VI. International Eurasian Ornithology Congress

23-27 April 2018, Heidelberg, Germany

Abstract Book

Editors:
Michael WINK, Tamer ALBAYRAK, İlhami KİZİROĞLU, Ali ERDOĞAN

PROGRAM Overview

- Monday, April 23:
  - 14:00 – 19:00 Arrival and registration
  - 18:00 – 20:00 Welcome reception
- Tuesday, April 24
  - 07:30 – 12:00 Registration
  - 08:45 – 11:20 Talks
  - 11:20 – 11:40 Coffee break
  - 11:40 – 12:40 Talks
  - 12:40 – 14:00 Lunch (in Student Canteen/Mensa)
  - 14:00 – 16:40 Poster pitching & talks
  - 16:40 – 17:00 Coffee break
  - 17:00 – 18:40 Talks
  - 18:40 – 19:30 Coffee break
  - 19:30 – 21:30 Poster session with wine, beer and snacks
- Wednesday, April 25

  Field trip to the Nature Conservation Area Waghäusel – Wagbachniederung (only water is provided, bring your own snack)
  - 08:30 – Bus departure from BioQuant (Im Neuenheimer Feld 267)
  - 13:15 – Bus departure from Wagbachniederung parking place
  - 14:00 – Lunch at Berghof Weinäcker Gaiberg: buffet (drinks not included)
  - 17:30 – Bus departs to Heidelberg
- Thursday, April 26
  - 09:00 – 10:40 Talks
  - 10:40 – 11:00 Coffee break
  - 11:00 – 12:40 Talks
  - 12:40 – 14:00 Lunch buffet at Marsilius Kolleg (congress venue)
  - 14:00 – 16:00 Talks
  - 16:00 – 16:40 Coffee break
  - 16:40 – 17:20 Talks
  - 17:20 – 17:40 Closing and farewell
- Friday, April 27

  Optional. Excursion to Frankfurt airport as a special habitat for endangered bird species
  - 09:30 – 12:00

Symposium Chairmen
Dr. Michael WINK
Dr. İlhami KİZİROĞLU

Chairman of Organizing Committee
Dr. Michael WINK

Symposium Secretary
Dr. Tamer ALBAYRAK

Organizing Committee
Dr. Michael WINK
Dr. İlhami KİZİROĞLU
Dr. Tamer ALBAYRAK
Dr. Ali ERDOĞAN
Dr. Bülent GÜNDÜZ
Dr. Murat TOSUNOĞLU

SCIENTIFIC COMMITTEE (in alphabetic order)

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Dr. Zoltan BARTA (University of Debrecen, Hungary)

Contents

Final category: Invited

Invited 01

THE BARN OWL: A PREDATOR THAT METAMORPHOSES FROM A HAWK INTO A DOVE

Alexandre Roulin

University of Lausanne, Lausanne, Switzerland

The barn owl is a fascinating bird that I am studying for more than 25 years. It is cosmopolitan, its plumage varies in coloration and this bird shows remarkable behaviour including cooperation between young siblings. In this talk I will highlight some key results our research group obtained on the study of (1) colour polymorphism, (2) reproductive behaviour and (3) social interactions between family members. This will be an opportunity to show that birds are not so different from human beings and can inspire us. To prove this statement I will present a project in the Middle East where we use wild barn owls to bring Israeli, Jordanians and Palestinians at the same table.

Invited 02

WINNERS AND LOSERS - CHANGES IN THE BIRD LIFE OF GERMANY

Michael Wink

Heidelberg University, Heidelberg, Germany

This plenary provides an introduction to bird life in Germany, with special emphasis on the Nature Conservation area Wagbachniederung, which will be the destination of the field trip on April 25. The composition of German birds has changed strongly over the last 50 years. Several species have recovered from declines earlier in the last century: Winners include most raptors, water birds, herons, storks, cranes, pigeons, wood peckers, tits & relatives. These taxa have profited from nature conservation, reduced hunting activities, food availability, and milder winters. This group also includes several neozoa, such as Canada goose, Egyptian goose, or Ring-necked parakeet (the latter with over 5000 individuals in the Heidelberg area). In the Wagbachniederung, a breeding population of Purple herons developed within the last 3 decades into a colony of over 30 breeding pairs at present. Also other Mediterranean species, such as Bee eaters, Melodious warblers and Cirl bunting could establish themselves in good numbers. On the other hand, we have many losers: they are mostly birds, which live in agricultural areas with extensive utilisation (industrial agriculture), such as Partridge, Lapwing, Curlew, Snipes, Black-tailed godwits, Common Skylark, Starlings and Field sparrows. Also, most insect-feeding, long-distance migrants show substantial declines. This decrease is certainly correlated to the dramatic loss of insects in most regions of Europa, due to increased utilisation of pesticides and habitat loss.

Invited 03

THE CONTROL OF AVIAN MIGRATION – AN INTEGRATED APPROACH WITH NORTHERN WHEATEARS *OENANTHE OENANTHE*

Franz Bairlein

Institute of Avian Research, Wilhelmshaven, Germany

Bird migration is one of the most spectacular natural phenomena. But it is only the last 100 years we are able to unravel its mysteries, by tracking, by captive studies understanding the internal mechanisms controlling bird migration, and by sophisticated field studies demonstrating the effects of external factors, such as food availability, weather, competitors, parasites or diseases, on the stopover behavior of migrants and migratory flights. However, integrated approaches to study coherently how the innate migration program interacts with the environment are almost missing. With the Northern Wheatear (*Oenanthe oenanthe*) we started such an integrated approach. The species has an almost whole Holarctic breeding range and all breeding populations overwinter in sub-Saharan Africa which makes the Northern Wheatear one of the most long-distant migratory songbirds with extraordinary long non-stop flights across oceans. It is a nocturnal migrant which travels without parental or social aid/guidance. Thus, young birds rely entirely on endogenous mechanisms of timing, route selection and fuelling on their first outbound migration. By establishing indoor housing under controlled conditions the endogenous control mechanisms of Northern Wheatear migration could be revealed. At the same time, environmental factors controlling migration and stopover could be investigated in the field making use of use of remote balances, radio-tagging and even experimentally manipulated food availability. By combining field and laboratory studies at various spatial and temporal scales, and linking various sub-disciplines we are aiming a coherent understanding of the control of bird migration.

Invited 04

TRENDS OF DNA STUDIES IN BIRDS

Michael Wink

Heidelberg University, Heidelberg, Germany

The investigations of nucleotide sequences of marker genes, of genomes and transcriptomes enhance our understanding of avian evolution. However, these new data also have strong implications on the systematics and taxonomy of birds with consequences for most ornithologists. Many species have been splitted into new taxa, increasing the number of bird species by roughly 1000 within 20 years to 10300 species at present. It is not unlikely that we end up with more than 17000 bird species when all DNA studies have been done. Several genera have seen changes too: some monotypic genera have been lumped into bigger genera. But more often existing larger genera have been splitted in several new monophyletic genera (e.g. in tits, gulls). The evolutionary past, especially the influence of last glaciation on the distribution of birds, can be studied with DNA markers of higher resolution, such as microsatellites and single nucleotide polymorphisms (SNPs) (Kraus & Wink 2015).

The avian tree of life project has seen tremendous advances recently through genome analyses so that we have quite a reliable overview on the taxonomic position of all bird orders and bird families.

The study of transcriptomes via RNASeq is the latest tool for ornithologists which allow investigations of the phenotype of birds and their multiple adaptations (Jax, Wink & Kraus 2018).

Welcome talk 01

BIRD RINGING: BANDING OF GEESE

Ilhami Kiziroğlu[1], Michael Wink[2]

[1]Hacettepe University Environmental Education and Bird ringing Center, Ankara, Turkey. [2]IPMB, Heidelberg University, Heidelberg, Germany

Bird Ringing started in Turkey in the birds' paradise Manyas in 1938 by Prof. Curt Kosswig, and restarted in 1977 by Prof. Kiziroğlu from Hacettepe University by a Project from TUBITAK. Presently organized by the Forst minister and bird ringing center from Antalya/Boğazköy, Samsun/Çernek and Nord Nature Society/Kars. Rings are marked with a number and the name of centre and TR. In Europe the bird ringing is organized by EURING. In Germany the bird ringing started on Helgoland and Rositten in 1900. Until today 200 million birds have been ringed in different countries, and millions of ringed birds were recaptured or found later. In this study we describe the capture and ringing of 147 individuals from three goose species in Heidelberg, Germany by Prof. Dr. Michael Wink.

Final category: Behavior

Oral _02

THE ASIAN ROSE-RINGED PARAKEET (*ALEXANDRINUS MANILLENSIS*, SYN. *PSITTACULA KRAMERI MANILLENSIS*): CURRENT TAXONOMY AND ASPECTS ON POPULATION AND BREEDING BIOLOGY

Michael Braun, Liviu G. Pârâu, Michael Wink

Institute of Pharmacy and Molecular Biotechnology, Dep. Biology, Heidelberg University, Im Neuenheimer Feld 364, 69120 Heidelberg, Heidelberg, Germany

The molecular phylogeny of the genus *Psittacula* revealed that the genus is not monophyletic, as at least two distinct parrot genera, *Psittinus* and *Tanygnathus*, cluster within that group. There are several morphological groups of species which are identical to phylogenetic units. Based on the paraphyly, the genus has been split up into several genera. The three new described genera are: *Himalayapsitta* for *H. himalayana, H. finschii, H. cyanocephala, H. roseata*, *Alexandrinus* for *A. krameri*, *A. eques/echo* and *A. exsul*, and *Nicopsitta* for *N. calthorpae* and *N. columboides*. *Palaeornis* is now used for *P. eupatria* and *P. wardi*, *Belocercus* for *B. longicauda*. Furthermore, the Rose-ringed parakeet (*Psittacula krameri*) is a paraphyletic species as it includes the taxon *echo* from Mauritius, and has been split between the African and the Asian clade. Since 1962 the Asian rose-ringed parakeet is living in the Rhine-Neckar Region, where it first bred in 1974. Since then the population increased to 6,500 birds in 2017 with more than 14,000 birds in total in Germany. Because of natural nesting cavities shortage, Asian Rose-ringed parakeets in Heidelberg started to breed in woodpecker holes in thermal insulation of buildings. By 2003, 50% of the local population bred in thermal insulation. Nest boxes were used by the parakeets after the façade holes were closed. The development of the chicks was different between male and female chicks, while, to our surprise, there was no difference between early and late hatched chicks. Temperatures in thermal insulation were higher than in tree cavities.

Oral _03

CONDITION AND HEALTH OF LITTLE EGRET NESTLINGS IN RELATION TO HATCHING ORDER

NEB AMEL

Faculty of science, Gabes, Tunisia

The onset of incubation before the end of laying imposes asynchrony at hatching and, therefore, an age hierarchy in the brood. This cost can have potentially various consequences for offspring quality and fitness. The aim of this study was to examine the condition and the health of little egret nestlings in relation to hatching order, during the rearing period 2015 on an islet in Boughrara Lagoon, south-east Tunisia. Specially, we investigated the relationship between chick's physiological and morphological quality and fluctuating asymmetry with their hatching order. Ours results showed that morphometric and condition parameters of the little egret chicks varied significantly according to hatching order. Pairwise comparisons showed no significant difference between the first and second hatchlings. However, the third hatchlings had significantly higher fluctuating asymmetry level but lower morphometric measurements, body condition index and haematocrit values compared to their siblings. These results were consistent with the brood-reduction hypothesis, which predicts that hatching asynchrony will maximize brood success under conditions of food limitation.

Oral_29

STARLING'S DIGESTIVE JUICE EFFECT ON GERMINATIVE POWER OF OLIVE CORES (NORTH-ALGERIA)

Hassiba BERRAÏ[1], Cherifa CHAOUIA[2], Katia DJENNAS[2], Amel BOUZAR LAKOUAS[2], Imene ZEROUALI[2], Lila HADDOUCHE[3]

[1]department of zoology, National High School of Agronomy, El harrach, Algiers, Algeria. [2]Department of Biotechnology, Faculty of Nature and life, University Blida 1, Blida, Algeria. [3]National High School of Agronomy, El harrach, Algiers, Algeria

Starling is a migrant who comes to winter every year in Algeria. It is considered invasive species because it happens by millions. Although it is responsible for much damage in olive groves, it was observed that it had the power to disseminate the olive cores. This study aims to verify the effect of digestive juice on olive nuclei. It consist to collect nuclei of healthy olives under oleaster and to gather at the same time nuclei in Starling's droppings. Thus 50 nuclei were collected under olive trees and 50 other whole nuclei were found in starling's droppings. The first batch suffered chemical and physical scarification. The second batch was that of the nuclei rejected by starling. 100 nuclei were placed under the same germination conditions. The results showed that the kernels rejected by starlings were the first to germinate. Indeed, the first bud appeared two months after its placement. It was followed by other nuclei of the same batch whereas no germination was observed in the batch of scarified nuclei. It is clear that Starling's digestive juice had a better effect on olive cores than double scarification. These results confirmed the hypothesis concerning the Starling's ornithochory.

