

f Christine figgener

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ResearchGate



Marine conservation biologist with a non-traditional and versatile skill set and over a decade of experience in marine megafauna research and conservation. Honoured as "Next Generation Leader" by TIME magazine. Featured researcher in productions of BBC, CBC, ARTE, BR, ARD, and KinderKanal.

Areas of Expertise: Applied Conservation Biology; Wildlife Biology and Management; Marine Ecology; Movement Ecology; Trophic Ecology; Population Monitoring; Biodiversity Status Assessments and Priority-Settings; Sustainable Fisheries; Bycatch Mitigation; Project Management; Science Communication and Outreach; Human Dimensions in Conservation

Education

Texas A&M University, College of Science | College Station, USA
Ph.D. in Marine Biology (Interdisciplinary Graduate Program) | Expected Fall 2019

Julius-Maximilian-University, Faculty for Biology | Würzburg, Germany
Diplom (Master of Science) in Biology, Major in Behavioural Physiology and Animal Ecology | March 2010
Master's Thesis: Paternity study and population genetics on the Caribbean Leatherback sea turtle population (*Dermochelys coriacea*) in Costa Rica
GPA 4.0

Eberhard-Karls-University, Faculty for Mathematics and Science | Tübingen, Germany
Vordiplom (~Bachelor of Science) in Biology | November 2005

Research Experience

Harte Research Institute & Texas A&M University | Texas, USA
Co-Principal Investigator | June 2019–Present

- Collaborative ecosystem-based assessment of Matagorda Bay, Texas
- Movement ecology of juvenile marine turtles present in Matagorda Bay (*Chelonia mydas*, *Caretta caretta*, *Lepidochelys kempii*).
- Utilisation of satellite tracking, acoustic tracking, and stable isotope analysis to delineate critical developmental habitat along the coast of Texas

Texas A&M University | College Station, Texas, USA
PhD Candidate | August 2014–Present

- Dissertation research in Costa Rica
- Behavioural ecology and physiology of olive ridley sea turtles (*Lepidochelys olivacea*)
- Utilisation of satellite tracking, stable isotope analysis, and morphometric analysis to investigate the basis of divergent nesting behaviour
- Spatial data used to delineate areas of conservation importance in Eastern Tropical Pacific

Golfo Dulce Whale and Dolphin Project | Peninsula Osa, Costa Rica
Research Associate | June 2011–January 2016

- Research in cetacean spatial and behavioural ecology, in particular, *Stenella attenuata*, *Tursiops truncatus*, *Megaptera novaeangliae*, *Steno bredanensis*, *Stenella longirostris*
- Research techniques included: boat-based surveys, spatial assessments, database work, photo identification, ethograms, recording and analyses of vocalisations
- Conservation actions included: education of public about measures for boat strike prevention and sustainable whale-watching, education of fishermen about bycatch prevention and proper release techniques

Leatherback and Pacific Green Sea Turtle Project Ostional | Ostional, Costa Rica

Field Director and Lead Biologist | October–February 2009/10, 2010/11, 2011/12, 2012/13

- Management of sea turtle conservation and monitoring project (including hatchery) and international research team
- Implementation of environmental outreach programs in local schools and tourist hubs
- Collaboration with adjacent artisanal fishing community to mitigate bycatch and entanglements
- Data management and analysis, field logistics, and technical reports
- Promotion of project, including creation and operation of website
- Fundraising and staff recruitment
- Administration and management of associated volunteer program

EarthWatch Leatherback Sea Turtle Project | Playa Grande, Costa Rica

Field Biologist | October 2009–February 2010

- Field research and coordination of volunteers in sea turtle population monitoring project

WIDECASST Sea Turtle Research & Conservation Project | Gandoca, Costa Rica

Field Coordinator and Lead Biologist | August–September 2009 | February–June 2010

- Management of sea turtle conservation and monitoring project (including hatchery) and international research team
- Implementation of environmental outreach programs in local schools and tourist hubs
- Collaboration with adjacent artisanal fishing communities mitigate bycatch and entanglements
- Data management and analysis, field logistics, and technical reports
- Promotion of project, including creation and operation of website
- Fundraising and staff recruitment
- Administration and management of associated volunteer program

BIOZENTRUM Julius-Maximilians-University | Würzburg, Germany

Student Researcher | September 2008–May 2009

- Laboratory work for Master's Thesis
- Analysis of genetic samples for paternity assay

WIDECASST Sea Turtle Research & Conservation Project | Gandoca, Costa Rica

Research Assistant | February–August 2008

- Collection of data and tissue samples for Master's Thesis
- Field research in sea turtle population monitoring project

