

[SNSB Benefit Sharing](#)

The SNSB scientists take their obligations regarding their benefit sharing with the countries of origin of genetic resources very seriously. Services to countries of origin of genetic resources (until December 2020):

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Algeria

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Argentina

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Armenia

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Australia

Joint publications: & Scientific collaboration:

- Joint projects and publications with the Western Australian University in Perth (ZSM-Section Mollusca)
- Provision of faunistic information in publications (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Knowledge transfer (taxonomy, morphology, floral ecology, DNA-barcoding) and supervision of an Honours and Masters student at Curtin University, Perth, Australia, 2020 (BSM).
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Austria

Scientific collaboration:

- Borrowing of material from the Botanical State Collection Munich (BSM)
-

Bangladesh

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (e.g. training in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections (ZSM sections Lepidoptera, Hymenoptera))
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Bolivia

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Brazil

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)

capacity building activities

- Supervision of doctoral students at the ZSM (joint material collections, regulations, publications) (ZSM section Mollusca)
- Supervision of doctoral thesis & transfer of expertise on molecular-phylogenetic and zygotic methods (BSM) Provision of faunistic information in publications (ZSM section Lepidoptera)
- Supervision of Erasmus scholarship holders and doctoral students at the ZSM (mollusc anatomy, histology, 3D reconstructions, joint material)

collections, regulations, publications)

- Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections
- Lectures by BGM scientists
- Training and co-supervision of PhD students (ZSM, Lepidoptera)

scientific collaboration

- Expert opinion, cooperation agreement and information exchange with the Zoological Museum Sao Paulo (ZSM-Section Mollusca)
 - Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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Cameroon

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
 - Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
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Chile

Joint publications: & Scientific collaboration:

- Projects with Universidad Austral Valdivia and Universidad Católica de Valparaíso, Chile (ZSM-Section Mollusca)
- Provision of faunistic information on Decapoda and Pycnogonida; joint projects and publications on Decapoda and Pycnogonida of Chilean fjords with Huinay Scientific Field Station (ZSM, Arthropoda varia)
- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Provision of faunistic information in publications (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
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China

Joint publications: & Scientific collaboration:

- publications, provision of type photographs of hydrozoans, provision of CT scans of hydrozoans and brachiopods (ZSM, Evertebrata varia)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Provision of faunistic information in publications (ZSM section Lepidoptera)
- Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
- Capacity building in the field of mollusc anatomy, histology, 3D-reconstructions, molecular genetics, genomics: supervision of a Chinese PhD student (EU-project) (ZSM-Section Mollusca)

Colombia

Field training and capacity building activities:

- Seminars at the Universidad Nacional de Colombia in Bogotá, provision of literature and laboratory material as well as field equipment (ZSM, Coleoptera)
- Instructions for postdoctoral students (ZSM, Lepidoptera)
- Training in the context of third-party funded research stays at the ZSM in the areas of preparation, taxonomy & systematics. and curatorial supervision of entomological collections 2020 (ZSM, Hymenoptera)
- Supervision of Master students 2020 (ZSM, Hymenoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

DR Congo

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Training of students, DNA sequencing. (ZSM, Ichthyology)
 - Supervision and training (molecular genetics) of PhD students of the University of Lubumbashi
 - Implementation and assumption of costs for expeditions to collect fish in the province of Katanga as part of the VW project "Exploiting the genomic record of living biota to reconstruct the landscape evolution of South Central Africa".
 - Supervision and training of a student of Univ. Bukavu within the MBISA-Congo project
 - Several weeks of training in next generation sequencing methods and data analysis for PhD students from the Democratic Republic of Congo from the MBISA Congo project (2019, ZSM Ichthyology)
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Costa Rica

Field training and capacity building activities:

- "Governance of Biological Diversity", half-day advanced training in the Botanical Garden Munich-Nymphenburg, 2015

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Croatia

Joint publications: & Scientific collaboration:

- Provision of faunistic information about Decapoda, Pycnogonida, Mollusca and Echinodermata (Brijuni National Park and Ministry of Environment and Energy); (ZSM, Arthropoda varia)
- Projects on marine invertebrates with the Rudjer Boskovic Institute in Rovinj and the Brijuni National Park and the University of Pula (ZSM, Arthropoda varia)

Field training and capacity building activities:

- Capacity Building for young scientists during research stays at the ZSM (Rudjer-Boskovic-Institute) (ZSM, Arthropoda varia)
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Cuba