Poster_01

FOOD BEHAVIOR OF *GARRULUS GLANDARIUS* IN PARIS

Alireza ENSAF[1], Florence De MASSOL[2], Pantea TAHERI[1], Patrice BOUREE[1]

[1]Association of Biodiversity Saint Fargeau, Paris, France. [2]Green Spaces, Nature and Biodiversity Conservation, Town Hall, Paris, France

Garrulus glandarius or Eurasian jay lives in Europe, Asia, and in the Maghreb countries. There are more than 30000 couples who live around of Paris and in the woods peripheral. We were interested to know what their nutritional behaviour is, their interaction with other birds and their ecological impact in Paris. Since 2012 we observed the jay in the private gardens, squares, green fields and in the cemetery of Père Lachaise in Paris. The oak tree and others trees with the fruits are identified. We also put peanuts and walnuts available to them to see their preferences and their nutritional choice. The entire jay was in liberty during our study and they were in natural situation. Jay is omnivorous and predominantly vegetal that gives this bird more food security in stressful times. At present, the jay has more chance to adapt itself to live in an urban environment and even has modified its eating habits. In Paris, they feed on insects, worms, fruits, eggs and chicks. They collect acorns of oak tree from September to end of October. They put it in the buccal pouch then fly away or cover up the acorns under mosses and leaves. Their nutritional behaviour change during their breeding period and they catch more insects to feed their chicks. Eurasian jay plays an important ecological role in urban area of Paris, they consume the insects, transport and distributes the seeds of the fruits and control pigeon's population by eating their eggs.

Poster_03

EFFECT OF BIRD DROPPINGS ON THE VEGETATIVE DEVELOPMENT (NORTH-ALGERIA)

Cherifa CHAOUIA[1], Hassiba BERRAÏ[2], Katia DJENNAS[1], Mohammed BENAZZOUZI[1], Abdelghani DAHEL[1], Lila HADDOUCHE[3]

[1]Department of Biotechnology, Faculty of Nature and life, University Blida 1, Blida, Algeria. [2]department of zoology, National High School of Agronomy, El harrach, Algiers, Algeria, Algiers, Algeria. [3]National High School of Agronomy, El harrach, Algiers, Algeria, Algiers, Algeria

This study aims to verify the effect of starling droppings on the growth of plants. For this, we planted lentil seeds in pots containing peat and starling droppings at different percentages. It carried out in the botanical garden of the High National School of Agronomy at El Harrach. Thus 750 g of starling droppings were collected under the olive trees. It was crushed and then weighed in laboratory. Then, they were mixed with peat with different percentages and put in 4 batches: first lot contained the pots (0% droppings), second lot (25% droppings), third lot (50% droppings), fourth lot (75% droppings). The seeds were placed there for germination. The results showed that the lentil seedlings of the second batch develop first and rapidly. Those of the first lot have developed less. No germination was observed in other lots. In parallel, the analysis of starling droppings reveals an acid pH. The results showed that the 25% mixed droppings have a bio-fertilizing effect on the development of lentil plants. Beyond this concentration, these droppings were very acidic and caused wilting and death of plants.

Poster_04

UPDATE AND REVIEW OF THE PHENOLOGICAL STATUS OF AQUATIC BIRDS OF SEBKHET BAZER SAKHERA, SÉTIF (ALGERIA).

Gouga Hadjer[1], Djerdali Sofia[1], Benssaci Ettayeb[2]

[1]university of Setif 1, Setif, Algeria. [2]university of M'sila, M'sila, Algeria

Monitoring of the avifauna of Sebkhet Bazer Sakra during a year, has allowed inventorying of 63 species divided into 11 orders and 21 families. Charadriiformes are the most diverse with 3 families represented by 22 species followed by Anseriformes with 10 species and one family, and that of Passeriformes with 7 species and 4 families. Phenological point of view, aquatic avifauna of Sebkhet Bazer has 18 migratory wintering species, 18 visitors passing, and 7 resident breeding and 4 resident non breeding. The variety of phenological statutes of aquatic birds of this wetland confirms its great ornithological value for certain species of conservation interest to know: Ferruginous Duck and Marbled Duck which have become breeding. Comparison of the results obtained with those reported by DJERDALIE (1995) and BAAZIZ (2006) show the change in status of certain species such as: Shelduck and Eurasian curlew.

KEY- WORDS: Phenology, Sebkhet Bazer, aquatic avifauna.

Poster_05

INVESTIGATION OF THE BREEDING BIRDS AROUND WIND ENERGY TURBINES (TEKIRDAĞ-MURATLI / TURKEY)

Yakut Can Aşıkoğlu, Murat Tosunoğlu, İbrahim Uysal

Çanakkale Onsekiz Mart University, Çanakkale, Turkey

Although declared as a source of clean and sustainable energy, the wind energy has varying degrees of effects on the species which are in the natural environment and which use this natural environment like all the other types of activities carried out in the wild. In particular, these effects on bird species are classified as collision, barrier effect, habitat loss and disturbance effects. In this study, we investigated breeding bird species around 32 wind energy turbines in the province of Tekirdağ. Each of the wind turbines studied was divided into 6 effect areas with 100, 200, 300, 400, 500 and > 500 m around them, and they were scanned by transect observation method. During the study, 1457 individuals belonging to 10 families were given certain breeding code and 324 nests were detected. In terms of number of individuals and families, the minimum reproductive activity was determined at the distance of 401-500 m (6 families, 79 individuals) and the most reproductive activity was found at 0-100 m (6 families, 418 individuals) in the around of turbines. The highest reproductive activity in the field was observed in areas of farmland (414 certain breeding code) at 0-100 m and rare woody areas (189 exact breeding code) at > 500 m. The predominant families in these habitats are the Alaudidae and Passeridae families. The importance of exploring breeding birds in ornithological preliminary survey reports has been emphasized in order to minimize the effects of habitat loss and distribution when designing wind turbines installation sites.

Final category: Bird strikes and aircraft safety

Oral _04

ESTIMATING THE IMPACT OF BIRD STRIKES

Isabel C. Metz[1,2], Thorsten Mühlhausen[1], Joost Ellerbroek[2], Dirk Kügler[1], Jacco M. Hoekstra[2]

[1]Institute of Flight Guidance, German Aerospace Center, Braunschweig, Germany. [2]Control and Simulation Department, Faculty of Aerospace Engineering, Delft University of Technology, Delft, Netherlands

Bird strikes have the potential to cause severe damage to aircraft. Therefore, measures to reduce the risk of bird strikes are performed at airports. However, this risk is not limited to the airport but is increased in the arrival and departure corridors as well. Consequently, a significant amount of bird strikes occurs outside the direct airport area. To estimate the risk of bird strikes in this extended airport area, a fast-time simulation environment was developed, representing air traffic as well as bird movement. It was verified by performing Monte-Carlo Simulations including real flight plans, a model for realistic bird movements and a comparison to real bird strike data.
In this study, the simulation results were evaluated considering the impact of bird strikes. For this purpose, the kinetic energy of the bird strikes that occurred within the simulation was calculated. Based on the international certification requirements for the impact resistance of engines, windshields and structure, the potential for severe damage was analysed. Finally, the results were compared to a long-term study of damaging bird strikes of the US aviation authorities. The results indicate that the simulation environment allows a reasonable estimation of the damaging potential of bird strikes. The simulation data derives from the Netherlands, while the real bird strike data originates from the US. For further validation and enhancement of the simulation's bird model, European data from multiple years would be required.

Oral _05

EVALUATING SOARING MIGRATORY BIRDS AND AVIATION DEVELOPMENT: A CASE STUDY AT ISTANBUL NEW AIRPORT

Tansu TUNCALI, Sercan BİLGİN, Sedat İNAK, Şebnem SAMSA, Orhan GÜL, Nuh KUBİLAY, Mehmet Eren YALMAN

Istanbul Grand Airport, Istanbul, Turkey

Istanbul is located on one of the very important migration routes in the Western Palearctic region. There are many other areas in the Middle East, Balkans, Caucasus and also America where they are lying on special migration routes as well. Millions of soaring migratory birds are passing over every year from those special areas.

Human beings share the sky with birds by the planes they design. The aviation industry has been on the rise in the recent years and since 1905; the year in which the first birdstrike had been recorded, overlapping with one of the earliest flight test experiences ever made by planes.

Among other industries, aviation industry should also identify its prevention measures on conservation and flight safety especially on birds. This can both cover the airports being developed from greenfield, and also the ones have already been built, needing an expansion plan in their housing space and air traffic development, accordingly.

As it has been developing from greenfield, Istanbul New Airport (INA) had launched an ongoing scientific bird monitoring program to identify its prevention measures, balancing conservation and flight safety.

Our study resulted that the habitat change in INA because of the construction activities developing from the greenfield, there is no scientific evidence of an impact on the Lesser Spotted Eagle populations, over 4 years monitoring scheme. Additionally, considering the birdstrike issue, which will be the subject by October 2018, the aviation industry is well-known as very precautionary together with pilots, airlines and air traffic controllers.

Oral _06

PATTERNS OF AVOIDANCE SHOWN BY BIRDS TO MOVING AIRCRAFT

Thomas Kelly[1], Michael O'Callaghan[2], Ricky Whelan[3], Dmitry Rachinskiy[4], Andrei Korobeinikov[5], Neil Coughlan[6], Alexander Pimenov[7, 1] School of Biology, Earth and Environmental Sciences, University College, Cork, Ireland. [2]School of Mathematics, University College, Cork, Ireland. [3]Birdwatch Ireland, Newcastle, Ireland. [4]Department of Mathematical Sciences, The University of Texes, Dallas, USA. [5]Centre de Recerca Matematica, Barcelona, Spain. [6]School of Biological Sciences, Queens University, Belfast, United Kingdom. [7]Weierstrass Institute, Mohren Str. 39, Berlin, Germany

Nowadays, due to intensive management, relatively few birds are found on airfield runways. Therefore, a high proportion of bird strikes are caused by birds over-flying the manoeuvring areas. However, birds are known to actively avoid moving aircraft (Kelly *et al*. 2001 *Advances in Vertebrate Pest management* **2**: 291-300) though relatively little quantitative information is available on the patterns of these avoidance behaviours and on how they calculate the time to collision (ttc). This study analyses the avoidance manoeuvers of all species (primarily members of the Families Falconidae, Corvidae, Laridae, Columbidae, Charadriidae, Apodidae and Hirundinidae) of birds detected during dedicated surveys conducted at the airfield at Dublin Airport, Ireland, mainly over the 2006 to 2016 interval. The evasion behaviours are classified and related to weather variables e.g. ambient temperature, cloud cover, barometric pressure, wind speed and direction and to the various phases of aircraft flight i.e. approach, landing, take-off roll etc. Finally, in addition to the direction which they were flying, the age of the bird (where possible), and the height at which they were flying as well as the approximate distance to the runway at which they commenced their avoidance movements are also included in the analysis. It appears that immature birds i.e. < 1 year old are notably less efficient at avoiding aircraft and that this is at least is a partial explanation for the relatively higher rate of collisions involving this age group.

Oral _07

COLLABORATION OF SCIENCE AND INDUSTRY AS BASE FOR SUSTAINABLE SOLUTIONS FOR FLIGHT SAFETY - EXAMPLE OF GOOD PRACTICE

Primož Kocbek[1,2], Vanja Svetina[1]

[1]Fundation DZVN, Ljubljana, Slovenia. [2]Faculty of Health Science Maribor, Maribor, Slovenia

In addition to the Ecological study as base for efficient Wildlife hazard reduction at the Airport Ljubljana, we also wanted to gain additional ecological insights of the observed area together with a dipper theoretical understanding of modelling methods used. With the insight gained we try, if possible, to generalize our findings over a broader area or use them in a broader way. As an example, we assembled a bird species specific distribution model of the area observed, where we also take into account the temporal component of the data

As our primary data set consists of data collected by the airport and a limited amount of data collected in the ecological survey, animal and plant ecology. We have also detailed meteorologic data from the automatic weather station at the airport runway, land use data of the surrounding area (and bird strike events data from the airport's AORFs (Aerodrom Occurence Report Form). We have also additional data used from survey carried out in broader vicinity of the airport.

The research is focus on specific species distribution models (SDM), where we compare and evaluate different approaches of modelling spatial distributions of specific species. The models we want to test can be divided into 3 categories: classical statistical regression models, Bayesian approaches and machine learning methods.

We compare the model through time in how well they perform, which models are best after 1 year and which after 3-5 years.

Poster_06

BIRDS' DIVERSITY ON THE WETLANDS AROUND THE INTERNATIONAL IASI AIRPORT (ROMANIA) AND RISKS FOR THE AIR TRAFFIC SAFETY

Diana Roxana TOFANESCU, Carmen GACHE

Al. I. Cuza University from Iasi, Iasi, Romania

The presence of birds in proximity of one airport with increasing trafficking such as the Iasi International Airport may represent one risk factor for the air traffic security. In the western side of this airport area, there exist one chain of small five dam lakes, Dorobanti – Aroneanu - Ciric I, Ciric II and Venetia lakes, while in the south-eastern vicinity is located one large dam lake, Chirita Lake.

Starting from March 2017, we initiated one monitoring program of the birds' presence on the territory of these aquatic surfaces that surround the airport's perimeter, following their diversity, effectives and distribution in the area, but also to assess the risk degree of birds' movement for the security of existent air traffic.