BIOZENTRUM Julius-Maximilians-University | Würzburg, Germany

Research Assistant | June–November 2007

- Introduction to genetic analysis using PCR
- Development of microsatellite markers for *Metrioptera bicolor*

ANAI Sea Turtle Research & Conservation Project | Gandoca, Costa Rica

Research Assistant | February–June 2007

- Field research in sea turtle population monitoring project

Max-Planck-Institute for Developmental Biology | Tübingen, Germany

Research Assistant | April–July 2005

- Husbandry of experimental guppy stocks (*Poecilia reticulata*)
- Assistance with phylogenetic study of guppies from South America

Texas Sea Grant | College Station, TX

Graduate Research Assistant | September 2018–Present

- Support of the communications department by creating content for social media posts
- Support for research competitions

Costa Rican Alliance for Sea Turtle Conservation & Science (COASTS) | Costa Rica

Founder and Scientific Director | October 2014–Present

- Founder of non-governmental, not-for-profit organisation meant to empower the next generation of local scientists and conservationists in Costa Rica to take responsibility for the conservation of marine biodiversity
- Emphasis is on the unification of efforts to conserve and research sea turtles in Costa Rica

CULTOURICA | Ciudad Colón, Costa Rica

Tour Guide | October 2013–December 2018

- Naturalist and tour guide for a German tour operator
- Leading two-week tours through Costa Rica

Centro de Investigación de Cetáceos en Costa Rica (CEIC) | Costa Rica

Co-Founder and International Relations Representative | August 2012–January 2016

- Co-founder of CEIC, a non-governmental, not-for-profit organisation
- Fundraising, promotion of project, outreach

Tropica Verde e.V. | Frankfurt, Germany

Consultant for Community-Based Sea Turtle Conservation | August 2010–Present

- Advisory role for the development of conservation management concepts for sea turtle projects funded by the German NGO Tropica Verde e.V.
- Development of alternative tourism and sustainable living concept for a small Costa Rican community adjacent to a major leatherback turtle nesting beach.

Delphinarium Muenster | Allwetterzoo, Münster, Germany

Marine Mammal Husbandry and Training Intern | June 1998–August 2003

- Assistance in husbandry and training of bottle-nose dolphins, *sotalia* dolphins, and California sea lions
- Involvement in physiology studies of dolphins and sea lions
- Participation in dolphin therapy
- Involvement in outreach campaigns by YAQU PACHA e.V.

Texas A&M University | College Station, USA

Graduate Teaching Assistant & Undergrad Mentor | August 2014–Present

- Teaching BIOL214 Genes, Ecology & Evolution | BIOL319 Human Anatomy & Physiology
- Mentoring undergraduate students during field research/ study abroad experience in Costa Rica

International Student Volunteers, Inc. | Heredia, Costa Rica

Project Leader | May 2011–July 2014

- Leading student groups on educational trips to conservation projects in Costa Rica and Panama

Conservation Biology Field Course | Costa Rica

Founder and Instructor | April 2010–Present

- Organisation and instruction of annual accredited university course for science students from Germany, Austria, and Switzerland

Clemmie Gill School for Science & Conservation (SCICON) | Tulare County, California, USA

Environmental Education Counsellor | May 2001

- Counselling of primary school children in outdoor school

Selected Honours & Awards

2019 | **Footprint**, Ocean Hero Award
2019 | **Texas Sea Grant**, Inspire to Influence Award
2018 | **Dallas Morning News**, [Texan of the Year Finalist](#)
2018 | **TIME Magazine**, [Next Generation Leader](#)
2018 | **Texas A&M University, College of Science**, Dr. Joseph Newton Graduate Student Service Award
2017 | **Telonics, Inc.**, In-Kind Donation of Satellite Tracking Equipment
2016 | **American Museum of Natural History**, Lerner-Gray-Fund for Marine Research
2016 | **Texas A&M University Student Research Week**, Winner "Best Graduate Student Poster"
2015, 2016 | **Texas Sea Grant**, Grant-in-Aid for Graduate Research
2015 | **George Bush Presidential Library Foundation**, Graduate Student Travel Award
2011, 2014, 2016, 2017, 2018 | **International Sea Turtle Society (ISTS)**, Student Travel Award
2011 | **Leatherback Trust**, Travel Grant
2009, 2016 | **PADI Foundation**, Research Grant
2008 | **Oskar-Karl-Forster-Foundation**, Award for Gifted Students
2008 | **Deutscher Akademischer Austauschdienst (DAAD)**, Scholarship
2001 | **Golden State Exam (GSE)**, Golden Merit Seal in Biology
2000 | **Degussa Foundation**, Scholarship
2000 | **Youth for Understanding Foundation**, Scholarship