Field training and capacity building activities:

- Capacity building for students/young scientists within the context of third-party funded research stays at the ZSM, training internships and supervision of final theses (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Cyprus

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Czechia

Field training and capacity building activities:

- Supervision of doctoral students (ZSM section Lepidoptera)

Scientific collaboration:

- Borrowing of material from the Botanical State Collection Munich (BSM)
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Dominican Republic

Field training and capacity building activities:

- „Governance of Biological Diversity“, half-day advanced training in the Botanical Garden Munich-Nymphenburg, 2015
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El Salvador

Field training and capacity building activities:

- „Governance of Biological Diversity“, half-day advanced training in the Botanical Garden Munich-Nymphenburg, 2015
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Ecuador

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Lectures by BGM scientists

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Egypt

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Estonia

Scientific collaboration:

- Loan of material from the Botanical State Collection Munich (BSM)
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Ethiopia

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Establishment of national reference collections (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-

party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)

France

Scientific collaboration & Field training and capacity building:

- Exchange of collection material
 - Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
 - Supervision of scientific guests
 - joint supervision of doctoral students with French institutions
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Gabon

Scientific collaboration:

- Determination of new collections for checklists and floras (BSM)
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Georgia

Field training and capacity building activities:

- Knowledge Transfer: The Botanical Garden Munich-Nymphenburg supports Batumi Botanic Garden (Georgia) in the creation of an Alpine Garden in the Lesser Caucasus (2016). Planning workshop on site. Transfer of expertise to future director of the Alpine Garden in the Munich Alpine Collection.
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Greece

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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Guatemala

Field training and capacity building activities:

- „Governance of Biological Diversity“, half-day advanced training in the Botanical Garden Munich-Nymphenburg, 2015
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Guinea

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
 - Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
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Great Britain

Scientific collaboration

- Loan of material from the Botanical State Collection Munich (BSM)
 - Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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Honduras

Field training and capacity building activities:

- „Governance of Biological Diversity“, half-day advanced training in the Botanical Garden Munich-Nymphenburg, 2015
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Hungary

Field training and capacity building activities:

- Training and co-supervision of PhD students (ZSM)
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India

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open

access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Indonesia

Joint publications: & Scientific collaboration:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Preparation of the establishment of national reference collections (ZSM section Lepidoptera)
- Project with Universität Manado, Indonesia; (ZSM, Mollusca)
- Sample repatriation as part of the INDOBIOSYS project (18,000 DNA samples were collected from Canada and personally transferred to Indonesia, voucher specimen prepared, labelled, packaged and also personally transferred to Indonesia), joint publications and application, 2016 (ZSM)
- Within the context of ongoing DNA barcoding projects, 12,500 individuals from Indonesia were processed and approximately 3000 prepared voucher specimens repatriated to Indonesia, 2017/2018/19 (ZSM)
- Sample repatriation within the INDOBIOSYS project, joint publications and application, 14-day collection and coordination trip together with MZB LIPI. (ZSM, Section Coleoptera, 2019)
- All project data were uploaded into the global "Barcode of Life Database" (BOLD) and are available there for the Indonesian project partners. All data and results will be freely available at the end of the project.
- Water beetle research: curatorial work at the Museum Zoologicum Borienses (ZSM)

Field training and capacity building activities:

- Supervision of an Indonesian doctoral student, (DAAD for INDOBIOSYS project)
 - Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections.
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Iran

Scientific collaboration:

- Gobiid Research Cooperation, University Shiraz, Iran.
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Provision of faunistic information in publications (ZSM section Lepidoptera)

Field training and capacity building activities:

- entomological training and technical advice for PhD student, 2018 (ZSM, Hymenoptera)
- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
- Supervision of a PhD student (Ichneumonidae, January-February 2019), entomological training and expert advice. (ZSM section Hymenoptera)
- Assumption of travel expenses of a scientist of the Univ. Shiraz, Iran, sponsored by the "Freunde der Zoologischen Staatssammlung München e.V."