The list of bird fauna consists in 83 species, part of them appearing just during the migration or wintering time, while other are breeding in the area. We notice the passage of significant effectives of storks (*Ciconia ciconia*), raptors (*Clanga clanga*, *Buteo sp*., *Pernis apivorus*, *Milvus migrans*, *Falco sp*. etc.), gulls (*Larus cachinnans*, *Chroicocephalus ridibundus*) and ducks (*Anas sp*.) during the migration time, representing medium and large risks for the air traffic. There are present some breeding pairs of raptors in the perimeter of Ciric forest, most of them using the open areas from proximity of airport like feeding territories. Not least, we mention the presence of small and medium size birds that form large and more or less compact flocks, representing also a risk concerning traffic safety (doves and passerines).

Poster_07

DIET OF THE COOT *FULICA ATRA* (AVES, RALLIDAE) IN THE NATURE RESERVE OF LAKE REGHAÏA (ALGIERS, ALGERIA)

Fatiha Metna[1], Aicha Lardjane-Hamiti[1], Samira Merabet[1], Nabila Boukhemza-Zemmouri[1], Mohammed Boukhemza[1], Ramzi Abba[2]

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The study of the Coot's (*Fulica atra*) diet was carried out from February 2010 to January 2012 in the nature reserve of Lake Réghaïa in the eastern part of Algeria. For that purpose, a total of 600 faecal samples, or 300 faecal samples per year, were analysed. The analysis showed that the bird's food spectrum primarily consists of plant species, animal prey being very rare. Overall, 34 plant species belonging to 17 families and 18 animal species were identified. Thirty plant species belonging to 15 families were identified during the first study period (February 2010–January 2011) and 32 plant 15 species belonging to 17 families were identified during the second study period (February 2011–January 2012). The relative abundance of Poaceae family plants in the Coot's diet was estimated at 65.1% and that of Cyperaceae and Typhaceae at 7.3 and 4%, respectively. The share of other plant families in the bird's diet was found to be negligible. The proportion of animal prey in the diet represents 3.1%. Among plants of the Poaceae family, the most favoured are the following three species Paspalum distichum, Phragmites sp. and Panicum repens with rates of 33.2, 18.6 and 15.7%, 20 respectively. The intake of other taxa was lower. Dietary variations during the year coincided with changes in local availability of food and species phenology.

Poster_08

EXCURSION TO FRANKFURT AIRPORT AS A SPECIAL HABITAT FOR ENDANGERED BIRD SPECIES

Jurgen J. Ebert

Fraport AG, Frankfurt/M., Germany

During a two hour bus tour and some minor walks on the airfield the special habitat of an airport and the efforts for biological flight safety will be presented. Frankfurt Airport's nutrient-poor grassland is dominated by heath. It is home to many endangered bird species (i. g. skylark, wheatear, stonechat, peregrine falcon, hen harrier, short-eared owl, and many more). The basic methods of wildlife control at an airport will be presented. The excursion starts 9:30 a. m. on Friday, April 27th 2018, in Terminal 1 of Frankfurt Airport and ends around 12:00. There is no organized transport from Heidelberg to Frankfurt and back. However, the public train connection is very feasible.
A previous admission is mandatory. Please send an e-mail not later than April 25th 2018 to i.kraft@fraport.de if you are willing to join. You will be given further detailed information after the admission.
The excursion is free of charge.

Final category: Climate Change

Poster_09

PROTECTED AREA COVERAGE OF GOLDEN EAGLE DISTRIBUTION IN IRAN UNDER CLIMATE CHANGE

Anooshe Kafash

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Golden eagle (*Aquila chrysaetos*) is one of the best-known birds of prey in the world. It is the most widely distributed species of eagle. In this study, I predicted the impact of future climate change on the distribution of Golden eagle in Iran, using MaxEnt model. Results indicated that Golden eagle is most likely to lose considerable proportions of its current distribution under the future climate changes. Moreover, I estimated protected areas coverage of the species distribution range under the current and future climatic conditions. I found poor representation of the species in protected areas. Suitable protected habitats were also predicted to decrease under the future climatic condition. Thus, it is vital to consider this species in the future expansion plans of protected areas in Iran.

Keywords: *Aquila chrysaetos*, Climate change, MaxEnt, Niche, Habitat.

Poster_10

CLIMATIC NICHE BREADTH OF THE GREAT TIT WILL DECREASE UNDER CLIMATE CHANGE

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Great tit *(Parus major)* is an important model in ecology and behavioural biology that is distributed across Palearctic region. The species inhabit deciduous woodland, parkland, urban gardens urban and agricultural land. Despite being model in ecology very little is known about ecology and distribution of the species in Iran. In present study we employed species distribution modelling techniques (SDMs) to model potential distribution of the species in Iran. In order to assess the impacts of future climatic change on the Iranian populations of the species, we used MaxEnt model and projected current distribution model of the species into the future. Results revealed that potential distribution of the species will decrease under future climate change. Moreover, we evaluated potential changes in the species niche breadth under the future climatic change using ENMTools. We found the species niche breadth will decrease as response to the climatic change.
Keywords: *Parus major*, Distribution, Iran, MaxEnt, Niche.

Final category: Collision with obstacles

Poster_11

THE INCREASING ANTHROPOGENIC PRESSURE IS THREATENING THE COMMON KESTREL (*FALCO TINNUNCULUS*) IN TURKEY

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HACETTEPE UNIVERSITY, FACULTY OF EDUCATION, DEPARTMENT OF BIOLOGY EDUCATION, ANKARA, Turkey

The landscape was changing depending on the economic growing over the country year by year. This circumstance required especially more agricultural activity and energy based on transmission line and power plant projects such as hydroelectric, wind and solar. The effect of the situation on the environment are not known in detail. Our study aimed the effects of this anthropogenic activity on the common kestrel which is a common bird of prey living close to the human. In this context, the carcasses caused by wind turbines and electric transmission line were collected from four regions over the country to calculate fatality rates. The residue polychlorobiphenly (PCBs) and organochlorine (OCPs) pesticides as persistent organochlorine contaminants (POPs) on the tissue of species were analysed to determine effects of agricultural activity. According to the results, 52 carcasses from 26 bird species were found around wind turbines and 16 of them (%30.7) were common kestrel. 6 carcases were found under the transmission line over the study. The residues of POPs were found 78.45±2.36ng/g of PCBs and 231.24±32.41ng/g at mean level. The results showed that the species is the most effected species by wind turbines and the residue were at critical level for surviving. A protection plan is needed for the common kestrel, otherwise it seems that the species will not be a resident and common species in Turkey in the next decades.

Final category: Conservation

Oral _08

POPULATION RESPONSE OF SAKER FALCON ON AN ILLEGAL CATCHING OF FEMALES

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Saker Falcon (Falco cherrug) is enlisted as endangered species in the IUCN Red List. One of the last reserves of the species are Altai-Sayan region of Russia, Mongolia, and Tibet. The main reason for population decline is a poaching for falconry. In Altai-Sayan region the maximum pressure on a breeding population is observed in Altai Republic and Khakasia where population number declined on 27% and 55% respectively during the last 11 years.

Several cases of successful detention of poachers gave a data to estimate the annual population loss as 400 individuals minimum, and females make about 90% of them. Additionally, not less than 50 birds are caught outside the breeding range. Thus, annual population loss is about 25-50% of all young birds, mainly females. As a result, we got an increasing number of breeding territories occupied by a sole male. However, this population is not isolated and we observed a strong inflow of birds from central Mongolia. As a result, a substitution of phenotypes (subspecies) of a Saker Falcon occurs. We also register a population response that is expressed in an increasing number of females in broods proofed by genetical sex-determining. Thus, on the territories where the population of a Saker declined more than twice a percentage of females in broods is about 70-100% (broods consist of 5 females were observed), meanwhile in Western Mongolia and the Tuva Republic of Russia where the situation is better the gender composition of broods is 1:1.

Oral _09

THE ALTAI SAKER ORIGINS STUDY AND REINTRODUCTION PROJECT - PRELIMINARY RESULTS AND PERSPECTIVES

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The Altai Saker, a unique dark morph of the saker falcon (*Falco cherrug*), was recently widespread in the Altai-Sayan region but now is quickly disappearing. The previous analysis of the saker mitochondrial D-loop (Nittinger et al., 2007) detected two distinct haplogroups. Morphological analysis showed a zone of intersection of different subspecies areas in the Altai-Sayans, and the altaic phenotype was present in broods in case of the most mixed population structure (Karyakin, 2011), but the origins of this morph remained unclear. In the course of the Altai saker reintroduction project we found that this phenotype is inherited but with some cases of segregation and the hand-raised Altai sakers of the Altaic origins have both D-loop haplogroups. Consequently, the Altai saker can be a hybrid morph with the unique combination of genes alleles previously present in the Altai-Sayan population. For the pilot reintroduction experiment 10 hand-raised chicks from the altaic parents were released at the age of 20-27 days to natural nests of other saker morphs. Video recording showed that in all cases the natural stepparents accepted the chicks regardless to the differences in phenotype and age and started feeding all the chicks in 1 hour after the transferring. One nest was observed full-time till fledging, others were monitored during the breeding season. 9 released chicks fledged successfully, 1 was predated by the Eagle owl. This method of reintroduction can be used to conserve the Altai saker and to elevate the genetic diversity of the natural saker population in the Altai-Sayans.

Oral _10

THREATENED BIRDS IN SAUDI ARABIA: THEIR CONSERVATION REQUIREMENT, ASSESSMENT, STATUS AND CONSERVATION MEASURES

M. Zafar-ul Islam

National Wildlife Research Center, Taif, Saudi Arabia

Saudi Arabia lie between Europe, Africa and Asia that serves as a natural crossroads for birds migrating between their breeding areas and their winter quarters in Africa. Large concentrations, of tens of thousands of birds, regularly pass through the Saudi Arabia during migration periods. Bird conservation priorities are conservation of the highlands of SW Arabia (high number of endemic species), the protection of internationally important seabird islands in the Arabian Gulf and Red Sea. A book **"Threatened Birds in Saudi Arabia: their conservation requirements"** records these species.

Out of 54, one is extinct in the wild *Struthio camelus syriacus* & 3 CR Bald Ibis, Slender-billed Curlew & Sociable Lapwing. Three EN, Basra Reed-warbler, Saker Falcon & Egyptian Vulture and nine are in Vulnerable category (Greater Spotted Eagle, Eastern Imperial Eagle, & Great Knot, Houbara, Arabian Woodpecker, Socotra Cormorant, Yemen Warbler, Lappet-faced Vulture & Yemen Thrush; 15 are NT. Out of 54 spp, 35 have decreasing population;14 spp, stable population; 23 are migrant.

Almost 99% of threatened species are at risk from human activities beside 86% by habitat loss and degradation and introductions of **alien species**, o**ver-exploitation, pollution and diseases, and h**uman-induced **climate change** is increasingly recognised as a serious threat. Climate change is altering migratory species patterns, causing coral bleaching, etc. Threat processes are dynamic and change over time. Invasive alien species were historically the greatest threat to birds, but today, habitat loss has emerged as the dominant threat. This may change again if predictions of **global warming** are correct.

Oral _11

WIDESPREAD SUPPLEMENTARY FEEDING OF RED KITES *MILVUS MILVUS* IN URBAN BRITAIN

Mark FELLOWES[1], Rebecca THOMAS[2,1], Melanie ORROS[1]

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Red kites have been successfully reintroduced to Britain, where they now thrive. Unexpectedly, red kites are regularly found over suburban and urban areas. Survey work shows that road kill and discarded human food does not explain this. Instead, red kites are now fed by people. In one a study, the town of Reading, UK, is visited by ~300 kites per day. Almost 10% of households have fed Red Kites, and food provided equates to the numbers of Red Kites visiting the town. The most common food provided is chicken, with other meats and table scraps also provided. Attitudes to Red Kites remain very positive, with many taking pleasure in seeing these large raptors close by. However, the practice is controversial. Using stable isotope analyses, we found that feeding is now widespread across Britain, which raises the question of how important supplementary feeding has been for the success of the Red Kite reintroduction programme. While many people intentionally feed small birds in their gardens, this is the first report of widespread supplementary feeding of a raptor by individual homeowners.

Oral _12

FIGHT AGAINST THE ILLEGAL POISONING OF EASTERN IMPERIAL EAGLES IN HUNGARY

Márton Horváth[1], Gábor Deák[1], Imre Fatér[1], Tibor Juhász[2], Szílvia Pásztory-Kovács[3]

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The most western and isolated population of globally vulnerable Eastern Imperial Eagles (*Aquila heliaca)* occurs in the Pannonian region of Central Europe. Most of the population breeds in Hungary, where slow growth in the early 2000's stabilized at around 150 pairs in 2012. Over the past decade, 78 poisoned Eastern Imperial Eagles were found in Hungary, which extremely high non-natural mortality could limit the population. To address illegal poisoning, we developed a complex conservation project with the financial support of the European Union's LIFE program. The project involved: 1. Genetic tracking of 145 breeding adult Eastern Imperial Eagles. 2. Satellite tracking of 40 immature eagles. 3. Intensive communication, cooperation, and education among conservation biologists, hunting associations, farmers, veterinarians, police, and prosecutors. 4. A special poison- and carcass-searching dog unit employed to document and remove poisoned baits and eagles from the landscape. Genetic tracking indicated the estimated mortality of breeding individuals decreased from 15-25% in 2012 at the beginning of the project, to 6-9% in 2016. Satellite tracking indicated poisoning of immatures decreased from 20-30% to 0-10% over the course of the project. The number of poisoned Imperial Eagles dropped from 16 poisoned eagles in 2012 to a single bird by 2016. The combination of public communication and the dog unit have led to reduced incidents of poisoning, and to seven prosecutions of perpetrators of illegal poisoning. In parallel with the decreasing rate of poisoning, the breeding population has increased by 30% and exceeded 200 pairs by 2016.

