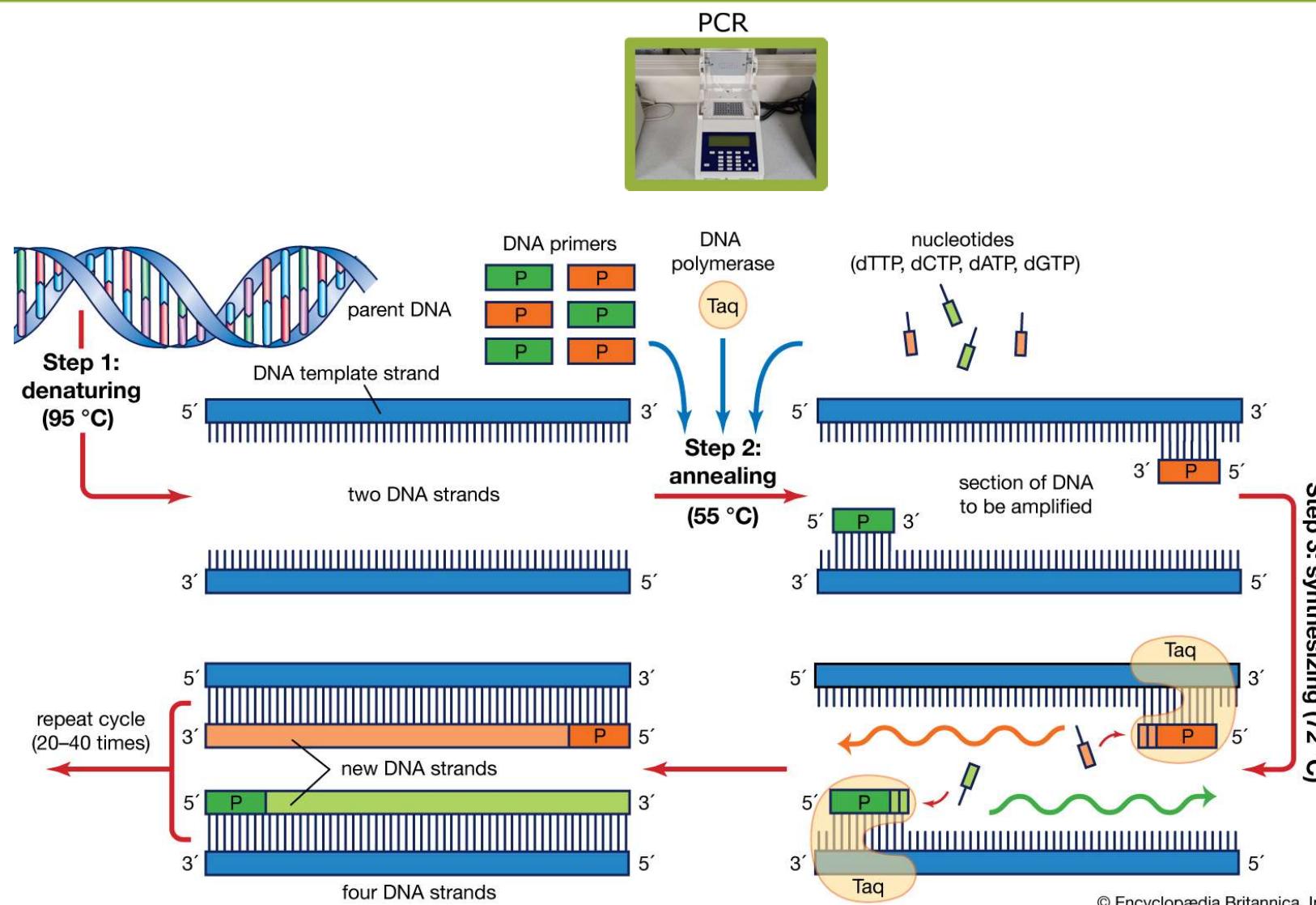
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DNA Extraction



In the laboratory technicians isolate a small piece of tissue from each specimen and extract DNA.





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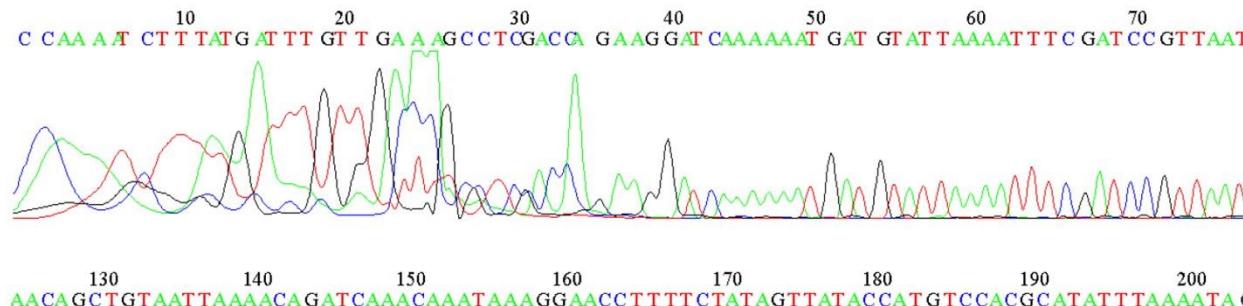