Ireland

Joint publications: & Scientific collaboration:

- Joint projects and publications with Queen's University Belfast (ZSM-Section Mollusca)

Israel

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Preparation of the establishment of national reference collections (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Italy

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
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Ivory Coast

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Indonesia

Joint publications: & Scientific collaboration:

- Provision of faunistic information in publications (ZSM section

Lepidoptera)

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Preparation of the establishment of national reference collections (ZSM section Lepidoptera)
- Project with Universität Manado, Indonesia; (ZSM, Mollusca)
- Sample repatriation as part of the INDOBIOSYS project (18,000 DNA samples were collected from Canada and personally transferred to Indonesia, voucher specimen prepared, labelled, packaged and also personally transferred to Indonesia), joint publications and application, 2016 (ZSM)
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Field training and capacity building activities:

- Supervision of an Indonesian doctoral student, (DAAD for INDOBIOSYS project)
- Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections.

Iran

Scientific collaboration:

- Gobiid Research Cooperation, University Shiraz, Iran.
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Provision of faunistic information in publications (ZSM section Lepidoptera)

Field training and capacity building activities:

- entomological training and technical advice for PhD student, 2018 (ZSM, Hymenoptera)
- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
- Supervision of a PhD student (Ichneumonidae, January-February 2019),

entomological training and expert advice. (ZSM section Hymenoptera)

- Assumption of travel expenses of a scientist of the Univ. Shiraz, Iran, sponsored by the "Freunde der Zoologischen Staatssammlung München e.V."
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Ireland

Joint publications: & Scientific collaboration:

- Joint projects and publications with Queen's University Belfast (ZSM-Section Mollusca)
-

Israel

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Preparation of the establishment of national reference collections (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Italy

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
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Ivory Coast

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
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Jamaica

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Japan

Field training and capacity building activities:

- Preparation and dispatch of extensive photographic documentation of collection material in place of material rental, especially type material of hydrozoans, support of researchers from the field of origin of the material (Japanese Sea), (ZSM Evertebrata varia)
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Jordan

Scientific collaboration:

- Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Kazakhstan

Wissenschaftliche Zusammenarbeit (scientific collaboration):

- Identifikation von Schmetterlingen per Korrespondenz und Bearbeitung von

Leihmaterial (z.B. Landwirtschafts- und Forstschädlinge) (ZSM-Sektion Lepidoptera)

- Generierung von Datensätzen identifizierter Schmetterlinge auf internetgestützten open access Informationssystemen (BOLD, GenBank) (ZSM-Sektion Lepidoptera)
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Kasachstan

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Kenya

Field training and capacity building activities:

- Preparation of a workshop lasting several days; information of scientists and students on professional collection management and a mobile network with DWB, 2015 (BSM)
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Kyrgyzstan

Field training and capacity building activities:

- Capacity building for students/young scientists within the context of third-party funded research stays at the ZSM, training internships and supervision of final theses in 2015 (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Laos

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
 - Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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Lebanon

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Liberia

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
-

Madagascar

Field training and capacity building activities:

- Workshop at the ZSM to update the IUCN Redlist Assessment for Malagasy Amphibians (ZSM-Section Herpetology)

Scientific collaboration:

- 50% of the specimens collected are donated to the Malagasy University Collection (UADBA) (ZSM Herpetology Section).
- Redetermination of numerous reptiles in the UADBA collection (ZSM herpetology section)
- Scientific cooperation with Malagasy colleagues and students (ZSM-Section Herpetology)
- Cooperation in updating the species lists of Madagascan protected areas (CEPF project) (ZSM herpetology section)
- Collaboration on the 2nd edition of the book "The Natural History of Madagascar" (ZSM-Section Herpetology)

Joint publications:

- Collaboration in publication of photo guides for Madagascan reptiles (ZSM section herpetology)
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Malawi

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
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Mali

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Development of national reference collections (ZSM-Section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Morocco

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
 - Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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Mexico

Field training and capacity building activities:

- “Governance of Biological Diversity”, training courses in the Botanical Garden, 2015
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Mongolia

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Myanmar

Scientific collaboration:

- Determination of new collections for checklists and Floren (BSM)
-

Nepal

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Nigeria

Field training and capacity building activities:

- Supervision of collections and works, Univ. Ile-Ife, Nigeria, following the project “Inventory of the fish of the Jos Plateau” (ZSM, Ichthyologie)
 - “Capacity Building” for students and prospective scientists through supervision of internships (ZSM section Lepidoptera)
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Oman

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
 - Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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Panama

Field training and capacity building activities:

- “Governance of Biological Diversity”, training courses in the Botanical Garden, 2015
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Papua New Guinea

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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Peru

Joint publications:

- Projects with University of Cayetano Heredia, Lima (ZSM-Sektion Mollusca)
- Provision of faunistic information in publications (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Provisions of entomological material for the Peruvian nature conservation authority SERFOR (with several colleagues from ZSM)
- Lecture in Lima (ZSM)
- joint research project “Biodiversidad de Fauna y Flora en la Estación Biológica Panguana (ZSM)
- SNSB Cooperation Agreement and Information Exchange with the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos in Lima (= “national supporting institution” in Peru) (ZSM)

- Barcoding contract with the Peruvian Nature Conservation Authority (SERFOR, Ministerio de Agricultura y Riego) (ZSM)
- Accommodation of Peruvian scientists at the Panguana Biological Research Station in 2015 (ZSM)
- Provision of literature for Peruvian institutions (ZSM)
- Deposition of Holo- and Paratypes in the Museo de Historia Natural (UNMSM) in Lima. (ZSM, Arthropoda varia)
- Workshop in the framework of a DAAD Summer School in Panguana, two lectures in Panguana and Lima, a panel discussion in Lima, Peru. (TSM)

Field training and capacity building activities:

- Continuing education of a Peruvian botanist on work processes in different areas of the Botanical Garden as part of the Weltwärts Program, an intercultural initiative supported by the BMZ (Sept. 2019-Aug. 2020), BGM
- Practical training of Peruvian entomologists in joint field research, joint publications planned (ZSM, Arthropoda varia)
- Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections.
- Teaching biodiversity of the tropical rainforest, its importance and worthiness of protection at the Panguana station to students and inhabitants of the surrounding villages (Yuyapichis, Pampas Verde, Tahuantinsuyo); teaching collection and preparation techniques. (ZSM, 2019)
- September 2019 to December 2020: Training of visiting scientists on work processes in different areas of the Botanical Garden (BGM).
- February to April 2020: 2-month course "Ecosistemas Andino-Amazonicos Christopher Davidson y Sharon Christoph" at Jardín Botánico de Missouri, Oxapampa for local students (BGM)

Philippines

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Further training (field training and capacity building activities):

- 14-day course (DNA-Barcoding) at the Ateneo de Manila University, Manila.

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Poland

Scientific collaboration:

- Loan of material from the Botanical State Collection Munich (BSM)
-

Russia

Joint publications: & Scientific collaboration:

- Joint projects and publications with the universities in Moscow and Vladivostok (ZSM section Mollusca)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Course for PhD student and head of department of the Laboratory of Lichenology and Bryology, Komarov Botanical Institute, St. Petersburg for the introduction to work in a molecular biology laboratory, 2015 (BSM)
- Consolidation of the molecular-phylogenetic knowledge of a Russian doctoral student during a four-month stay, 2018 (BSM)
- Provision of faunistic information in publications (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections.
 - Supervision of a Russian PhD student in the Molecular Laboratory (BSM)
 - Training and co-supervision of PhD students, postdocs (ZSM; Lepidoptera)
-

Sambia

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Samoa

Field training and capacity building activities:

- Field training/seminar for Research Assistants of the Division of Environment and Conservation (Apia) (ZSM, Coleoptera)
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Santo Domingo

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Sao Tomé

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
-

Saudi Arabia

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Singapur

Scientific collaboration:

- Determination of new collections for checklists and floras (BSM)
-

Slowenia

Joint publications: & Scientific collaboration:

- Projects with the National Institute of Biology in Piran
-

Spain

Joint publications: & Scientific collaboration:

- Joint projects with the Universität Cádiz (ZSM-Sektion Molluska)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Provision of faunistic information in publications (ZSM section Lepidoptera)
- Loan of material from the Botanical State Collection Munich (BSM)

Field training and capacity building activities:

- Capacity Building for students/and young scientists at the ZSM in 2020 (ZSM, Lepidoptera)
-

Sri Lanka

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
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Sudan

Scientific collaboration:

- Cooperations with Fisheries Research Institute, Khartoum; Sudan Natural History Museum and Darfur Land Commission, Government of the Sudan (Section Ichthyology)
- Project: "First inventory of freshwater fishes of Western Darfur, Sudan" and Diversity of the Nile fish fauna (Section Ichthyology)

Field training and capacity building activities:

- Workshops: "Theoretical and practical determination of Nile fish" (section Ichthyology) in Khartoum in cooperation with government officials of Sudan in the context of the projects for the inventory of fish of the lower Nile and the Darfur region.
 - Collection management training and provision of collection containers as part of the SNSB's cooperation agreement with the Sudan Natural History Museum, Khartoum, Sudan.
 - Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections.
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South Africa