Oral _13

BREEDING POPULATION SURVEYS OF EASTERN IMPERIAL EAGLES AND STEPPE EAGLES IN CENTRAL ANATOLIA

Márton Horváth[1], István Béres[1], Cansu Özcan[2], Tibor Juhász[3], András Kovács[4], Burak Tatar[5], Igor Karyakin[6], Matthias Schmidt[7], Jose Tavares[8]

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The breeding distribution and population size of the globally vulnerable eastern imperial eagle (*Aquila heliaca*) was moderately known in Turkey before 2007. Besides, the status of the endangered steppe eagle (*Aquila nipalensis*) was also uncertain, as the regular breeding of the species was not proved in past decades. BirdLife Hungary, with the support of volunteers and co-operating organizations executed 14 expeditions comprising a total of 116 field days between 2007 and 2017 in order to gather data on the status of the two globally threatened eagle species in Central Anatolia. The surveys located more than 100 imperial eagle nests in 53 distinct territories in Bolu, Ankara, Eskisehir, Cankiri and Corum provinces. The surveys were extended to Kirsehir, Aksaray and Konya provinces, where 11 nests in six occupied steppe eagle territories were discovered. The successful breeding of an adult male imperial eagle - steppe eagle hybrid with an adult female imperial eagle was also documented. The dispersal and migration of three young imperial eagles, three young steppe eagles and two hybrid offsprings have been tracked with the help of GPS transmitters. The tracked imperial eagles showed regional dispersal within Anatolia, while the steppe eagles and the hybrid eagles moved to the Sahel region for wintering. The surveys also revealed significant threats to eagle populations within Turkey, including electrocution, shooting, massive habitat alteration and infrastructural developments. Therefore, intensive further studies, including active species and habitat conservation measures are inevitable for the maintenance of these regionally significant Anatolian eagle populations.

Oral _14

IMPORTANCE OF HABITAT TYPES AND SPECIAL PROTECTED AREAS FOR CORNCRAKE *CREX CREX* CONSERVATION IN LATVIA

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Population estimates are important source of information for bird conservation. Corncrakes are still widespread in East-European countries, thus counts of all calling males are not realistic. We used annual night bird survey data as to estimate population size in Latvia.

For the first method the habitat specific „breeding density" (=calling males per km^2 of each specific habitat) was calculated: (1) territory density per habitat area in each plot and country average was calculated; and (2) total population calculated by the use of national agricultural land use data. We attributed each Corncrake to one of the following: (1) cultivated meadows; (2) uncultivated meadows; (3) cultivated pastures; (4) uncultivated pastures; (5) spring crops; (6) winter crops; (7) other arable land; (8) abandoned agricultural land; (9) clearcuts in forests; (10) other. This method yielded the estimate of 31 000 – 111 500 calling males in Latvia.

For the second approach, generalized hierarchical distance sampling model was built explaining abundance of calling corncrakes with available countrywide landscape and habitat variables while accounting for imperfect detection. The model was used to predict abundance of Corncrake within a distribution grid covering the whole country (cell size 40 ha). The cell estimate values were summed to obtain the national population and yielded 50 000 – 200 000 calling males in Latvia.

We used data pool on *Natura2000* areas database to estimate number of calling Corncrake males in all *Natura2000* network in Latvia. The estimate yielded less than 10 % of the estimate for the total population in country.

Poster_12

POPULATION SURVEYS OF GREAT BUSTARD (*OTIS TARDA*) WITHIN THE SCOPE OF AN ACTION PLAN IN TURKEY

Burak Tatar[1], Hilmi Çatal[1], Ferdi Akarsu[2]

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In this study, we investigated one of the biggest bird species of Eurasia, the great bustard (*Otis tarda*), whose world population is estimated to be around 44000 – 57000 individuals. The great bustard population in Turkey is known to be the fourth largest population in Europe after Spain, Portugal and Russia. In this study, we aimed at assessing the great bustard's current situation in Turkey. Ten years ago, its population was estimated to be around 1000 individuals. After ten years, there was a need to estimate the current population sizes of great bustards to revise the existing Great Bustard Action Plan. A new species action plan with more applicable actions was prepared in 2016. As the action plan suggested, we collected data about the distribution and population characteristics of great bustards, their habitat features and threats for three consecutive years starting from 2015. Our studies revealed remarkable results such that the general tendency of great bustard populations in Turkey is on a great decline whereas there are several newly found populations in some provinces which were not recorded before. The decrease rate was estimated to be around % 50 with the most important threat factors being habitat destruction and poaching. These results showed us the importance of further studies for protecting newly found wintering and summering grounds of this globally important species.

Poster_13

VALIDATION OF MORPHOLOGICAL SEX IDENTIFICATION OF EASTERN IMPERIAL EAGLE NESTLINGS BY MOLECULAR METHODS

Péter KACZ[1], Márton HORVÁTH[2], Nóra VILI[1], Imre FATÉR[2], Tibor JUHÁSZ[3], Szilvia PÁSZTORY-KOVÁCS[1]

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Sex identification of birds in the field can be problematic, especially in case of sexually plumage-monomorphic species. In Eastern Imperial Eagles (*Aquila heliaca*) we cannot observe any difference in plumage coloration between genders. However, sexual dimorphism appears in body size, and even the nestling females are larger than males.

In this study DNA samples were taken from armpit feathers of 480 nestlings during ringing, and different body size variables were measured: hind claw length, tarsus diameter, tarsus length, tail length and body mass. Furthermore, development stages of the chicks were estimated based on the colour of plumage which was determined by the ratio of down feathers and growing juvenile feathers. An intron (i16) of CHD1 gene was amplified by polymerase chain reaction for sex determination. Decision trees and random forest method were used to find the best variables to distinguish sex groups by morphology. According to all statistical analyses the most important variable was the hind claw length. The tarsus diameter was the best for estimating sex of the youngest nestlings, however with age the difference between males and females decreased. In case of more developed chicks hind claw length and body mass were most useful for separating sex groups, since in case of these variables the difference between sexes was growing with age. Tail feathers are continuously growing during the development of nestlings, therefore tail length was the best variable for age determination. Based on our results we created a protocol that can be introduced for field sex determination.

Poster_14

NEWLY DESIGNED MITOCHONDRIAL DNA PCR PRIMERS REVEAL SUBTLE GENETIC DIFFERENCES BETWEEN RED-FOOTED FALCON COLONIES IN THE CARPATHIAN BASIN AND THE ROMANIAN PLAIN

András Máté LUDÁNYI[1], Krisztián SZABÓ[2], Szilvia PÁSZTORY-KOVÁCS[2], Nóra MAGONYI[3], Péter FEHÉRVÁRI[4], Nóra VILI[2]

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To analyse intraspecific variability of mitochondrial DNA sequences and to reveal the genetic structure of Red-footed Falcon (*Falco vespertinus*) colonies in their westernmost breeding area, we studied samples collected at one Romanian (n=7) and eight Hungarian (n_{all}=18) sites.

As NUMTs occur frequently in the genome of Falco species, the analysis of the mitochondrial genome is difficult. To solve this problem we used a DNA extraction kit developed for bacterial plasmids. First we sequenced the NADH dehydrogenase 1 subunit gene, but found it to be monomorphic. To increase the possibility of finding a marker that could be polymorphic within the species, several primers for the D-loop segments of the mtDNA were designed covering the D-loop and partially flanking the tRNA genes for Threonine and Proline. From these, the pair FVcr2/FVpro2 could be used with the least likely presence of NUMTs. With this pair we were able analyse a 511 bp long sequence and identified six unique haplotypes in 25 individuals. As a result, small genetic differences could be detected (six variable positions, Φ_{PT}=0.252, p=0.002) between the studied sites, but no clear geographic pattern was found. To test whether the species could be distinguished from their closest relative based on this marker we also analysed samples from five Amur Falcon (*Falco amurensis*) individuals and found eight variable positions between the two species, but all Amur Falcon samples proved to be monomorphic.

The project was funded by the LIFE11/NAT/HU/000926-2012-2018 Conservation of the Red-footed Falcon in the Carpathian Basin project.

Poster_15

BREEDING OF BLACK *STORK* (*CICONIA NIGRA*) IN KYIV ZOO

Oleksandr PANCHUK, Vitalii LIASKIVSKYI

Kyiv ZOO, Kyiv, Ukraine

Black Stork is a rare species, which is the Red Data Book of Ukraine. It breeds in the Zoos sometimes, so the scientists of Kyiv Zoo are working on the methods how to reproduce them in captivity. We have achieved some results – in our Zoo one pair bred in 2015 and three pairs in 2017. Success of breeding depends on proper nutrition. After feeding our black storks with live river fish in spring 2017, all sexually mature species of our zoo were breeding. Four nestlings were got in 2015. Seven nestlings were got in 2017, 5 of them were fed by parents. These 5 young birds and those which we are planning to get in 2018 we hope to release in wild nature. Before this the young Black Storks will go on acclimatization in the National Nature Park "Galytskyi" in large captive area in the woods. The idea of our investigation is to learn can the birds, which were born in the Zoo, to survive and breed in wild nature. It is also interesting to discover their local movements and possible migration.

Final category: Ecology

Oral _15

COMPARATIVE APPROACH ON THE BIRD FAUNA'S DIVERSITY IN THE BASINS OF SIRET AND PRUT RIVERS (ROMANIA)

Carmen GACHE, Alina Elena IGNAT

Al. I. Cuza University from Iasi, Iasi, Romania

The basins of Siret and Prut Rivers represent the most important flyways for the birds in the eastern Romania, the both rivers flowing into the Danube in the immediately vicinity of Danube Delta.

For the whole Romanian Prut River basin, our systematic ornithological monitoring began in 1992, while for the Siret River basin, it was done starting from 1991, but have been carried out sequentially - in the lower basin from 1991 to 2010, in the middle basin from 2011 and in the upper one, from 2006. In the both areas, our monitoring activity is still on-going. The diversity of bird fauna consists in 212 species in the Siret basin, respectively, 250 species in the Prut basin. We recorded similar effectives like total bird populations, but the specific composition is very different and some bird species seem to have a certain preference for one of these two hydrographic basins.

The Siret River valley is located on the eastern edge of Carpathians, collecting the waters of rivers that come from this mountainous sector. The Prut River basin has tributaries that are crossing hills and plains areas. The flows are higher and with more frequent flooding phenomenon on the Siret than the Prut. The hydrotechnical arrangements are different in these two basins: dam lakes in the Siret basin, respectively, one large and some small dam lakes and many fishery ponds in the Prut basin. The anthropogenic risks for birds are the intensive poaching and hunting activities, respectively, loss of wetlands.

Oral _16

WINTER ROOST TREE SELECTION AND PHENOLOGY OF LONG-EARED OWLS, *ASIO OTUS* IN CRIMEA (SOUTH UKRAINE)

Volodymyr Kucherenko, Pavel Kalinovsky, Marina Maleichik

V.I. Vernadsky Tavriisky University, Simferopol, Ukraine

Relatively little work has been carried out on the phenology of winter roost and behaviour at roost of Long-eared Owl (*Asio otus*). These ecology aspects have not been studied at all in Ukraine. The research has been conducted in north part of Simferopol, Crimea (45°00'60" N, 34°03'17" E) for two years. The roost has been located in the university yard and almost completely surrounded by five-story buildings.

Owls were counted weekly from October to April 2015-2016 and 2016-2017. The maximum of roosting owls was in December, the minimum – in October and April. Only 20 trees out of 33 were occupied by owls. The birds exhibited a preference for roosting in conifers, where we recorded 89% of all birds. We found a strong inverse relationship between a maximum daytime temperature and an increasing of owls' numbers occurring in the study area in autumn. Abrupt but short-term temperature anomalies did not affect owls' number. However, the temperature decrease caused almost a synchronous rise in the number of birds. There were two temperature anomalies in 2015-2016, with the removal of which the correlation was increased from r=-0.65 to r=-0.81. In 2016-2017, the inverse relationship was higher (r=-0.87).

We found that the number of owls on 16 trees reliably depended on the weather conditions. The proportion of owls sitting on most coniferous trees was elevated during precipitation as rain or snow. The reverse trend was observed on other trees (the London plane and Turkish pine).

Poster_16

FISHERIES AND DAM LAKES AS WINTERING AREAS FOR WATERFOWL IN THE EASTERN ROMANIA

Alina Elena IGNAT, Carmen GACHE

Al. I. Cuza University from Iasi, Iasi, Romania

Our winter monitoring of waterfowls in the perimeter of dam lakes and fisheries from the eastern Romania began in 1992 and is still on-going. We followed the importance of these aquatic surfaces like feeding and resting territories for birds during the wintering time.

We analyse how the birds use these aquatic surfaces depending on the weather conditions during the wintering time (from November to February-March), but also on the available ecological resources related to the birds requirements in this period of year. Taking account by the qualitative and quantitative presence of waterfowls during the winter on the territory of investigated fisheries and dam lakes, we notice that the diversity and effectives present bigger values in the fisheries area in the first part of cold season. The ponds have lower depths, rich, various and easy available food resources for waterfowls. Usual, these areas present large reed beds that provide good protection for birds against the winds and predators, and also one mild microclimate space than the open and depth waters of dam lakes.

