

Manuel Andreas Staggl

PALAEOBIOLOGIST · ZOOLOGIST

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www.orcid.org/0000-0002-3068-3098p | 📧 Manuel Andreas Staggl

Profile

I am a dedicated paleobiologist with a strong foundation in the morphology, anatomy, and diversification of sharks. I am experienced in the use of 3D (μCT) modelling, diversity analyses, and field techniques, including scientific underwater photography and scientific diving. My current research is focused on identifying the drivers of shark and batoid evolution over deep time, as well as their adaptations to various environments. I have published my research in a variety of fields, including neoselachian morphology and taxonomy, marine biodiversity, and other related topics. Moreover, I am the manager of the aquarium facility at the EvoMoRG research group at the Department of Palaeontology in Vienna. Outside of my academic role, I am committed to engaging with the public on matters of environmental science, participating in citizen science initiatives and providing educational opportunities for young people. My work is driven by a passion for conservation, with a particular focus on marine ecosystems.

Education

University of Vienna (Department of Palaeontology, Faculty of Earth Science, Geography and Astronomy)

Vienna, Austria

ASPIRED TITLE: DR. RER. NAT. (EARTH SCIENCES)

Feb. 2022 - present

- **Doctoral project title:** “Drivers of Elasmobranch Diversity in Deep Time”
- **Supervisor(s):** Univ.-Prof. Dr. Jürgen Kriwet, Prof. Michael J. Benton, Dr. Eduardo Villalobos Segura”

University of Vienna (Faculty of Life Sciences)

Vienna, Austria

M.Sc. IN ZOOLOGY

Oct. 2018 - Oct. 2021

- **Thesis title:** “Comparative Study on the Head-Anatomy of *Chiloscyllium punctatum* (Müller and Henle, 1838) based on X-ray micro-computed Tomography and Dissection”
- **Supervisor(s):** Univ.-Prof. Dr. Jürgen Kriwet, Mag. Dr. Daniel Abed-Navandi

Ludwig-Maximilians-Universität (Faculty of Biology)

Munich, Germany

B.Sc. IN BIOLOGY

Okt. 2015 - Sep. 2018

- **Thesis title:** “Head-anatomy of *Etmopterus cf. lucifer* based on x-ray micro-computed tomography”
- **Supervisor(s):** Prof. Dr. Nicolas Straube, Prof. Dr. Roland R. Melzer”

Further Education

Transmitting Science

Online

THE ART OF STORYTELLING, COMMUNICATING SCIENCE THROUGH POWERFUL STORIES

2024

- Scientific writing course

Instats

Online

PYTHON FOR EVERYONE

2024

- Python course

Transmitting Science

Online

NATURALISTIC AND SCIENTIFIC ILLUSTRATION 1 TRADITIONAL TECHNIQUES

2022

- Scientific illustration course

Transmitting Science

Online

NATURALISTIC AND SCIENTIFIC ILLUSTRATION 2: DIGITAL TECHNIQUES SECOND EDITION

2022

- Scientific illustration course

Transmitting Science

Online

GEOMETRIC MORPHOMETRICS FOR BEGINNERS

2021

- Gemoetric Morphometrics course

Ludwig-Maximilians-Universitaet (Faculty of Biology)

Munich, Germany

RESEARCH INTERNSHIP EVODeVO WORKING GROUP PROF. JOACHIM T. HAUG

2015

Field & Lab Experience

FIELD WORK

2024	Expedition , Biodiversity survey, Lim bay (limski zaljev)	Croatia
2024	Field work , Middle Miocene marine sediments near Kühnring	Austria
2024	Field work , Triassic formations of Polzberg	Austria
2024	Field work , Miocene marine formations St. Margarethen	Austria
2024	Field work , Miocene marine deposits near Velky Krtís	Slovakia
2023	Expedition , Biodiversity survey, Brijuni marine protected area	Croatia
2023	Field work , Miocene marine formations St. Margarethen	Austria
2023	Field work , Palaeogen and Neogene marine sediments of Antwerp with Dr. F. Mollen (Elasmobranch Research Belgium)	Belgium
2023	Field work , Middle Miocene marine formations near Kaisersteinbruch	Austria
2022	Expedition , Biodiversity survey, Brijuni marine protected area	Croatia
2020	Expedition , Biodiversity survey, Brijuni marine protected area	Croatia
2020	Expedition , Mapping and documentation of seagrass meadows along the Istrian coast	Croatia
2019	Expedition , Mapping and documentation of seagrass meadows along the Istrian coast	Croatia
2019	Expedition , Biodiversity survey, Brijuni marine protected area	Croatia

LAB EXPERIENCE

2022	Morphology , Clearing and staining of vertebrates	Austria
2022	Morphology , Morphological dissection and preparation of vertebrates	Austria
2018	Data , Processing (micro-) CT data	Germany
2018	Sample preparation , Staining of CT samples	Germany
2018	Sample preparation , Macro- & micro-dissection and preparation of invertebrate samples	Germany