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
- Several weeks of training in next generation sequencing methods and data analysis for a South African scientist of the South African Institute for Aquatic Biodiversity, (ZSM section Ichthyology)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Sweden

Scientific collaboration:

- Loan of material from the Botanical State Collection Munich (BSM)
-

Taiwan

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Tajikistan

Joint publications

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Tanzania

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open

access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Thailand

Field training and capacity building activities:

- Seminars (expertise, collection methods) for lecturers and students at Srinakharinwirot University, Bangkok (ZSM, Insecta varia)

Joint publications: & Scientific collaboration:

- Joint publication activity, field courses, determination exercises, establishment of a comparative collection (ZSM, Coleoptera)
 - Within the framework of the project "Water Beetles of Thailand" (recording of the water beetles of Thailand, in cooperation with Srinakharinwirot University, Bangkok) about 500 floating beetles were determined on site in Bangkok and included in a database. (ZSM, Insecta varia)
 - Provision of faunistic information in publications (ZSM section Lepidoptera)
 - Definition of new collections for checklists and floras (BSM)
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Turkey

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)
- Capacity building in mollusc anatomy, histology, 3D reconstructions, molecular genetics, genomics: Year-round supervision of a Turkish guest student (ZSM Section Mollusca)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
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Tunisia

Field training and capacity building activities:

- Capacity building for students/young scientists in the context of third-

party funded research stays at the ZSM, training internships and supervision of theses (ZSM section Lepidoptera)

Scientific collaboration:

- Identification of butterflies by correspondence and processing of rental material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Uganda

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
-

Ukraine

Field training and capacity building activities:

- Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections.
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United Arab Emirates

Scientific collaboration:

- Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
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USA

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
-

Ukraine

Field training and capacity building activities:

- Capacity Building within the context of third-party funded research stays at the ZSM in the fields of preparation, taxonomy & systematics and curatorial supervision of entomological collections.
-

United Arab Emirates

Scientific collaboration:

- Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
-

USA

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
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-

Venezuela

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)

Field training and capacity building activities:

- Training in the context of third-party funded research stays at the ZSM in the areas of preparation, taxonomy & systematics, and curatorial care of entomological collections (ZSM, Hymenoptera)
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Vietnam

Field training and capacity building activities:

- Conducting entomological trainings for Vietnamese colleagues and

students and accompanying scientific investigations (ZSM, Hymenoptera)

- April-May 2019 trip to Vietnam (Cuc Phuong National Park), with entomological training for Vietnamese colleagues and students and accompanying scientific research.
- Within the framework of the VietBio project, scientists from Saigon Hanoi were invited to Munich (SNSB-ZSM) in September 2019 and supported.

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)
- October-November 2019 collective trip to Vietnam (cooperation with Cuc Phuong NP and Bidoup NP)
- Identification of butterflies by correspondence and processing of loan material (e.g. agricultural and forest pests) (ZSM section Lepidoptera)
- Coordination trip to Hanoi/Vietnam, preparation of joint applications, 2020 (ZSM)
- Several thousand individuals from Vietnam were processed in 2020 as part of ongoing DNA barcoding projects. All project data were uploaded to the global "Barcode of Life Database" (BOLD), where they are globally available

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
 - Joint publications (ZSM, Coleoptera)
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Yemen

Field training and capacity building activities:

- Capacity building for young scientists during research stays at the ZSM.

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Joint publications:

- Provision of faunistic information in publications (ZSM section Lepidoptera)
-

Zimbabwe

Scientific collaboration:

- Generation of data sets of identified butterflies on internet-based open

access information systems (BOLD, GenBank) (ZSM section Lepidoptera)

Various countries

- The online portal LIASlight for the interactive identification of more than 10,000 lichens worldwide is available in 20 languages. High-resolution images and data of collection documents were made available to botanists and mycologists from other countries and thus repatriated, via web-based databases or by sending them directly to external researchers (BSM).
- Project data in global “Barcode of Life Database” (BOLD) and freely available there (ZSM)
- Collections from tropical Africa and several South American countries identified and annotated for floras and checklists of the respective countries (BSM)
- International cooperation projects with joint conference contributions and publications. Editorial and review work for scientists from all over the world 2020 (ZSM)
- Knowledge Transfer: Through the “Weltwärtsprogramm”, an intercultural initiative funded by the BMZ, volunteers from the global south are placed for a full year. (BGM)