When the temperature decreases and the ponds are frozen, the waterfowls move on the surface of dam lakes that preserve unfrozen perimeters even during the harshest winters. The moment of this movement of birds was changed during our study period from middle December in the ’90s of last century to the first or second decade of January during the last about ten years.

Poster_17

THE BIRDS OF THE 20TH DISTRICT OF PARIS

Alireza ENSAF, Pantea TAHERI, GINETTE ROUX, Patrice BOUREE

Association of Biodiversity Saint Fargeau, PARIS, France

The 20th district of Paris is located on the right bank of the Seine. It is the result of the regrouping of several rural boroughs under the second empire. Today, there are 4 neighbourhoods in the 20th: Belleville, Saint-Fargeau, Ménilmontant and Charonne.

Since 2008, the mayor and associations of this district have been committed to conserve biodiversity, nature and urban ecosystem. They have improved green spaces and sensitized the inhabitants to protect the birds.This work is beginning to bear fruit and we hope to see birds again that have disappeared from our city and neighbourhood. 20th district has many green spaces: gardens and squares, Park Belleville, planted roads, green fields in the heart of the agglomeration, three cemeteries: Belleville, Charonne, Père-Lachaise, three water tanks covered with vast flowering meadows; slopes inaccessible to the public, green walls and roofs, refuges of biodiversity; almost 5 ha of Petite Ceinture, an abandoned railway line where wild nature has grown on it; more than fifty associative and individual initiatives.

All these places plus the many private gardens of the borough allow the fauna and flora to pacify our streets and improve our environment. Since 2008 we have studied and identified more than 70 species of the birds, such as: *Cyanistes caeruleus*, *Parus major, Fringilla coelebs, Erithacus rubecula, Prunella modularis, Passer domesticus, Troglodytes troglodytes, Turdus merula, Columba palumbus, Columba livia, Garrulus glandarius, Pica pica, Corvus corone,…*

We hope that with improvements to the green spaces, more species of birds will pass or install there.

Poster_18

DIET COMPOSITION OF THE WESTERN MARSH HARRIER *CIRCUS AERUGINOSUS* IN THE NORTH-EST OF ALGERIA.

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The diet of the March harrier *Circus aeruginosus* was carried from the analysis of pellets collected in the area of Bordj Bou Arreridj during the breeding season. The present study has allows the identification of 63 species distributed among 05 classes Arachnida, Insecta, Reptilia, Aves and Rodentia. Insects are the most consumed, representing 63.63% of the relative abundance followed by birds with a relative abundance of 27.27%. The species most consumed are *Anisolabis mauritanicus* (AR%=6.66%) Followed by *Pentodon* sp (AR%=4.85%), *Gallus sp* (AR%=4.24%). Based on the biomass, the birds are the most consumed with (B% = 93.11%). In addition, the species most consumed in biomass *Gallus sp* (B% = 71.6%). From this study we note that the March harrier (E = 0.89) is considered a generalist predator.

Poster_19

BIO-ECOLOGY OF BIRDS IN THE BEJAÏA REGION OF NORTH EASTERN ALGERIA

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The study of birds took place in olive region. This region is nestled among the hills of the Massif Djurdjuran and the first chains of Bibans. The methods used to identify birds in the area are the punctual abundance index (IPA), the quadrat method and the progressive frequency Sample Rate. We have identified 50 bird species belonging to 27 families in Sidi Aich station and 39 bird species belonging to 20 families in the Tazmalt. We identified these species of migratory species in summer as *Coturnix coturnix*, *Streptopelia turtur*, *Hippolais pallida* , *Muscicapa striata* and migratory species in winter as *Motacilla alba*, *Motacilla flava*, *Turdus philomelos* and *Sturnus vulgaris*. These results are processed by environmental cues such as centesimal frequency, diversity and density and statistical methods such as correspondence analysis.

Key words: Birds, Tazmalt, Sidi Aich, IPA, quadrat methods, Algeria.

Poster_20

EVALUATION OF SPECIFIC AND PHYLOGENETIC DIVERSITY OF BREEDING BIRD COMMUNITY IN URBAN GREEN AREAS OF SAINT-PETERSBURG

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The avifaunistic research in Saint-Petersburg parks and gardens includes more than hundred years. At the same time the particular analysis of bird assemblages according to the type of urban green areas and their placement in the city was not conducted. During our research on the structure of breeding bird community single counts by Finnish line transects method (Järvinen, Väisänen 1975, 1976) in mid-May – beginning of June 2015 were carried. All types of urban green areas were covered by counts: parks, gardens, square-gardens, boulevards and cemeteries; 7 model territories of each type were chosen. The selection was carried for consider areas of different size, age and location within the build area. For phylogenetic characteristics cyt b sequences from GenBank of noticed species were used with calculating index of average phylogenetic diversity (Clarke, Warwick 2001). 54 species were totally found (birds, which do not potentially nest in St-Petersburg green areas, e.g. gulls, were not considered). Main species presented on more than half territories are *Passer domesticus*, *Corvus cornix*, *Parus major*, *Fringilla coelebs*, *Turdus pilaris*, *Sturnus vulgaris* and *Motacilla alba*. Specific diversity by biotopes is: 21 for square-gardens, 23 – boulevards, 24 – gardens, 36 – cemeteries, 43 – parks. Difference between types of green areas is shown for specific and phylogeographic diversity. Area surface (ln) present positive correlation with species richness and with AvPD. Relation between position of investigated territory inside build area and number of species remains unproven, as well as for phylogenetic diversity index.

Poster_21

TROPHIC ECOLOGY OF TWO AVIAN SPECIES *CICONIA CICONIA* L.1758 AND *BUBULCUS IBIS* L.1758 COHABITING IN TÉBESSA (EAST OF ALGERIA)

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The western cattle egret (Bubulcus ibis) is a species with wide distribution in Algeria, this elasticity allows it to frequent the breeding areas of other species such as the white stork. To demonstrate the ability of species to exploit the food resources in their feeding areas, allowing them to coexist. Pellets of rejection are collected at the end of each month, then are triturated and analyzed to determine diet composition of both species during the years 2009-2010. The diet of *Bubulcus ibis* is composed of invertebrate and vertebrate prey. In total of 6386 preys identified, the diet is composed of 7 classes, 15 Orders and 50 families. Insects are dominant (97.07% of the total).

Insect's class contains six Orders, Orthoptera and Coleoptera being the most dominant, representing 63.49 % and 25.11 % respectively.

39 families compose the insect's class, Acrididae and Carabidae families are the most consumed . The other families prey are very weakly found.

Orthoptera and particularly Acrididae family are dominant during the summer, wintering and the breeding periods with the rearing of chicks representing 83.4%, 59.15% and 53.96% respectively.

The food spectrum of *Ciconia ciconia* comprises a total of 1875 individuals divided into 4 classes, 11 orders and 32 families. Insects are dominant and account for 95.94%.Insect's class contains 6 orders, Coleoptera are the most dominant, representing 68.31% of the total order's prey, followed by Orthoptera with 15.56%. 27 insect's families are identified, Carabidae, Scarabaeidae, Carcinophoridae, Tenebrionidae are consumed in priority.

Poster_22

REFERENCES ON THE AVIFAUNA IN THE AREA OF BISTREŢ LAKE, AN IMPORTANT ECOLOGICAL CONSERVATION AREA IN SOUTHWESTERN ROMANIA

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Bistreţ Lake is located in southwestern Romania, about 5 km away from the Danube River; it has an area of 1,936 ha and, until 2006, it functioned as an reservoir for industrial fishing. Since 2007, much of its surface has been integrated into the Natura 2000 ecological network with the status of *Avifaunistic Special Protection Area* (code ROSPA0010Bistreţ), and, in 2012, Bistreţ Lake was granted the status of *Ramsar site*.

The bird species recorded in the area of Bistreţ lake are mostly typical aquatic species (about 84); however, there have been also identified accessory/non-aquatic species (about 36), their frequency and density being directly or indirectly influenced by natural and anthropogenic factors.

Passage or stationary species as winter visitors or summer visitors arrived in the area for feeding are much more numerous than breeding species. This certifies the importance of Bistreţ Lake as refuge for the birds traveling along the Danube. Some migratory species observed here in recent years are considered avifaunistic rarities in our country e.g. *Phoenicopterus ruber*, *Bubulcus ibis*. The avifaunistic importance of the lake is also confirmed by the ringing birds and / or the rings recovered from time to time from different species, such as *Pelecanus crispus*, *Ciconia nigra*, *Sterna caspia*, *S. sandvicensis*.

The breeding aquatic birds (about 30-35 species), are also valuable from a faunistic point of view, many of them being species with unfavourable conservation status at European level.

Poster_23

THE BREEDING BIOLOGY OF THE MARSH HARRIER (*CIRCUS AERUGINOSUS*) IN SOUTHWESTERN TURKEY

Esat KIZILKAYA[1], Mehmet KARACA[1], Aziz ASLAN[2], Raşit URHAN[1]

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The marsh harrier (*Circus aeruginosus*) is a migrant species which nesting on ground, and also prefers semi-open habitats, extensive reedbeds and arable fields. The species breed and overwinter in Turkey, but there is no studies about reproductive biology. This study, therefore, was carried out to determine breeding biology of the species in 2017 breeding season (between March and August). Daily observations have been done to get breeding data and also unmanned aerial vehicle (UAV) was used for collecting pictures from nests. It was determined that the duration of nest construction is 7.19 ± 2.46 day and the duration of incubation period is 30.91 ± 1.37 day per pair/nest. The clutch size was 2.14±0.35 eggs per pair and the nest, hatching and fledgling success was 52%, 53% and 87%, respectively. It was seen that the both nesting and hatching ratios of the species are lower than fledgling success. It is thought that the species may tolerate lower nesting and hatching success with higher fledgling success and it could be adaptive trait to promote population and/or lineage.
However, long-term studies must have been done to get comparable and conclusive results.

Poster_24

THE DIET OF MARSH HARRIER (*CIRCUS AERUGINOSUS*) DURING THE BREEDING SEASON IN LAKE ACIGÖL (DENIZLI/TURKEY)

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Populations of marsh harriers has increased since 1970's in Europe due to recoveries in living habitats, termination of illegal hunting and prohibition of using toxic chemicals in agriculture. One of the important reasons behind this success is a relatively wide diet of the species. The Marsh harrier is a generalist predator and its diet include mammals, reptiles, frogs and even fishes. In addition, species eat eggs as a rare eating habit in birds of prey. Although it is known that marsh harrier breed and overwinter in Turkey, there is no studies ecology of the species in the country. The aim of the study is to determine the diet of marsh harrier in Turkey during 2017 (from March to August) breeding season. Direct observations have been done and pellet-prey remains were collected and analyzed to get data about diet of the species. It was seen that marsh harrier feed mostly on birds (38,1%) and small mammals (24,3%) and at least feed on eggs (2,4%) and insects (1,9%) during breeding activities. Our results showed that the species hunting on different vertebrate, which are dense groups living in breeding areas, and long term studies must have been done to get detailed results both in breeding and overwinter periods.

Poster_25

IS THE INSTALLATION OF THE NEWLY INTRODUCED PARAKEET (*PSITTACULA KRAMERI*) IN ALGERIA IS A PROBLEM FOR OTHER AVIAN SPECIES?

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None of the national avifaunes mention the Rose-ringed Parakeet. Speaks of this species only about the eighties. In March 1984, a group of *Psittacula krameri, attempted* to establish themselves in the southern suburbs of Algiers, at the "Gué de Constantine": has found 4 Rose-ringed Parakeet dead, possibly intoxicated by discharges from a nearby pharmaceutical factory; While the others at the water tower of Beryanne in Boufarik. Individuals escaping from private cages quickly joined the Algiers hikers (Hydra, Benaknoun) known for their tree species and then went to the Algiers test garden. They were subsequently observed in the town of Boufarik, which is 30 km from Algiers. In the following years, their presence was noticed in the Algerian agglomeration and the Algerian Sahel.

Poster_26

WHITE STORK *CICONIA CICONIA L.* CENSUS IN NATIONAL NATURE PARK "PYRYATYNSKYI" POLTAVA REGION UKRAINE

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White Stork numbers in Europe decreased during middle and the second half of 20th century, but in the end of 80s – beginning of 90s it started to increase rapidly. Data on the next numbers changes are very important to check the state of population and to plan the means of its conservation.

Full White Stork censuses on the territory of the National park were conducted each year 2014-2016. The total area of censuses is equal 870 km^2.

During three years the mean number of flying nestlings per the breeding pair was 2.46±0.06 (n=273), per successful breeding pair – 2.72±0.06 (n=247). The part of unsuccessful pairs was 9.42% (n=276). Mostly 3 (36.44%) and 2 (33.6%) nestlings start to fly, in the total its mean 70.04% of broods. The broods of 4 (17.41%) nestlings are not so popular and of 5 nestlings are less popular and not each year is recorded – during three years there were only 3.24% of such nests of total number. There were 9.31% of nests where only one nestling start to fly.

The mean date when the nestlings start to fly was 25.VII (n=33), *lim* 14.VII-1.VIII, i.e. they start to fly in the second half of July.

The nests are placed on the trees (16.68%), power transmission lines pillars (66.27%), buildings (1.79%) and water towers (15.26%).