Special Skills & Techniques

Field Sampling & Monitoring Techniques: manual transmission and 4x4 vehicles; **marine turtles:** anti-poaching patrols, bycatch mitigation and proper release techniques; morphometrical analysis, mark-recapture (Inconel, Monel, AVID PIT), ultrasound imaging, tissue sampling, blood sampling, satellite tracking (ARGOS & IRIDIUM), VHF radio tracking, turtle rodeo; **cetaceans:** ethogram-based behavioural observations, photo ID, recording of vocalisations, bycatch mitigation and proper release techniques

Laboratory Techniques: DNA Extraction, PCR, Microsatellites, Stable Isotope Analysis, Lipid Extraction,

Analytical Programs: R, JMP, ArcGIS, SigmaPlot

Microsoft Suite: Word, PowerPoint, Excel, Outlook, Access

Adobe Creative Suite: Photoshop, PremiumPro

Social Media: Facebook, YouTube, Twitter, Instagram, LinkedIn

Languages: German (native), English (fluent), Spanish (fluent)

Certificates: EU Driver's License (B)
CMAS*, SCUBA License
CPR, First Aid, and Wilderness First Aid

Additional Skills: project management, volunteer coordination, public speaking, event planning, promotion, data management and analysis, grant writing, photography, marketing

Film Team Assistance: Facilitated the filming of sea turtles and other wildlife in Costa Rica. Acted as scientific advisor and expert, provided on-site field assistance, logistical support, and permitting assistance.

2018 | Double Act TV, Alastair Cook

2017 | Renegade Pictures, Jo Young

2013 | Storyline, Kjetil C. Astrup & Melanie Chamorel

2013 | Text & Bild, Ben Wolter & Marcella Müller

Academic Services

Memberships American Society of Naturalists; American Society of Ichthyologists & Herpetologists; International Biologging Society; International Sea Turtle Society; Society for Conservation Biology; Sigma Xi; Society for Integrative and Comparative Biology; The Animal Behavior Society; Ecological Society of America; National Geographic Society;

Reviewer for *Marine Biology*, *Journal of Experimental Marine Biology and Ecology*, *Herpetological Review*

Judge/ Committee/ Technical Commission: Mini Grants For A Strawless Ocean (www.strawlessocean.org); Premios América Latino Verde (www.premioslatinoamericaverde.com);

OUTREACH AND ADVOCACY in the areas of marine (turtle) biology and conservation, ocean plastics, and sustainable fisheries (bycatch, ghost nets, and entanglement issues)

[Ending the Age of Plastic](#) | TIME (2018/10/10), [Interview](#) | Dallas Morning News (2018/07/19)

Viral Videos: Sea Turtle with Straw up its Nostril (YouTube)*
Sea Turtle Entangled in Ghost Net Rescued (YouTube)

**International Popular Press Coverage* included: [National Geographic](#), [HuffPost](#), [Washington Post](#), [The Independent](#), [The Telegraph](#), [Daily Mail](#), [Teen Vogue](#), [Metro](#), [Elite Readers](#), Tokyo Broadcasting System, [ABC7 News](#), CNN

Film and TV Appearances:

- 2019 | *The Nature of Things: [Turtle Beach](#)* (S58E17) (CBC production, featured researcher)
- 2018 | *La Vie Secrète d'un nid de tortues marines* (ARTE production, featured researcher)
- 2018 | [Nature's Turtle Nursery](#) (BBC production, featured researcher)
- 2018 | [What is the real impact of the #strawban?](#) (ALJAZEERA -The Stream, 2018/07/23)
- 2017 | *STRAWS* (www.strawsfilm.com, documentary film about single-use plastics)
- 2014 | *Paula und die wilden Tiere* (BR production)
 - [Wie Schildkröten Eier legen](#) (E50)
 - [Fit wie ein Faultier](#) (E51)
 - [Warum nickt der Leguan?](#) (E52)

Podcast/ Radio Appearances:

- 2019 | Speak Up For Blue, "[SUF8 806: Sea Turtle Week with Christine Figgenger](#)"
- 2019 | Infomaniacs (WTAW, 2019/04/22)
- 2019 | 1Live (WDR, 2019/04/12)
- 2019 | Let's Rethink Food – "[E7: Safeguarding Earth with Food](#)" (EAT-Lancet)
- 2018 | Science Vs. – "[Plastics: The Final Straw?](#)"(Gimlet)
- 2018 | Higher Ed Social – "[Christine Figgenger & the Sea Turtles](#)" (ConnectEDU Network)

