VI



International Conference on Malaria and Other Blood Parasites of Wildlife &

III International Symposium of the Wildlife Diseases Research Network

November 26th – 29th 2024

Sede de Investigación Universitaria – SIU

Cl. 62 #52-59, La Candelaria

Medellín, Colombia.

Hosted by the Grupo de Ecología y Evolución de Vertebrados¹, Grupo Malaria², International Society of Zoological Sciences and the Grupo Relación Parásito Hospedero³.

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| TUESDAY 26th - FRIDAY 29th NOVEMBER, 2024. | | | | | |
|--|---|--|---|---|---|
| TIME | 26 th - TUESDAY | 27 th - WEDNESDAY | 28 th - THURSDAY | 29 th - FRIDAY | 30 th - Saturday |
| 7:00 - 8:00 am | | | | | |
| 8:00 – 9:00 am. | REGISTER | | Workshop: Open meeting on use of IA tools for image-based parasite diagnosis | | |
| 9:00 - 9:10 a. m. | | The Wildlife Malaria Network | | The biology of blood parasites | |
| 9:10 - 9:25 a. m. | WELCOME/OFFICIAL OPENING | (WIMANET): who we are, what we do, and what we can do for | Birds and their hidden companions: Are there connections? | in amphibians and reptiles: Insights into host-parasite | |
| 9:25 - 9:40 a. m. | | you. Jenny Dunn | Alžbeta Šujanová | interactions and ecology. Edward Netherlands | GUIDED TOURS |
| 9:40 - 9:55 a. m. | Blood parasites and wildlife: The development of a | Tempo and mode in the evolution of primate malaria parasites. Ananias Escalante | Long-term efficacy of Malarone™ against malaria: insights from a study on Plasmodium relictum in Canaries. Vaidas Palinauskas | Isospora and Lankesterella parasites (Eimeriidae, Apicomplexa) of Passeriformes in Europe: infection rates, phylogeny, and pathogenicity. Josef Harl | (NOT INCLUDED IN THE REGISTRATION FEE) |
| 9:55 - 10:10 a. m. | discipline. Santiago Merino | Why is pSGS1 so successful? Ana Rivero | РНОТО | Spatial, phenological, and host-specificity patterns of three genera of blood coccidians in two Mediterranean lizards. Claudia Mediavilla (ONLINE) | |

| 10:10 - 10:20 a. m. | | COFFE BREAK | |
|---------------------|-------------|-------------|--|
| 10:20 - 10:40 a. m. | COFFE BREAK | COFFE BREAK | |

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|------------------------|---|---|---|---|---|
| 10:40 - 10:55 a. m. | Assemblages of haemosporidian parasites in birds with different migration status. Xi Huang (ONLINE) | Infection Challenges with Avian Malaria to understand the genetic basis of key processes on bird evolution. Ricardo Jorge Lopes | Effects of triazole fungicides consumption and avian malaria infection on passerine birds' health and immune system. Jéssica Jiménez-Peñuela | Looking for small creatures: a comparative analysis of methods for detecting Lankesterella parasites in birds. Germán Alfredo Gutiérrez Liberato | |
| 10:55 - 11:10 am | What kind of birds are more susceptible to avian malaria? A global analysis based on interpretable machine learning approach. Xinyi Wang | Unraveling Cryptic Genetic Diversity and the Complex Co-evolutionary Dynamics of Avian Malaria Parasites and Their Hosts. Lu Dong (ONLINE) | Infectionintensity shapes specializationand beta diversity ofhaemosporidian—birdnetworks across elevations. Diego Santiago-Alarcon (ONLINE) | Diversity of morphotypes and molecular lineages associated with Onchocercidae infecting wild birds, amphibians, and reptiles in Colombia. Gustavo Andres Fuentes-Rodriguez | GUIDED TOURS (NOT INCLUDED IN THE |
| 11:15 - 11:30 am | A dominant gut bacterium modulates the asymptomatic viral carriage of migratory birds. Longying Wen | Phenotypic plasticity of Plasmodium parasites in response to environmental triggers. Valentin Chauvin | Exo-erythrocytic development of Haemoproteus attenuatus and first report of abortive development of Haemoproteus majoris in the Thrush nightingale Luscinia Luscinia. Mélanie Tchoumbou (ONLINE) | Predictors of diversity, specificity and distribution of avian Hemosporidia in South America. Juliana Tamayo-Quintero | REGISTRATION FEE) |
| 11:30 - 11:45 am | Robotic data acquisition with deep learning enables cell image—based prediction of transcriptomic phenotypes. Jianshi Jin | Influence of Host and Environmental Factors on haemosporidian Infections in Tropical Birds. Paula Pinzón Cardenas | Meronts and megalomeronts: evidence for phenotypic variation during exo- erythrocytic development of Haemoproteus species. Tanja Himmel | Dynamics of resting metabolic rate and innate immune response in malaria-infected Eurasian siskins. Andrey Mukhin | |