The main majority of the nests (10-20) are recorded in the villages where flood plains and other suitable for storks landscapes situated quite close.

Poster_27

IMPACT OF TROPHIC AVAILABILITY ANTS PREY ON FOOD ETHOLOGY OF WRYNECK (*JYNX TORQUILLA MAURETANICA*) IN THE MITIDJA PLAIN (ALGERIA)

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A study of Wryneck *Jynx torquilla mauretanica* diet was conducted in the area of Baraki (Algeria). The content analysis of 109 droppings permitted to identify 21638 preys. Generally, these belong to the family *Formicidae.* The Wryneck preys mainly on *Tapinoma nigerrimum* (AR% = 76, 6%), *Pheidole pallidula* (AR% = 16,8%) and *Plagiolepis barbara* (AR% = 3,4%). Other ant species are represented marginally. Similarly, the ants searched for by the Wryneck between January 2010 and February 2011 are *Pheidole pallidula* (Ii = 0, 95) and *Tapinoma nigerrimum* (Ii = 0, 92). Our resultants show once again that the Wryneck deserves its name of anteater. It is a myrmecophagous bird that has a great capacity for food adaptation.

Keywords: Wryneck, prey, myrmecophagous, Formicidae, Mitidja. Écouter, Lire phonétiquement

Final category: Migration

Poster_28

GENOTOXICITY IN FREE-LIVING BIRDS: DETECTING NUCLEAR AND CYTOPLASMIC ABNORMALITIES IN THE RED BLOOD CELLS OF TWO TRANS-EQUATORIAL MIGRANTS THAT JUST ARRIVED TO EUROPE TO BREED

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Cellular abnormalities in erythrocytes have been extensively used as biomarkers to assess the presence of genotoxic factors in the environment of free-living animals. Birds, in particular, are considered ideal model organisms in such assays. Herein, we focused on two trans-equatorial migratory birds, the Turtle Dove and the Eurasian Golden Oriole, to detect the presence of a battery of stress indices, namely micronuclei, nuclear and cytoplasmic abnormalities. During spring 2017, we captured and sampled 53 individuals, on a small Greek island (Antikythira). Birds encountered at the island during spring have just crossed the Mediterranean Sea. Per species results indicated the absence of statistically significant age- and/or sex-related differences in the frequency of the examined stress indices. However, interspecies comparisons showed higher frequency in specific abnormalities in the Turtle Dove compared to the Eurasian Golden Oriole, as a result of differences among individuals of the same sex and/or age class (e.g. higher micronuclei frequency in females and adults). The observed patterns could be linked to sex and/or age-related differences in the physiology of the migrants and/or ecology (i.e. differential exposure to genotoxic factors) at their wintering areas. In the future we will examine blood samples of more species to elucidate the underlying factors influencing the susceptibility of spring migrants to genotoxic factors in the Palearctic migratory system. The study has been conducted in the framework of the project LIFE 13 NAT/GR/000909, with the financial support of the European Union LIFE Instrument and the Green Fund.

Poster_29

POPULATION BIRDS OF INDUSTRIAL-TECHNOGENIC AND RECREATION PARTS OF URBANIZATION TERRITORY OF PRIIRTISHJA (NATURAL RESERVE "BIRDS HARBOUR" AND "OMSK AIRPORT")

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Since 1974 up to present time we do research ornithological fauna and population birds of Natural Reserve "Birds harbor" (before it was a territory of floodplain of left banks Irtysh). In the period from 2013 to 2017 we analyze biodiversity and population birds and also ecology of dominant species birds on lakes of Natural Reserve – Caspian Gull and Black-headed Gull. We researched condition of bird fauna and ornithological complexes of the neighbour territory "Omsk Airport", which has a square more than 6 km^2, for analysis ornithological safety.

We marked maximal sum abundance of all birds of Natural Reserve "Birds harbor" from May to July 2014 (1337 and 1366 birds per km^2), that said about the preference Natural Reserve "Birds harbor" in the migration time and increasing population after nesting period. Before the starting mass migration birds the sum abundance birds of Natural Reserve "Birds harbor" was 1.2 times lower in April. We can compare it with June 2014 before appearance chicks in a nesting period.

We marked species richness of Natural Reserve "Birds harbor" in June 2014 (30 species), that said about preference floodplain of Natural Reserve during migration time.

As a result of research migration way of Caspian Gull of National Reserve "Birds harbor", we found that this species has wintering place on the coast of Arabian Sea (India). The distance from nesting place is 4600 km. Color ringing helped us in this research.

Poster_30

SATELLITE TRACKING AND MIGRATION ROUTES OF KOSOVO WHITE STORK (*CICONIA CICONIA*)

Qenan MAXHUNI[1], Wolfgang FIEDLER[2], Ahmet KARATAŞ[1], Liridon HOXHA[3]
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In 2016 - 2017 for the first time in Kosovo a pilot project for White Stork GPS tracking was started. In 2016 we equipped three white storks (*Ciconia ciconia*) nestlings and in 2017 two of them with GPS loggers including accelerometers. We used this method to study the migratory orientation of juvenile white storks from the population in Kosovo during their first autumn migration and also potentially important stopover sites. All data are stored and publicly available in www.movebank.org. During first autumn migration the storks born 2017 covered a distance of 7978 to 9790 km from their nesting site in Prelluzhe/ Kosova to their wintering areas in Tanzania. To reach central Sudan, as a main first stopover site, birds needed around 20 days. At the same time ringing of White Stork nestlings in Kosovo was started. Although Kosovo doesn`t have a national Ringing Center yet, the first eight young White Storks have been marked with rings issued by Max-Planck Institute of Ornithology.
During 2016 migration, one of the birds with loggers has been lost in Turkey while two of them safely arrived in Sudan but vanished for unknown reasons (presumably hunted) in November and December 2016. Those three individuals were tagged in their nesting site Lipjan in the center of Kosova. Two of the tracked individuals 2017 have at the end of the year arrived in Tanzania, which is unusually stopover place for storks migrating from south-east Europe.

Poster_31

BEHAVIOUR OF RAPTORS MIGRATING ACROSS THE GALLIPOLI PENNINSULA IN RELATION TO WIND

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In order to pass beyond the large sea connections between the continents of Europe and Africa, birds perform their migration process by centering upon the spots where terrestrial connections are the narrowest. The Gallipoli penninsula is one of the straits where mass of water, an important factor in the determining the bird migration routes in the west of Turkey, narrow down. Predatory migratory birds were observed during the spring and autumn migration period from 5 point determined on the Gallipoli peninsula in 2015. We observed 5195 raptor belonging to 21 species during spring migration period and 3007 raptor belonging to 19 species during autumn migration period in the field studies. There is a positive (0,464) linear relationship between the number of individuals observed in the spring migration period and the wind speed (t: 8,089, p: 0,000). 66.6% of the passages were observed at wind speeds above 20 km / h and 88.5% were observed in the days when the northern winds dominated. In the autumn migration period, there was no significant relationship between wind speed and number of individuals. It was observed that 69.6% of the passages occurred on days when the northern winds were dominant. When the direction and the speed of the wind were evaluated on the days that the movement/mobility of migration was at its highest level, it was seen that the winds from the North and Northeast had a positive effect on the number of migrations and the migrating individuals.

Poster_32

DIFFERENTIALLY EXPRESSED GENES IN THE BRAIN OF THE NORTHERN WHEATEAR (*OENANTHE OENANTHE*)

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Long-distance bird migration is one of the most extraordinary phenomena in nature, considering the magnitude of the displacements and the physiological challenges involved. The "migratory phenotype" has distinct somatic and behavioral features, but still, the identification of the molecular processes underlying that complex phenotype remains *terra incognita* for scientists.
As the brain is the primary organ responsible for behaviour, navigation, and control of many physiological functions, it has been one of the primary targets to investigate which genes are behind the migratory phenotype. Few studies using whole genome sequencing have shown that propensity to migrate, direction and migratory distance have genetic basis. In our work we discuss differential gene expression among three pre-migratory stages in the brain of captive Northern Wheatears (*Oenanthe oenanthe*), using RNA-Seq data.
The birds' autumn migration phase is separated in three distinct stages: (1) pre-migration (lean), (2) fattening, and (3) fat. Early in the season (stage 1) there are clues about neurogenesis and angiogenesis. Furthermore, two well-known neurotransmitters, Dopamine and GABA, seem to play a role directing the neural functions during that period. They might be influencing the behavior of the birds, maybe hyperphagia, and migratory restlessness. Later, from October to December when the birds have already duplicated their body mass due to fattening, genes involved in ATP production, lipid trafficking, and innate immune response are upregulated which corresponds to physiological and immunological challenges the birds are confronted along their journey. In total, 84 genes were differentially expressed among all three comparisons.

Final category: Others

Oral _17

DAILY RHYTHM OF LEPTIN AND PUBERTAL DEVELOPMENT OF JAPANESE QUAIL (*COTURNIX COTURNIX JAPONICA)*

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Endogenous circadian rhythms are need to be continuously entrained with the environment. Daily rhythms are mediated and imposed on the organism through the circadian system consisting of the hypothalamus, pineal gland and retina that contain multiple self-sustained circadian oscillators. The main signal from this complex is hormone melatonin. Oscillators were also found in peripheral organs, but how the peripheral and central oscilators interacted was not yet defined. The role of diffusible signals, such as hormones and food metabolites, in this process was suggested. Leptin hormone could be one of the factors that affect the circadian process directly or indirectly. It is well known that leptin has capacity to reduce food intake, cause body weight loss, and increase energy expenditure in several vertebral species. In this study, we tried to find out the daily leptin rhythm and the effects of physiological and pharmacological doses of leptin administration on post-hatching growth and development. Leptin showed a clear daily rhythm as being low during the day (below 7 ng/ml) and high at night (28 ng/ml). Leptin affected pubertal development according to the dosage given. Male (44 ± 0.28; pubertal time) or female (46 ± 0.25; pubertal time) quails treated with 4 µg leptin developed earlier compared to male (56 ± 0.28) and female (54 ± 0.28) birds treated with 0.9% saline injections ($p<0.05$). The results show that there is a rhythmic change in leptin hormone and pubertal development can be accelerated by the leptin doses.

Oral _18

THE COMPARISON OF EGG YOLK CAROTENOIDS LEVELS OF VAN LAKE GULLS (*LARUS ARMENICUS*) AND NIGHT *HERON* (*NYCTICORAX NYCTICORAX)*

Filiz KARADAS[1], Anders Pappe Moller[2], Özdemir Adızel[1], John Ewen[3], Phillip Cassey[4], Atilla Durmuş[1], Gökhan Oto[1]

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Wild birds that grow in natural conditions, adaptation and survival rate is a better than conditions of animals raised in farms. Therefore, it has been hypothesis that wild species birds accumulate more carotenes in their egg yolk to improve the reproductive performance, in order to test this hypothesis, egg yolk carotenoids levels of Van lake gulls (*Larus armenicus*) which is native birds and migrant birds Night Heron (Nycticoraxnycticorax) were compared.

For this purpose; carotene levels in egg yolk of both species were determined during laying period. Results showed that Night Heron - (Nycticoraxnycticorax) bird's egg yolks had twice more carotene accumulation than Van lake gulls (Larus armenicus) egg yolk carotenoid level ($p<0.05$).

This reserach was supported by Yuzuncu Yil University, the head of scientific reserach projects as 2007-BZF- 031 project code.

Oral _19

RELATION BETWEEN PHILOSOPHY OF SCIENCE AND ORNITHOLOGY

S. Ertan Tağman

Mehmet Akif Ersoy University, Burdur, Turkey

This issue was chosen due to one of the most famous quotes attributed to Richard Feynman who was one of the greatest physicists of the twentieth century: “The philosophy of science is as useful to scientists as ornithology is to birds." Why he chose Ornithology for simile, not the other branches of science? This question can be answered by this means; there were two breakthrough changes occurred in the history of science: Newton's law of gravity in Physics, and theory of evolution theorized by Darwin. Both of them had a deep impact on science as much as philosophy. All we know that there’s a fundamental difference between speaking or writing about a subject, and living or doing the subject. If one talk about to philosophy of science, inevitable he has to say something about evolution. And nothing can be written on evolution without a careful analyses of data from ornithology. So ornithology has importance far beyond the boundaries of that field. On the other hand, biology
differs in several important ways from the physical sciences. In biology statistical explanations which rely on probabilistic generalizations, “rules” and concepts exist, rather than laws as in the physical sciences which are named deductive nomological explanations dominated by essentialist philosophy. And for some physicists “all biology is a dirty science” because nice clean laws without exceptions do not exist in large parts of biology. This reflects the nature of biological phenomena, but some workers thought that biology could be reduced completely to physics.

Poster_33

ASPECTS REGARDING THE DIVERSITY OF AVIFAUNA IN CRAIOVA MUNICIPALITY (DOLJ COUNTY)

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Craiova Municipality, with a surface of 81.41 km^2, is located in the South-West of Romania, on the left bank of the Jiu River. It is part of Oltenia Plain. In this paper I update the ornithological database (started in 2000) with new information from the investigations carried out during the period 2015-2017 and with some conclusions regarding the species dynamics during all the ecological aspects of a year.

During this period, there were monitored 121 species distributed in 18 orders and 42 families. From the point of view of the phenological dynamics, during the vernal and aestival seasons, we noticed a relatively constant number of species, nesting birds predominating (64 species). The large number of species in the prevernal (90 species) and serotinal (87 species) seasons, which coincide with the spring and autumn migration, confirms the hypothesis that Craiova is located on the migratory route of birds moving along the Jiu corridor.