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Sequencing

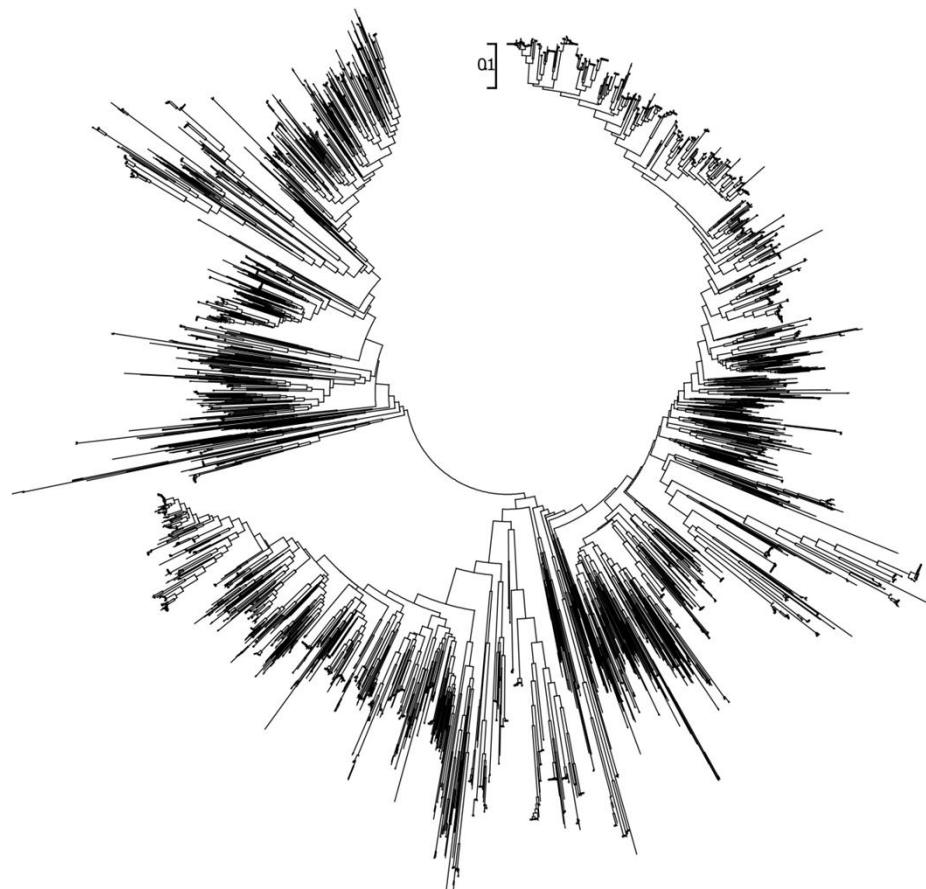
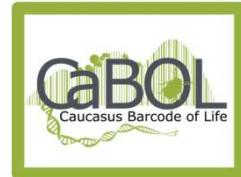


File: A_4_HCO2198.ab1 Run Ended: 2012/8/28 9:34:41 Signal G:1877 A:3472 C:3089 T:3079
 Sample: A_4_HCO2198 Lane: 47 Base spacing: 14.817353 1499 bases in 16302 scans Page 1 c



AACTTATACTTGATTTGGAGCTGAGCTGCTATAGTGGGTACAGCAATAAGAGTATTGATTGAATTGAGCTGGGAGATTTGGGT
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 CAGGGGGTGGGGATCCTATTATTCAGCATTATT

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Sequences and metadata (collection data, taxonomy, photographs) of the samples will be tested for completeness and quality by CaBOL scientists.