| 11:45 - 12:00 am | Lunch | Changes in parasite abundance in a bird population sampled across a quarter of a century. Olof Hellgren | Application of YOLO algorithm to the detection of wildlife aviary blood parasites. Juan D. García-Arteaga | Linking past and present: treasure chest in museums. Mélanie Duc | |
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| 12:00 - 1:30 pm | LUNCH | | | | |

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|----------------|---|---|--|---|---|
| 1:30 - 1:45 pm | | | A new long-read mitochondrial- genome protocol (PacBio HiFi) for avian haemosporidian parasites: Raptors as a case of study. Andreina Pacheco | A journey into the knowledge of blood parasites of wild vertebrates in Colombia. Angie D. González | |
| 1:45 - 2:00 pm | Blood parasites in rodents from anthropized landscapes. Rodolfo Dirzo | Blood-borne pathogens associated with bats. Alexandra Corduneanu | Gene family analyses of avian haemosporidian genomes. Nayden Chakarov | Leucocytozoon sporozoites in wild-caught Simuliidae. Carolina R. F. Chagas (ONLINE) | GUIDED TOURS |
| 2:00 - 2:15 pm | | | Host-parasite interactions of an avian blood parasite elucidated by single-cell transcriptomics. Tim Maximilian Rapp | Diversity and abundance of Culicoides biting midges transmitting Haemoproteus parasites on the Curonian spit (south-eastern baltic sea cost). Elena Platonova | (NOT INCLUDED IN THE REGISTRATION FEE) |
| 2:15 - 2:30 pm | Identifying the diversity of mosquito vectors in the Doñana World Heritage Site. Josué Martínez-de la Puente | High diversity and phylogenetic relationships of Polychromophilus and Hepatocystis parasites of various bat species in Cambodia. Juliane Schaer. (ONLINE) | Haemosporidian parasites in nestlings of birds of prey in Lithuania: prevalence, diversity, and vectors. Dovilė Bukauskaitė | Host Plasmodium infection status affects <i>Culex pipiens</i> life-history traits across sequential blood meals. Soledad Santillán- Guaysamín | |