The diversity of urban birds is influenced by the variety of anthropogenic habitats, climatic factors and trophic resources.

Particular attention has been paid to the species listed in the Annexes to international legislation (e.g. Annexe 1 of the Birds Directive) and requiring special conservation measures, such as: *Aythia nyroca, Microcarbo pygmeus, Ixobrychus minutes, Nycticorax nycticorax, Ardeola ralloides, Egretta garzetta, Ardea alba, A. purpurea, Ciconia ciconia, Pernis apivorus, Himantopus himantopus, Recurvirostra avosetta, Chlidonias hybrida, C. niger, Alcedo atthis, Coracias garrulus, Dendrocopos medius, D. syriacus, Ficedula albicollis*, *Lanius collurio, L. minor*.

Final category: Parasitology

Oral _20

DOCUMENTATION OF CHEWING LICE (PHTHIRAPTERA: AMBLYECARA, ISCHNOCERA) INFESTING ACCIPITRIFORM BIRDS (AVES: ACCIPITRIFORMES) OF TURKEY

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Accipitriforms (Aves: Accipitriformes), the carnivorous diurnal prey birds, include around 225 species. This paper documents the louse (Phthiraptera: Amblyecara, Ischnocera) fauna so far associated with the Accipitriform birds of Turkey. Of the total 160 birds of 10 genera and 16 species examined, 127 (79%) were found infested with 21 chewing louse species (11 Amblyceran species and 10 Ischnoceran species). Of the 21, seven species of the genus *Colpocephalum* (C.) *viz*; *C. zebra, C. trachelioti, C. impressum, C. polonum, C. nanum, C. turbinatum, C. milvi* and six species of the genus *Degeeriella (D.) viz; D. phlyctopygus, D. leucopleura, D. aquilarum, D. nisus, D. fusca, D. fulva* were predominantly reported in the study. Other species of louse reported in this study include: *Laemobothrion (L.) vulturis, L. maximum, Myrsidea* sp. (probably straggler), *Crapedorrhynchus (Cr.) fraterculus, Cr. platystomus, Kurodaia fulvofasciata, Falcolipeurus (F.) suturalis,* and *F. quadripustulatus.* The most number (73.1%) of the birds examined were from the genus *Buteo* (Buzzards). *Clanga clanga* and *Accipiter (A.) brevipes* were not found infested with louse. At least one bird from the remaining species examined was found infested with lice. Six species of louse were found on *Buteo buteo* followed by five on *Buteo rufinus*; three each on *Aegypius monachus*, *Aquila (Aq.) heliaca, A. nisus,* and *Circus (Ci) aeruginosus*; two each on *Pernis apivorus, Ci. pygargus* and *Milvus migrans*; and one each on *Circaetus gallicus, Hieraaetus pennatus, Aq. chrysaetos, A. gentilis* and *Ci. macrourus.* Many Turkish birds are; however, yet to be screened for chewing louse infestation.

Oral _21

ECTOPARASITES OF THE WILD BIRDS IN WILDLIFE RESCUE REHABILITATION TRAINING PRACTISE AND RESEARCH CENTER OF KOCATEPE UNIVERSITY IN AFYONKARAHİSAR, TURKEY

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Ectoparasites such as lice, mites, ticks, fleas etc. can infest wild birds, and they cause irritation, anorexia, allergic reactions in the hosts, decreasing in animal products and can transmit some parasitic, rickettsial and viral diseases. In this study, several wild birds injured and brought to treatment and hospitalize to the Wildlife Rescue Rehabilitation Training Practise and Research Center of Kocatepe University in Afyon, Turkey, between April and December 2017 were examined for ectoparasites. Living birds were examined macroscopically; later, an insecticide spray consisting of synthetic pyrethroid, tetramethrin was applied to them. They were put in cartoon boxes for 30 minutes, and then they were transferred to their cages. Consists of the cartoon boxes were removed to the petri dishes. They were examined under a stereomicroscope for ectoparasites. Dead birds were also examined macroscopically, and then they were washed under top water into a nylon bag. The ectoparasite specimens collected from the birds were preserved in ethanol 70% in eppendorf tubes and identified. Fifteen birds were infested with at least one ectoparasite species. Seven louse, one mite and one tick species were detected on the birds. In addition, traumatic myiasis due to third stage larvae of *Lucilia sericata* was detected on a long legged buzzard (*Buteo rufinus*). Two lice species; *Cuculiphilus fasciatus* from Cuckoo (*Cuculus canorus*) and *Upipicola upupae* from Eurasian hoopoe (*Upupa epops*), and adult *Ixodes gibbosus* from Short-toed snake eagle (*Circaetus gallicus*) were reported for the first time in Turkey.

Oral _22

GROSS PATHOLOGICAL FINDINGS IN CHUKAR PARTRIDGE (*ALECTORIS CHUKAR*) IN TURKEY: PRELIMINARY RESULTS

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Chukar partridge (*Alectoris chukar*, Aves, Galliformes) is the most important game bird that specially breed in breeding stations and spread to nature by the ministry of Turkey. This bird species traditionally important for Turkish people and Turkish culture. Chukar partridge is showing spread almost all over the Turkey and the birds migrated throughout the country. During their life and migration, they may contact domestic poultry and wild birds. Numerous diseases can be seen in Chukar partridge but there is no extensive study about disorders and pathological finding in this bird species in Turkey. In this study 138 Chukar partridge collected from 20 different regions which are 19 hunting station and a breeding station, Afyonkarahisar, examined grossly occurrence of the diseases. At the gross examination, eye, leg and skin problems easily diagnosed. At necropsy, the most commonly effected system was digestive system. In some case granulomatous lesions were observed in abdominal cavity and visceral organs. Splenomegaly was also common necropsy finding. After complete collection, their histopathological examinations will be made. Aspergillosis, Mycobacteriosis, NewCastle disease, Marble Spleen Disease (Adenovirus) and Marek's disease will be evaluated by immunohistochemical methods. This is preliminary results for our project and the aim of the project is to diagnosis of these disease in Chukar partridge and developed to prevention strategies of these diseases from the production station to the natural populations.

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Oral _23

ANATOLIA – A CENTER OF AVIAN HAEMOSPORIDIAN GENETIC DIVERSITY

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Understanding the evolution of haemosporidian parasites in Anatolian populations has been a central theme in avian haemosporidian studies. Though much research has investigated factors shaping the abundance and geographical distribution of avian malaria in different continents, the vast territories of Asia have received little attention. Moreover, the distribution of haemosporidian remains poorly known in Turkish birds. Here, birds were caught in seven localities throughout the Anatolia. The distribution and genetic diversity of the haemosporidian parasites were characterized by analyzing partial sequences of the mitochondrial cytochrome b gene. Avian haemosporidian parasites showed high genetic diversity in Anatolia. Several undescribed haemosporidian lineages were found among populations of the bird species in Turkey. Our results show that the level of the genetic diversity of haemosporidian parasites in the Anatolian avifauna is more diverse to other, well-studied regions.

Poster_34

STUDIES ON CHEWING LICE (PHTHIRAPTERA, ISCHNOCERA, AMBLYCERA) OF DOMESTIC AND WILD BIRDS IN TURKEY

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This study was performed to detect chewing lice species of domestic and wild birds in Turkey, between the years of 2014-2018. For this purpose, 149 bird samples in 13 orders were examined for chewing lice. Studied birds examined macroscopically, and sprayed an insecticide with synthetic pyrethroid. Collected louse samples were preserved in alcohol 70%, and they were cleared in potassium hydroxide (KOH) 10% for 24 hours. Later, they were rinsed in distilled water and transferred to alcohol 70 and 99, respectively, and mounted on the slides in Canada balsam. Ninety-two (61.74%) of 149 birds were infested with chewing lice, and detected 55 chewing lice species belonging to the 33 genera. The genera; *Aquanirmus, Bonomiella, Esthiopterum, Gruimenopon, Heleonomus, Paragoniocotes* and the species; *Amyrsidea minuta, Ardeicola maculatus, Ardeicola stellaris, Bonomiella columbae, Brueelia amsel, Brueelia tasniemae, Colpocephalum nigrae, Ciconiphilus pectiniventris, Esthiopterum gruis, Gruimenopon longum, Heleonomus macilentus, Kurodaia cryptostigmata, Kurodaia subpachygaster, Menacanthus (Gallacanthus) kaddoui, Myrsidea isostoma, Neophilopterus tricolor, Paragoniocotes* spp (N), and *Pseudomenopon dolium* were detected for the first time in the birds in Turkey. *Menacanthus stramineus* was detected for the first time in *Chrysolophus pictus* throughout the world.

Poster_35

THE PREVALENCE OF HAEMOSPORIDIAN INFECTIONS OF FREE-LIVING AND CAPTIVE BUZZARDS, *BUTEO BUTEO:* MOLECULAR INVESTIGATION

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Globally distributed Haemosporidian parasites are affected birds. Rehabilitation centers in conservation programs have recently increased significantly for raptors. Their health takes an important role such as the programs. However captive birds which are lived in rehabilitation center suffer from malaria parasites. We comparative analyzed Haemosporidian parasite between free-living birds and captive birds using molecular markers to understand whether there is any effect on living spaces where raptors live in nature or same cage. Fifteen free-living and twenty-two captive Buzzards, Buteo buteo in the Lisinia Rehabilitation Center were investigated in Burdur, Turkey. The overall higher prevalence of Haemosporadian was found in captive birds (22,7%) whereas prevalence Haemosporidian was found 20% in free-living birds. Prevalence of Haemoproteus, Plasmodium, Leucocytozoon, and mix infection (Plasmodium and Leucocytozoon) were found as 4,5%, 9,1%, 13,6%, and 4i5% respectively in captive birds, and only Plasmodium was found as 20% in free-living buzzards. Our results show that captive buzzards have more infections than free-living buzzards. The higher prevalence of Haemosporidian in captive birds could be explained as its contamination risk because captive buzzards have lived together in the same cage for a long time. Removing program of vectors of Haemosporidian should be build up around the rehabilitation centers for the health of raptors.

Poster_36

PARASITOLOGICAL EXAMINATION ON AVIAN HAEMOSPORIDIAN PARASITE IN A REHABILITATION CENTER, BURDUR, TURKEY

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Rehabilitation centers take very important role for health of birds which is bring to treatment and then release them to wildlife. Some of treated birds especially raptors are not released due to their lack of wing, leg, etc. If the birds stay long period in the cage, risk of contamination of Haemosporidian parasites could be increased. We made parasitological examination on avian Haemosporadian parasite in Lisinia Rehabilitation Center, Burdur Turkey. We examined total 57 birds from 18 species and 9 families using light microscopy. Over all the prevalence of Leucocytozoon spp., Haemoproteus spp., and Plasmodium spp. were 22,8%, 21,1%, and 14,0% respectively. Diagnosis of the parasites were made according to their characteristic microscopical appearance. Mix infection with Leucocytozoon and Haemoproteus was found as 7,0%; Leucocytozoon and Plasmodium as 1,8%. Highest prevalence of Leucocytozoon, Haemoproteus, and of Plasmodium were observed in Accipitridae (36,1%) and Buteo rufinus (50,0%) , Columbidae (50,0%), and Columba livia (66,7%), and Accipitridae (22,2%) and Buteo buteo (27,3%) respectively as family and species. Numerous erythroblastic cells were observed in affected birds blood, possibly due to hemolytic effects of the parasites. This study revealed that captivity can cause increased prevalence in blood parasites in birds.

Poster_37

IDENTIFICATION OF ECTOPARASITES OF *STURNUS VULGARIS* IN NORTH EAST OF ALGERIA

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This study aims to identify the parasites that starlings can transmit and the possibility of disease transmission by these migratory birds. For this, a manual body search and a coprological study were conducted on 30 caught starlings. Identification of the parasites revealed the presence of 6 species belonging to 2 branches of Arthropoda and Apicomplexa. The identified species are *Brueelia nebulosa*, *Myrsidea cucullaris, Sturnidoecus sturni, Trouessartia* sp., *Isospora* sp., Analgoïdae sp. Among the ectoparasites, the most abundant species *Brueelia nebulosa* followed by *Myrsidea cucullaris*, *Trouessartia* sp. and *Sturnidoecus sturni*. The average size of the lice is between 0.78 and 1.82 mm for the different development stages. Prevalence of Starling parasites ranges from 6.7% (Isospora sp.), to 30 starlings only 2 individuals were infested with coccidia (Rare). Mites and insects with prevalence values greater than 50% belong to the class of dominant species. This is Brueelia nebulosa (96.7%), Myrsidea cucullaris (80%) and Trouessartia sp. (73.3%). Sturnidoecus sturni (36.7%) and Analgoidae sp. (23.9%) are satellite species.

Keywords : European starling, Parasite, *Brueelia nebulosa*, Lice, Mites, Prevalence, Algeria

Poster_38

FEATHER MITES (ACARI: ASTIGMATA AND PROSTIGMATA) RECORDED ON DIFFERENT BIRD SPECIES FROM TURKEY

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Many species of feather mites (Acari: Astigmata and Prostigmata) are ectoparasites and widely found on different bird species. These mites continuously living on their hosts. Until now, about 2.500 species of feather mites were recorded worldwide. However, researchers expect that more than 10.000 species not yet discovered.