Invited Speaker:

- 2019 | Ocean Heroes Bootcamp 2019
- 2019 | GeoX Summercamp
- 2019 | Texas A&M University, SPH, Panel: Effects of Plastic
- 2019 | College of Charleston, Marine Biology Seminar Series
- 2018 | Texas Master Naturalists, Annual Meeting
- 2018 | International Herpetology Symposium, Houston
- 2018 | STRAWS Screening, Ocean Film Festival, Washington DC
- 2018 | "Social for the Ocean", Smithsonian Museum, Washington DC
- 2018 | First Texas Plastic Pollution Symposium, Corpus Christi
- 2018 | Veterinarians without Borders TAMU
- 2018 | Society for Conservation Biology, TAMU Chapter
- 2017 | STRAWS Screening & Panel, EarthX Film Festival, Dallas
- 2016 | TAMU Zoo Club

Collaborative Advocacy: The Last Plastic Straw (Plastic Pollution Coalition), Strawless Ocean (Lonely Whale Foundation), Sin Pajilla Porfavor, Turtles against Plastic

Mentorship of Young Scientists and Ocean Advocates: Skype with a Scientist, Letters to a Pre-Scientist, #TAMUTurtles, Turtles against Plastic, Girl Scouts Bryan/College Station, Team for Lego Challenge

Invited Contributor

Nature—World View "[What I learnt pulling a straw out of a turtle's nose](#)" (2018; Nature 563: 157)
medium.com "[Meet the Scientist behind the Viral Sea Turtle Video](#)" (2017)
Blue Ocean Network "The Sea Turtle Rangers", [Part 1](#) & [Part 2](#) (2017)

- Figgner C**, Bernardo J, Plotkin PT (2019). Beyond trophic morphology: stable isotopes reveal ubiquitous versatility in marine turtle trophic ecology. *Biological Reviews*
- Figgner C**, Bernardo J, Plotkin PT (2019). MarTurtSI, a global database of stable isotope analyses of marine turtles. *Scientific Data*. 6: 16
- Figgner C**, Beck E, Dunlop D, Castillo-MacCarthy A (2018). *Loxocemus bicolor*. Diet. *Herpetological Review*. 49(1):133
- Robinson NJ, **Figgner C**, Gatto C, Lazo-Wasem EA, Paladino FV, Santidrian Tomillo P, Zardus JD, Pinou T (2017). Assessing potential limitations when characterising the epibiota of marine megafauna: Effect of gender, sampling location, and inter-annual variation on the epibiont communities of olive ridley sea turtles. *Journal of Experimental Marine Biology and Ecology*. 497:71-77
- Figgner C**, Chacón D, Jensen M, Feldhaar H (2016). Paternity re-visited in a recovering population of Caribbean leatherback sea turtles (*Dermochelys coriacea*). *Journal of Experimental Marine Biology and Ecology*. 475:114-123
- Robinson NJ & **Figgner C** (2015). Plastic straw found inside the nostril of an olive ridley turtle. *Marine Turtle Newsletter*. 147:5-6
- Oviedo L, Herra-Miranda D, Pacheco-Polanco JD, **Figgner C**, Márquez-Artavia A, Quirós-Pereira W, Iñiguez M (2015). Diversidad de cetáceos en el paisaje marino costero de Golfo Dulce, Península de Osa, Costa Rica. *Revista de Biología Tropical*. 63 (Suppl.1):395-406
- Pacheco-Polanco JD, Herra-Miranda D, Oviedo L, Quirós-Pereira W, **Figgner C** (2015). Agregaciones de Alimentación del Tiburón Ballena *Rhincodon typus*, SMITH 1828 (Orectolobiformes: Rhincodontidae) en la cuenca interna de Golfo Dulce, Península de Osa, Costa Rica. *Revista de Biología Tropical*. 63 (Suppl.1):299-306

- Figgner C**, Bernardo J, Plotkin PT (in preparation). Beyond body size: sexual dimorphism in olive ridley turtles in the Eastern Tropical Pacific.
- Figgner C**, Bernardo J, Plotkin PT (in preparation). Trophic ecology of olive ridley turtles illuminated with table isotopes analysis: individuality is the pattern.
- Figgner C**, Bernardo J, Plotkin PT (in preparation). Individual differences in migratory behaviour pose challenge for feasible conservation measures in the Eastern Tropical Pacific
- Casale P, **Figgner C**, Arendt M, Kaska Y, Plotkin P, Luschi P (in preparation). Comparison of ARGOS and IRIDIUM satellite telemetry
- Figgner C**, Herra-Miranda D, Pacheco-Polanco JD, Márquez Artavia A, Fernández M, Goodman S, Oviedo L (in preparation). A niche-based model for humpback whale occurrence in an important Central American wintering ground: a presence-only approach.