| 2:30 - 2:45 pm | Landscape and mosquito community explain the avian malaria infection patterns in Culex pipiens. Martina Ferraguti | Molecular survey of hemopathogens in non-hematophagous bats from Belo Horizonte, Minas Gerais, Brazil. Nícolas Colácio | Prior host species prime the gene expression of malaria parasites Luz García-Longoria | Role of the Invasive <i>Aedes</i> albopictus in the Transmission of Avian Malaria Parasites. Jesús Veiga | |
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|-------------------|--|---|---|---|---|
| 2:45 - 3:00 pm | Associations between Culex perexiguus microbiota and the avian pathogen West Nile virus. Marta Garrigós | Transcriptome analysis of <i>Hepatocystis</i> -infected epauletted fruit bats in Uganda. Brenda Mugambi (ONLINE) | A plethora of blood parasites (Protozoa: Apicomplexa: Haemosporida) in captive and free-ranging Afrotropical birds: Implications on conservation and opportunities for future research. Mamohale Chaisi (ONLINE) | Shifting Landscapes, Shifting Vectors: How Forest Disturbance Alters Aedes Mosquito Communities and Potential for Avian Malaria Transmission in a Cameroonian Rainforest. Cyril Kowo (ONLINE) | |
| 3:00 - 3:15 pm | Association of Matryoshka RNA Viruses with Avian haemosporidian Parasites. Ravinder Sehgal | Forests, altitude, or parasites: <i>Alophoixus flaveolus</i> in the Hkakabo Razi Landscape. Swen C Renner | The prevalence and genetic diversity of haemosporidian parasites (Apicomplexa, Haemosporida) in birds of the white sea. Maria Erokhina | Diversity of trypanosomatids in <i>Culicoides</i> biting midges Margarita Kazak (ONLINE) | GUIDED TOURS (NOT INCLUDED IN THE REGISTRATION FEE) |
| 3:15 - 3:30 pm | Wild-caught biting midges as vectors of Haemoproteus parasites and factors influencing the spread of infection. Rita Žiegytė | Experimental evidence that blood parasite infection and nest microclimate affect incubation behaviour in cavity-nesting songbirds. Marina García-del Río | Selective whole genome amplification – A promising tool for making malaria genomic studies more accessible and affordable. Angela Theodosopoulos | Trypanosomatids – neglected avian blood parasites. Rasa Bernotiene | |
| 3:30 - 3:45 pm | A proposal for the application of the diversity index in parasites: blood parasites in fish from two types of water sources in Arauca, Colombia. | Life-History Traits and haemosporidian Parasite Load in Great Tit Nestlings in Vienna, Austria: the role of urbanization. Marcela Suarez-Rubio | Avian haemosporidian Infection in Wildlife Rehabilitation Centres of Portugal: Causes, Consequences, and Genetic diversity. Alfonso Marzal | Rhinella as an animal model: its value in studying blood parasites. Nubia E. Matta Camacho | |

| | Andres Felipe Aponte- Gutiérrez | | | |
|--------------------|--|---|-------------------|--|
| 3:45 - 4:00 p.m | COFFE BREAK | | | |
| 4:00 - 5:30 p.m | 20 POSTERS EACH DAY CONFERENCE CLOSING | | | |
| 5:00 – 7:00 p.m | | Workshop: Open meeting on use of IA tools for image-based parasite diagnosis. | CONFERENCE DINNER | |

POSTERS

TUESDAY 26th - FRIDAY 29th NOVEMBER, 2024.

| POSTER | TUESDAY, 26th NOVEMBER. 4:30 – 5:30 PM |
|--------|--|
| 1 | Infection by Acanthocheilonema sp. and Dirofilaria sp. in mesocarnivores in the Andean region of Colombia. |
| | Brayan Andrés Gamboa-Suárez |
| 2 | First molecular detection of <i>Polychromophilus</i> spp (Haemosporida:Plasmodiidae) in bat flies from brazilian bats. |
| | Bruno S. Mathias |
| 3 | Host species and age-specific variation on Hepatozoon prevalence and its effect on body condition in two Neotropical crocodiles. |
| | Wendy Flores-Saavedra |
| 4 | Effect of climate change and economic development on hemorrhagic fever with renal syndrome. |
| | Gang Chang |
| 5 | Culex pipiens microbiome: effects of diet and avian malaria exposure. Jesús Veiga |
| 6 | Stress might impact <i>Hepatocystis</i> infections in peri-domestic epauletted fruit bats in Uganda. |
| | Juliane Schaer (ONLINE) |
| 7 | Exploring the effects of avian malaria on bird gut microbiota. |
| | Juste Azelyte |
| 8 | Avian haemosporidian parasites from wild-caught mosquitoes with new evidence on vectors of <i>Plasmodium matutinum</i> . |
| | Kristina Valavičiūtė-Pocienė (ONLINE) |
| 9 | A checklist of the <i>Anopheles</i> mosquito species (Diptera: Culicidae) in Colombia Caribbean. |
| | Luis Acuña-Cantillo |