Teaching Experience

Palaeobiodiversity

UNIVERSITY OF VIENNA

Austria

2024

- Lecture and practical course, 5 ECTS points

Principles of Palaeobiology

UNIVERSITY OF VIENNA

Austria

2024

- Lecture and practical course, 3 ECTS points

Biology for Earth Scientists

UNIVERSITY OF VIENNA

Austria

2023

- Lecture, zoology part, 5 ECTS points

Comparative Morphology and Evolution of basal Vertebrates

UNIVERSITY OF VIENNA

Austria

2022

- Dissection course of various basal vertebrates, 5 ECTS points

Student (Co-)Supervision

Raffael Pichler

UNIVERSITY OF VIENNA, ASPIRED TITLE: M.Sc.

Austria

2023 - present

- Project title: Locomotion patterns in the epaulette shark, *Hemiscyllium ocellatum* (Elasmobranchii, Orectolobiformes)

Sina Hübner

UNIVERSITY OF VIENNA, COMPLETED TITLE: B.Sc.

Austria

2023

- Project title: Cranial traits of the blue shark, *Prionace glauca* (Chondrichthyes, Carcharhiniformes)

Ricky Bichler

UNIVERSITY OF VIENNA, COMPLETED TITLE: B.Sc.

Austria

2023

- Project title: The head morphology of *Lachnolaimus maximus* (Hogfish) and a comparison to individuals from the genus *perca* and other labrids

JOURNAL ARTICLES

2023 , Jambura PL, Villalobos-Segura E, Türtscher J, Begat A, **Staggl, MA**, Stumpf S, Kindlimann R, Klug S, Lacomat F, Pohl B, Maisey JG, Naylor GJP, Kriwet J. Systematics and phylogenetic interrelationships of the enigmatic Late Jurassic shark *Protospinax annectans* Woodward, 1918 with comments on the shark-ray sister group relationship. *Diversity*. 2023. 15(3).

2023 , **Staggl, MA**, Ruthensteiner, B, Straube, N (2023). Head anatomy of a lantern shark wet-collection specimen (Chondrichthyes: Etmopteridae). *Journal of Anatomy*, 242(5), 872-890.

2023 , **Staggl, M.A.**, Abed-Navandi, D., Kriwet, J. (2022). Cranial morphology of the orectolobiform shark, *Chiloscyllium punctatum* Müller and Henle, 1838. *Vertebrate zoology*, 72, 311.

2019 , Melzer, RR, Heß, M, **Staggl, MA**, Makovec, T, Mavrič, B (2019). *Hippolyte prideauxiana* Leach, 1817: First Record for the Northern Adriatic and Observations on Mimetic Colouration. In *Annales: Series Historia Naturalis* (Vol. 29, No. 2, pp. 231-234). Scientific and Research Center of the Republic of Slovenia.

2019 , Guariento, E, Lanner, J, **Staggl, MA**, Kranebitter, P (2019). *Megachile sculpturalis* (Smith, 1853) (Hymenoptera: Megachilidae), the giant resin bee new to South Tyrol with a newly described plant species interaction. *Gredleriana*, 19, 209-215.

EDITED BOOKS

2022 , Melzer, RR, Brenzinger, B, Lehmann, T, Makovec, T, Mavrič, B, Meyer, R., **Staggl, MA**, Heß, M (2022). *Marine Microworlds: Excursions to the Bottom of the Adriatic Sea*. Verlag Dr. Friedrich Pfeil.

CONFERENCE PAPERS

2024 , **Staggl, MA**, Villalobos-Segura, E, Benton, MJ, Kriwet, J. Joint Meeting of the Polish Paleobiologists, and the 95th Annual Meeting of the Paläontologische Gesellschaft, Abstract Book. Warsaw, S. 137 A tale of two trends: Disentangling the drivers of neoselachian diversity and faunal composition in the Cenozoic (2024).

2024 , **Staggl, MA**, De Gracia, C, López Romero, FA, Stumpf, S, Villalobos-Segura, E, Benton, MJ, Kriwet, J. XXIV Edition of the Giornate di Paleontologia: Abstract Book. Pisa, S. 111 Habitat availability and environmental covariates drive Mesozoic neoselachian diversification: a multi-variate approach (2024).

2023 , **Staggl, MA**, Stumpf, S, De Gracia, C, Villalobos-Segura, E, López Romero, FA, Benton, MJ, Kriwet, J. (2023). Diversification patterns of Jurassic-Cretaceous elasmobranch fishes (Vertebrata, Chondrichthyes), XVII European Congress of Ichthyology: Abstract Book. Prague, S. 140-141.