- Figgenger C**, Bernardo J, Plotkin PT (2019). Spatial modelling used to identify and characterize oceanic areas of conservation importance for the Eastern Pacific olive ridley turtle, *Lepidochelys olivacea*. *Oral Presentation*. 39th International Symposium on Sea Turtle Biology and Conservation, Charleston, USA
- Figgenger C**, Bernardo J, Reich K, Plotkin PT (2018). Divergent nesting behaviour linked to differences in foraging behaviour of female olive ridley sea turtles nesting on the Pacific coast of Costa Rica elucidated with stable isotope analysis. *Oral Presentation*. 38th International Symposium on Sea Turtle Biology and Conservation, Kobe, Japan
- Figgenger C**, Bernardo J, Reich K, Plotkin PT (2018). Successful use of the IRIDIUM satellite system to study the fine-scale movements of internesting marine turtles. *Poster Presentation*. 38th International Symposium on Sea Turtle Biology and Conservation, Kobe, Japan
- Figgenger C**, Bernardo J, Reich K, Plotkin PT (2017). Trophic ecology of the olive ridley sea turtle in the Eastern Pacific Ocean. *Poster Presentation*. 37th International Symposium on Sea Turtle Biology and Conservation, Las Vegas, USA
- Figgenger C**, Bernardo J, Plotkin PT (2016). Sexual dimorphism & sexual selection in *Lepidochelys olivacea*. *Oral Presentation*. 36th International Symposium on Sea Turtle Biology and Conservation, Lima, Peru
- Figgenger C**, Bernardo J, Plotkin PT (2016). Sexual dimorphism in *Lepidochelys olivacea*. *Poster Presentation*. IDP MARB Retreat, Corpus Christi, USA
- Figgenger C**, Castillo-MacCarthy A, Mora-Sandoval J, Argüello-Gomez Y, Quiros-Peirera W (2014). Raising the hatching success of leatherback nests at the olive ridley mass-nesting beach Ostional (Guanacaste, Costa Rica). *Oral Presentation*. 34th International Symposium on Sea Turtle Biology and Conservation, New Orleans, USA
- Márquez-Artavia A, Oviedo L, Herra-Miranda D, Pacheco-Polanco JD, Quirós-Pereira W, Silva-Hernandez MG, **Figgenger C** (2012). The utilization distribution of humpback whales in Golfo Dulce, Costa Rica. International Whaling Commission (IWC). *Report of the Scientific Committee*. SC/64/015
- Oviedo L, Herra-Miranda D, Pacheco-Polanco JD, Márquez-Artavia A, Quirós-Pereira W, Silva-Hernandez MG, **Figgenger C** (2012). The critical foraging habitats of coastal bottlenose and pantropical spotted dolphins in Golfo Dulce, Costa Rica. International Whaling Commission (IWC). *Report of the Scientific Committee*. SC/64/SM10
- Figgenger C**, Quiros-Pereira W (2011, 2012, 2013). Leatherback and Pacific Green Sea Turtle Research and Conservation Project Ostional – Nesting-Season 2010/11 (2011/12, 2012/13). *Technical Report* for MINAE/SINAC
- Figgenger C**, MacCarthy A, Chacón D, and Feldhaar H (2010). Re-assessment of mating strategies of Caribbean leatherback turtles. *Poster Presentation*. 30th International Symposium on Sea Turtle Biology and Conservation, San Diego, USA
- Figgenger C** (2010). Paternity study and population genetics on the Caribbean Leatherback sea turtle population (*Dermochelys coriacea*) in Costa Rica. *Master's Thesis*, Julius-Maximilians-University Wuerzburg Germany. ProQuest 175251699.
- Figgenger C** (2009). Monitoring of the nesting activities of the Hawksbill turtle (*Eretmochelys imbricata*) and the Green turtle (*Chelonia mydas*) at Playa Gandoca, Gandoca-Manzanillo Wildlife Refuge, Costa Rica from August until October 2009. *Technical Report* for MINAE/SINAC
- Figgenger C** (2005). Size does matter – clients' choice of cleaning stations of the cleaner wrasse *Labroides dimidiatus* in the Red Sea. *Senior Project*. Eberhard-Karls-University Tuebingen, Germany