| 10 | Avian malaria parasites (haemosporida: plasmodiidae) in mosquitoes (diptera: culicidae) on the Curonian Spit, South-East Baltic Sea coast. |
|----|--|
| | Maria Erokhina |
| 11 | Microbiota disruption modulates <i>Culex pipiens</i> immune response. |
| | Marta Garrigós |
| 12 | Targeting key mosquito species to control West Nile virus transmission in a mediterranean region. |
| | Martina Ferraguti |
| 13 | Matryoshka viruses and avian haemosporidians in Europe: finding a needle in a haystack. |
| | Mélanie Duc |
| 14 | First investigation of blood parasites of bats in Burkina Faso detects <i>Hepatocystis</i> parasites and infections with diverse <i>Trypanosoma</i> spp. |
| | Noel Gabiliga Thiombiano (ONLINE) |
| 15 | Microfilariae infection in short-distance migratory birds in Lithuania. |
| | Rasa Binkienė |
| | |
| 16 | Differential nested patterns of commensals and endosymbionts in microbial communities of two Culex mosquito species. |
| | Rita Žiegytė |
| 17 | Estimating Influencing Factors on the Global Distribution Pattern of Avian Haemosporidian Parasite. |
| | Beixi Wangzheng (ONLINE) |
| 18 | Blood parasites of fish from some localities of the Colombian Amazon and Orinoco regions. |
| | Carlos Arturo Vega Suárez |

| POSTER | WEDNESDAY, 27th NOVEMBER. 4:30 – 5:30 PM |
|--------|---|
| 1 | Evolutionary adaptation in blood group genes across non-human primates may be driven by malaria-causing parasites. |
| | Alejandra Herbert Mainero (ONLINE) |
| 2 | Exo-erythrocytic stages of Haemoproteus parasites in blackcaps: coinfections and the challenges in identification. |
| | Alžbeta Šujanová |
| 3 | The prevalence of <i>Haemoproteus</i> spp. in different avian groups from southern Vietnam. |
| | Andrey Bushuev |
| 4 | Morphological and molecular characterization of Trypanosoma spp. in anurans from tropical ecosystems in Colombia. |
| | Angelica Tatiana Ospina Rios |
| 5 | Morphological diversity of hemoparasites present in Colombian Thraupidae species. |
| | Angie D. González |
| 6 | Leptodactylidae and Bufonidae blood parasites from Caatinga domain, Brazil. |
| | Carla Adrielle Costa de Carvalho |
| 7 | The impact of avian malaria infection on feather quality and feather growth rate of migratory passerines. |
| | Carlos Mora-Rubio |
| 8 | Diversity and host specificity of avian haemosporidians at the largest conservation reserve in the Atlantic Forest. |
| | Carolina C. Anjos |
| 9 | Seasonal regulation of haemosporidian infection risk throughout the annual cycle of migratory birds. |
| | Claudio Navarrete |
| 10 | Haemosporidian parasites in wintering long-eared owls <i>Asio otus</i> in Northern Serbia. |
| | Daliborka Stanković (ONLINE) |