Diversity collection:

- Georgia: 4752 (with Barcode: 3783)
- Armenia: 916 (with Barcode: 443)

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The species profile including the DNA sequence is fed into global reference databases for DNA barcodes

NCBI Resources How To

Nucleotide Nucleotide Argyope bruennichi Create alert Advanced

COVID-19 is an emerging, rapidly evolving situation. Get the latest public health information from CDC: <https://www.coronavirus.gov>. Get the latest research from NIH: <https://www.nih.gov/coronavirus>. Find NCBI SARS-CoV-2 literature, sequence, and clinical content: <https://www.ncbi.nlm.nih.gov/sars-cov-2/>

Species Summary 20 per page Sort by Default order

Items: 1 to 20 of 2232

Filters activated: Nucleotide, Mitochondrion. [Clear all](#)

[Argiope bruennichi mitochondrion complete genome](#)

1. 14,063 bp circular DNA
Accession: NC_024281.1 GI: 651424659
BioProject Protein Taxonomy
2. 14,063 bp circular DNA
Accession: KJ594561.1 GI: 641804290
Protein Taxonomy
3. [mitochondrial](#)
1,199 bp linear DNA
Accession: KC195752.1 GI: 471257930
Protein PubMed Taxonomy

Send to: Filters: Manage Filters

Results by taxon

Taxonomic Groups [List]

- arthropods (2232)
- arachnids (2231)
- hexapods (1)

Find related data Database: Select

Search details

("Argiope bruennichi" [Organism] OR Argiope bruennichi [All Fields]) AND (is_nuccore[filter] AND mitochondrion[filter])

Search See more...

<https://www.ncbi.nlm.nih.gov>



AACTTATACTTGATTTGGAGCTTGA
GCTGCTATAGGGTACAGCAATAAGA
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CTGGGAGATTATGGGTGATGATCAATT
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CAGGGGGTGGGGATCCTATTATTTC
AGCATTATT

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Report**

A prelude to the Caucasus Barcode of Life Platform (CaBOL): Biodiversity Days in Georgia in 2018 and 2019

Jana Thormann¹, Dirk Ahrens¹, Cort Anderson², Jonas J. Astrin^{1,*}, Levan Mumladze³, Björn Rulik¹, David Tarkhnishvili¹, Marianne Espeland¹, Matthias Geiger¹, Nils Hein⁴, Giorgi Iankoshvili², Elisabeth Karalashvili², Ximo Mengual¹, Carsten Morkel⁵, Marco T. Neiber⁶, Ralph S. Peters¹, André Reimann⁷, Axel Ssymank⁸, Thomas Wesener¹, Joachim Ziegler⁹ & Bernhard Misof^{1*}



Biodiversity Data Journal 8: e57862
doi: 10.3897/BDJ.8.e57862



Research Article

Towards retrieving the Promethean treasure: a first molecular assessment of the freshwater fish diversity of Georgia

Giorgi Epitashvili[‡], Matthias Geiger[§], Jonas J Astrin[§], F. Bella Japoshvili[‡], Levan Mumladze[†]

[‡] Institute of Zoology, Ilia State University, Tbilisi, Georgia

[§] Zoological Research Museum A. Koenig, Bonn, Germany

ZooKeys 916: 1–123 (2020)
doi: 10.3897/zookeys.916.47824
<http://zookeys.pensoft.net>

CHECKLIST



A peer-reviewed open-access journal
Launched to accelerate biodiversity research



European Journal of Taxonomy 717: 3–26
<https://doi.org/10.5852/ejt.2020.717.1095>



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ISSN 2118-9773
www.europeanjournaloftaxonomy.eu
2020 · Ševčík J.

Mitt. dtsch. malakozool. Ges.	104	23 – 36	Frankfurt a. M., März 2021
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Checklist of hover flies (Diptera, Syrphidae) of the Republic of Georgia

Ximo Mengual¹, Sander Bot², Tinatin Chkhartishvili³, André Reimann⁴, Jana Thormann¹, Laura von der Mark¹

23 – 36 Frankfurt a. M., März 2021

Research article

<urn:lsid:zoobank.org:pub:1358E5B2-056C-4DF2-9C4E-0189E1086712>

Five new Palaearctic species of *Docosia* (Diptera: Mycetophilidae) with updated molecular phylogeny of the genus

Jan ŠEVČÍK^{1,*}, Nikola BURDÍKOVÁ², David KASPRÁK³ & Olavi KURINA⁴

Continental molluscs collected during the second Georgian-German BioBlitz 2019 in Stepantsminda, Georgia

MARCO T. NEIBER, ANI BIKASHVILI, GIORGI BANANASHVILI, ANANO SHUBASHISHVILI,
BELLA JAPOSHVILI, FRANK WALTHER & LEVAN MUMLADZE

Abstract: The results of surveys of land and freshwater molluscs collected during a BioBlitz event held in Georgia in 2019 are reported. In total, 54 mollusc species belonging to 27 families were recorded at 44 sampling sites

RT vom



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Thank you for your attention!

Special thanks to: Jonas Astrin, Matthias Geiger, Hans-Joachim Krammer, Laura von der Mark, Vera Rduch, Björn Rulik, Jana Thormann, Alex Wellenbeck

For further information

stefan.otto@iliauni.edu.ge & n.hein@leibniz-zfmk.de



`cabol_biodiversity_caucasus`