2022 , Jambura, PL, Villalobos-Segura, E, Türtscher, J, Klug, S, Maisey, JG, Naylor, G, **Staggl, MA**, Stumpf, S, Kriwet, J. 2022. Reconciling genetics and morphology: a revised phylogenetic analysis of the enigmatic elasmobranch *Protospinax annectans* from the Late Jurassic Lagerstätte of Solnhofen, Germany. - Abstracts of the 82nd Annual Meeting of the Society of Vertebrate Paleontology: 189, Toronto, Canada.

2022 , **Staggl, MA**, Kriwet, J, Stumpf, S. 2022. End of the line: Quantifying the demise of hybodontiform shark-like chondrichthyans. - Abstracts of the 82nd Annual Meeting of the Society of Vertebrate Paleontology: 314-315, Toronto, Canada.

Grants & Awards

2024	Open Access Funding , requested additionally to the FWF Project P33820, led by Prof. Dr. Kriwet	Vienna, Austria
2024	Travel grant , Doctoral School of Ecology and Evolution of the University of Vienna	Vienna, Austria
2024	Special Award , "Snapshots of Exploration" photo competition of the Faculty of Earth Sciences, Geography and Astronomy	Vienna, Austria
2024	Travel grant , Faculty of Earth Science, Geography and Astronomy	Vienna, Austria
2023	Travel grant , Faculty of Earth Science, Geography and Astronomy	Vienna, Austria
2022	Travel grant , Faculty of Earth Science, Geography and Astronomy	Vienna, Austria
2019	Fellowship , Ludwig Salvator Fellowship funded by the Ludwig Salvator Society	Vienna, Austria

Conferences

The Palaeontological Association 68th Annual Meeting	Erlangen, Germany
TALK	Dec. 2024
From peak to decline: The story of Cenozoic neoselachian diversity	
Joint Meeting of the Polish Paleobiologists, and the 95th Annual Meeting of the Paläontologische Gesellschaft	Warsaw, Poland
TALK	Sep. 2024
A tale of two trends: Disentangling the drivers of neoselachian diversity and faunal composition in the Cenozoic	
XXIV Edition of the Giornate di Paleontologia of the Italian Palaeontological Society	Pisa, Italy
TALK	Jun. 2024
Habitat availability and environmental covariates drive Mesozoic neoselachian diversification: a multi-variate approach	
49. Arbeitskreistreffen Wirbeltierpaläontologie	Kiel, Germany
TALK	Mar. 2024
Revealing the lost World of Scombridae in the Pannonian Sea: A new Dogtooth Tuna Species and Implications for Scombrid Diversity	
XVII European Congress of Ichthyology	Prague, Czech Republic
POSTER	Sep. 2023
Diversification Patterns of Jurassic-Cretaceous Elasmobranch Fishes (Vertebrata, Chondrichthyes)	
48. Arbeitskreistreffen Wirbeltierpaläontologie	Berlin, Germany
TALK	Mar. 2023
Diversification Patterns of Jurassic-Cretaceous Elasmobranchs	
4th Palaeontological Virtual Congress	Online
PALAEOART CONTEST CONTRIBUTION	2023
Jurassic Jaws: <i>Protospinax annectans</i> in the Solnhofen Archipelago	
82nd Annual Meeting of the Society of Vertebrate Paleontology	Toronto, Canada
POSTER	Nov. 2022
End of the Line: Quantifying the Demise of Hybodontiform shark-like Chondrichthyans	
Public Exhibition, Brijuni MPA	Brijuni, Croatia
POSTER	Jul. 2020
Marine Microworlds of the Brijuni National Park	
Crustaceologen-Tagung	Munich, Germany
POSTER + PHOTO CONTEST CONTRIBUTION	Mar. 2019
Larval development of a Galatheid Squad Lobster with special remarks on the transition from apposition to superposition eye.	

Memberships

Memberships	- Palaeontological Association - Società Palaeontologica Italiana - European Ichthyological Society - Austrian Polar Research Institute (APRI)
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Imaging Systems

- Nikon Camera Systems (D3200, D5100, D7500, D850,...)
- Underwater Photography
- Micro-, and Macro Photography (Stacking and Stitching)
- Keyence Digital microscope VHX-6000

Imaging Software

- Adobe Photoshop
- Adobe Lightroom
- Adobe Illustrator
- Adobe Premiere Pro
- Adobe InDesign
- InkScape
- Zerene Stacker
- ACDSee
- Amira
- Dragonfly

GIS Software

- QGIS3
- OruxMaps
- GPS Track Editor
- Google Earth Engine (Satellite Image Coding)

Additional Software

- MS Office: (Word, Excel, Outlook, PowerPoint)
- R-Studio
- Zotero

Programming

- R
- Python
- LaTeX

Languages

- German
- English
- Italian
- Spanish

Additional Skills

- PADI: Divemaster
- European Driving License
- Salt- and Freshwater Aquaristics
- Terraristics