| 11 | Factors associated with the prevalence of Haemosporidian parasites in Anseriformes from Chile. |
|----|---|
| | Daniela Loyola |
| 12 | Prevalence of haemosporidian blood parasites and leukocyte profile in two South Asian Babblers. |
| | Ekaterina Shishkina |
| 13 | Morphological and molecular identification of <i>Hepatozoon</i> spp. (Apicomplexa: Adeleorina) in some snakes from Colombia. |
| | Erick Nicolás Patiño Acosta |
| 14 | Molecular and microscopical detection of <i>Trypanosoma</i> spp. infections in reptiles and amphibians in Brazil. |
| | Gabriella R. C. Clemente |
| 15 | An integrative approach to understanding Leucocytozoon infections in Paridae birds. |
| | Germán Alfredo Gutiérrez Liberato |
| 16 | Sequestration of blood stages in Leucocytozoon toddi infections. |
| | Herbert Weissenböck |
| 17 | Changes in ornamental colouration and body condition caused by <i>Hepatozoon</i> infection in three Amazonian tortoise species. |
| | Irene Hernandez-Caballero |
| 18 | The prevalence of hemoparasites and leukocyte profile parameters in three species of European lizards. |
| | Irina Demina |
| 19 | Hemosporidios en aves silvestres en un gradiente altitudinal en el Departamento de Caldas-Colombia. |
| | Jesús David Santana Porras |

| POSTER | THURSDAY, 28th NOVEMBER. 4:30 – 5:30 PM |
|--------|--|
| 1 | Haemosporida present in birds of Vireo and Catharus from a Colombian biological collection: morphological analysis reveals two new |
| | Plasmodium species. |
| | Juanita Cárdenas |
| 2 | Diversity of haemoparasites in free-living tropical dry forest and captive birds: how many are shared? |
| | Laura-Sofía Delgado-Luligo |
| 3 | The first report of <i>Plasmodium</i> infecting a Red-Legged-Seriema (<i>Cariama cristata</i>): A new <i>Plasmodium</i> sp. lineage found in Brazil with remarks |
| | on its pathogenicity. |
| | Lis Vieira |
| 4 | Annual distribution of hemoparasites infections in wild birds in a semideciduous forest in Brazil. |
| | Luiz Alves |
| 5 | Detection of Haemosporidia in Gyrfalcons in Alaska: Immune Response Implications. |
| | María Teresa Reinoso-Pérez |
| 6 | Geographical distributions and avian host specificity in <i>Haemoproteus</i> lineages: A review of two databases. |
| | Misa Shimizu |
| 7 | New member of Plasmodium (Vinckeia) and P. cyclopsi discovered in bats in Sierra Leone – nuclear and complete mitochondrial genome |
| | analyses. |
| | Oskar Werb (ONLINE) |
| 8 | Ethnoecological analysis of malaria in two indigenous communities in the Colombian Amazon |
| | María Camila Aroca Aguilera |

| Haemosporidian parasites in birds of forest enclaves in semi-arid savanna in the northeast of Brazil. |
|--|
| Pedro Pereira |
| Molecular Characterization of Haemoproteus gallinulae (AMPHO01) from White-breasted Waterhens (Amaurornis phoenicurus) in Thailand. |
| Phirom Prompiram (ONLINE) |
| Molecular detection of hemoparasites (Apicomplexa: Haemosporida) in blood and tissue samples in bats from Valle del Cauca. |
| Christian Cabrera-Ojeda |
| Towards the curation of host-symbiont interactions in the future. |
| Ricardo Jorge Lopes |
| Blood parasites of <i>Pleurodema thaul</i> (Anura: Leptodactylidae) in Chile. |
| Rocío Sanhueza-Caba |
| Hematological response to Haemosporidia parasites in understory avian assemblages across different land use types and seasons in a cloud |
| forest ecosystem in Veracruz, Mexico. |
| Sandra Rocío Hernández Soto |
| Preliminary investigation of avian blood parasites in trans-Saharan migrants at a desert stopover site. |
| Tabe Tiku Regine Claire |
| Prevalence of hemosporidian parasites in birds from forested areas surrounding the Magdalena River in Santander, Colombia. |
| Tiana Beltran |
| Characterization of Haemoproteus macrovacuolatus in a new host, Tadorna ferruginea (Anseriformes). |
| Vitória Loiola (ONLINE) |
| Avian haemosporidian infection prevalence in California as a reflection of environmental conditions. |
| Wilmer Amaya-Mejia |
| |

19 New data on the Haemosporida of South Vietnam birds.

Yana Dombrovskaya

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