In Turkey, systematic and diversity of feather mites are poorly known. So far, only 41 species have been reported in limited papers (Peterson et all. 1980; Aksın and Erdoğmuş 2005; Aksın 2007, 2010; Gürler et all. 2013). The following families of mite species were recorded from Turkey. Astigmata: Alloptidae (1 species), Analgidae (5 species), Avenzoariidae (1 species), Dermoglyphidae (1 species), Eustathiidae (2 species), Freyanidae (2 species), Proctophyllodidae (13 species), Psoroptoididae (1 species), Pterolichidae (4 species), Pteronyssidae (2 species), Ptiloxenidae (1 species) and Trouessartiidae (7 species). Prostigmata: Harpirhynchidae (1 species). According to published literatures, following 28 different bird species were found to be infested by feather mites in the country: *Acrocephalus scirpaceus, Alectoris chukar, Cettia cetti, Coturnix coturnix, Erithacus rubecula, Fringilla coelebs, Hirundo rustica, Locustella luscinioides, Luscinia luscinia, Motacilla alba, Netta rufina, Passer domesticus, Passer hispaniolensis, Phoenicurus phoenicurus, Phylloscopus collybita, Phylloscopus trochilus*, *Porphyrio porphyrio, Prunella modularis, Regulus regulus, Scolopax rusticola, Sylvia atricapilla, Sylvia borin, Sylvia communis, Sylvia curruca, Sylvia melanocephala, Tachymarptis melba, Tringa totanus* and *Turdus merula.* In the present paper, all species of feather mites with their hosts were presented which recorded on different bird species from Turkey. Also, negative effects of feather mites to their hosts were discussed.

Poster_39

PARASITOLOGICAL AND PATHOLOGICAL OBSERVATIONS OF THE HOUSE SPARROW (*PASSER DOMESTICUS*)

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This study describes the parasites and related pathological observations in the house sparrow (*Passer domesticus*). In total 48 birds were examined and 41 sparrows were found to be infected with one or more endoparasites (85.4%). The most common parasites were liver trematodes, identified as *Brachydistomum microscelis* and *Brachydistomum gracupicae*. Also coccidia and cestode (*Infula* sp.) were observed. In one bird, one female *Tetrameres sp.* and one female *Microtetrameres sp*. were found in the proventriculus. No blood parasite was found after examination of the blood smears. No gross pathological lesion was seen the organs except proventriculus, gut and liver. At histological examination, small necrotic areas and inflammatory reactions were seen in the liver and the gastrointestinal system related to the parasites. Incidentally anthracosis was diagnosed in 23 and mild pneumonia in 12 of the lungs.

*This study was published in Journal of Zoo and Wildlife Medicine 44 (3):564-569 (2013).

Poster_40

IS PCR-BASED DETECTION ENOUGH IN DETERMINING THE PREVALENCE OF HAEMOSPORIDIAN INFECTION*?*

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Research in avian blood parasites has seen a remarkable increase since the introduction of polymerase chain reaction-based (PCR-based) methods for haemosporidian parasite detection. PCR-based methods are mostly selected due to time and inexperience of microscopy. Although most of the literature use only PCR-based detection methods in last decade, we don't know whether it is enough or not for determining the prevalence of haemosporidian in infection. Because if a location, like Anatolia, has the high genetic diversity of haemosporidian parasites, the gene could not be amplified by the primers due to the mutations which occur in primers' banding locations in some lineages of haemosporidian. We check the hypothesis using 22 buzzards, *Buteo buteo* in Anatolia. Though prevalence of Haemoproteus, Plasmodium, Leucocytozoon, and mix infection (Plasmodium and Leucocytozoon) were found as 4,5%, 9,1%, 13,6%, and 4,5% respectively in PCR-based methods but we found as 36,4%, 27,3%, 31,8%, and 9,1% respectively in microscopy method. But determined one Plasmodium sp. and one Leucocytozoon sp using PCR-based method were not found in the microscopy method. This differentiation could be explained that some sequence of haemosporidian is suitable the others are not suitable for banding of primers due to mutations in the locations. PCR-based method and microscopy should be used together especially if a location has high genetic diversity and there are not specific primers for the location such as Anatolia

Final category: Phylogeography and Phylogeny

Oral _24

MITOCHONDRIAL DNA REVEALS HIGH GENETIC ADMIXTURE AMONG EUROPEAN RED-BACKED SHRIKES

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Answering questions on HOW and WHY species have evolved to their current status has triggered major debates in molecular ecology. Remarkable insights obtained via recent DNA sequencing technology have helped us to better understand the diversity of today's biota in Europe, but crucial aspects are still poorly explained.

The Red-backed Shrike *Lanius collurio*, an iconic songbird renowned for impaling its prey, is widely distributed as a breeder in Europe and Western Asia. But many populations are declining as a result of habitat loss, reduction of arthropod food and illegal trapping. As such, gene flow among different populations becomes paramount to ensure survival of the species, but we still lack an overview on the genetic diversity of the Red-backed Shrike.

To address this knowledge gap, we analyzed the cytochrome b gene (mtDNA) and the cytochrome c oxidase subunit 1 gene (mtDNA) from 183 breeding Red-backed Shrikes from across the entire distribution range. Our results revealed high genetic admixture and 52 haplotypes among the Eurasian populations. Birds are clustered in two major groups, with no clear geographical separation, as a direct consequence of Pleistocene glaciations.

* This project is supported by a grant from the German Ornithologists' Society (DO-G)

Oral _25

RECONSTRUCTION OF THE BIOGEOGRAPHICAL HISTORY OF TITS AND CHICKADEES (PARIDAE)

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We inferred the biogeographical history of the Paridae (tits and chickadees) using methods based on discrete, a priori defined, geographical areas and a method that uses actual species distributions and a relaxed random walk in a Bayesian context. We compared their relative performances and how different area codings influenced the outcome in the discrete analyses. The phylogeny was reconstructed using Bayesian inference and time-calibrated using published substitution rates and a fossil calibration point. The discrete analyses were performed in BioGeoBEARS. For the probabilistic diffusion analysis, the extant distribution of each species was shaped as polygons in Google Earth and analyzed together with the posterior distribution of time-calibrated trees in beast. The diffusion process was modelled as a relaxed random walk. The earliest divergences occurred between 10 and 15 Ma and the probabilistic diffusion analysis and one of the discrete analyses indicated that the parids originated in the mountains of East Asia (Sino-Himalayas). Between 8 and 5 Ma parids started to spread from the Sino-Himalayas and became established in North America and Africa before 5 Ma. Not all the main lineages contributed to the colonization processes. The presentation explicitly focuses on the role of the Middle East.

Poster_41

CONTINENT-WIDE PHYLOGEOGRAPHY OF THE EUROPEAN BEE-EATERS *MEROPS APIASTER* REVEALS STRONG GENETIC CONNECTIVITY ACROSS PALEARCTIC-AFRICAN ZONES

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Throughout the periods of low temperature during the Tertiary and Quaternary in Europe a vast area was under lasting ice, and consequently decreasing the breeding sites, meanwhile, a high diversity of habitats were accessible along the tropical zones, comprising breeding zones for birds. As a result to the long-term climatic oscillations the migration systems of birds developed and altered the evolutionary history of the species due to gene flow among populations from distinct areas. In the present study, we detailed the current genetic status of the populations of the entire Palearctic-African distribution range including breeding and migration sites using multilocus approach of the migratory European Bee-eater (*Merops apiaster*). Interestingly, the mitochondrial and microsatellites data support the high genetic connection amongst populations from Europe, Asia and Africa and panmictic crossing in this taxon. Our striking result was the evidence of low differentiation between the South-African and the European and Asian bee-eaters, supporting the gene flow amongst these populations.

Poster_42

PHYLOGEOGRAPHY OF EURASIAN SPARROWHAWK *ACCIPITER NISUS* AND NORTHERN GOSHAWK *ACCIPITER GENTILIS* BASED ON NUCLEOTIDE SEQUENCES OF MITOCHONDRIAL DNA

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Eurasian Sparrowhawk and Northern Goshawk are the most widely distributed representatives of the genus *Accipiter* in Eurasia and include at least 6 and 8 currently recognized subspecies, respectively (Thiollay, 1994). Nevertheless, their phylogeographic structure remains uncertain. We examined sequences obtained from blood, frozen tissues, feathers and museum skins, and in addition Genbank, for the whole range of both species. Two partial coding regions of mitochondrial cyt b and COI genes were selected. These species reveal relatively low polymorphism according to cyt b, especially Northern Goshawk, for which overwhelming majority belong to only one haplotype, COI results show a more diverse distribution of haplotypes. No clear relations between subspecies ranges were found, which may be explained by wide migrations of hawks across Eurasia after the last glaciation. An exception is the American Northern Goshawk *Accipiter gentilis atricapillus*, which differs substantially from Eurasian Goshawks by each gene; it probably represents a distinct species. This research is supported by Global Education Program (DL – 36/05 pr).

Final category: Wildlife management

Oral _26

BREAKING BAD: FULL IMPACT ASSESSMENT OF INCREASING ALIEN PARROT POPULATIONS IN EUROPE REVEALS NO MAJOR IMPACT

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Across the world, alien species are considered an urgent societal and economic problem, with numerous impacts attributed to their invasion. However, in many cases a holistic evaluation is lacking, indicating that their "invasive" status is derived from only a handful of negative impacts, often concerning restricted locations and anecdotal reports. The Rose-ringed Parakeet *Psittacula krameri*, an iconic pet bird, is widely established as an alien species, with more than 90,000 wild individuals in Europe alone. Nonetheless, despite its charisma, negative impacts on local fauna, infrastructure and human wellbeing have been reported in several European countries. Currently, many populations are still increasing and are predicted to spread beyond their initial urban habitats. Across Europe, we have closely monitored the demographic evolution of this alien parrot, resulting in one of the most comprehensive datasets for alien species in Europe. To evaluate Rose-ringed Parakeet impact in Europe, we used a novel framework to collate data and evidence from multiple sources, followed by a consultation phase with regional experts. In total, we had 246 data entries and we covered 17 languages, targeting both peer-reviewed and grey literature.

Although it is considered one of the worst avian invaders worldwide, our inclusive assessment reveals that, despite constant population increase, the Rose-ringed Parakeet causes only minimal to moderate impact in Europe, related mostly to competition with the common native cavity nesters and, in Southern Europe, agricultural damage.

Oral _27

AVIATION SAFETY AND THE WHITE STORK IN A CHANGING WORLD

Michal Skakuj

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Continuous growth number of air traffic increases the probability of collision with birds and other animals. Worldwide anthropogenic changes influence on birds populations and behaviour including species that are hazardous to aviation like geese, cranes, gulls. Aircraft movements and aerodrome infrastructure development may cause negative impacts on protected species and habitats. However with a very few exceptions, bird strikes have no important role in bird mortality or disturbance. In addition a collision with very big species could be catastrophic for the aircraft. Growing presence of some bigger bird species like White Stork in vicinity of aerodromes increase probability of bird strike. The risk to aircraft is higher in dens breeding and wintering populations areas or along White Stork migratory flyways. Looking at the flying altitude of the birds, the greatest risk occurs on and around aerodromes during take-off and landing, as well as low level military flights. The data concerning environmental protection system (e.g. Natura 2000 network), nests distribution and new technologies (e.g. satellite tracking, radar analysis) should be used to benefit aviation safety. World Birdstrike Association (WBA) stimulates toward a multidisciplinary approach and stakeholders co-operation in a proactive way. This is necessary to manage the wildlife strike risk based on proper balance between nature protection and aviation safety. Therefore, Birdlife International and the WBA signed a Memory of Understanding. The collaboration toward effective wildlife hazard management should include national aviation and nature protection authorities, scientists, NGOs, as well as European Union Agencies on the national or EU level.

Oral _28

THE EXPERIENCE OF RECOVERY AND MAINTENANCE OF WATERFOWL POPULATIONS AT THE SOUTHERN EUROPEAN RUSSIA

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Climate, habitat, agricultural technology changes are the main causes of negative trends of dynamics of waterfowl populations by the 21st century at the southern European Russia. Recovery waterfowl populations program was launched in 2005 in Veselovsky reservoir area. Investments in reintroduction of ducks into natural habitats allowed stabilizing the local mallard population. Features of reintroduced duck dispersion, their breeding, feeding behavior have been clarified. Banding confirmed the high rate of "farmer" ducks in hunting trophies and reducing hunting pressure on wild ducks. The graylag goose spatial distribution in breeding and migration seasons, wintering areas has been investigated using a color and GPS-GSM-transmitters marking. The "close" and "distant" wintering areas of graylag geese have been clarified. Modern views on the state of the local population, number of waterfowl during migration stopovers, as well as the extraction of birds share during the hunt were obtained. The most important characteristics of habitats that enhance their ecological capacity (availability, accessibility of food resources, hydrological regime) have been clarified. On the model plots practical measures to improve the quality of bird habitats have been implemented, which led to the formation of large concentrations of birds in the area. Experimental resting areas for migratory and wintering birds organized in study area, helped to increase the habitat ecological capacity. The local mallard population was stabilized. It was established that warming and the onset of a humid climatic period combined with measures to improve habitats led to the restoration of the graylag goose population.

Poster_43

AN INVESTIGATION ON RELEASING TREATED WILD ANIMALS INTO THE NATURE IN TURKEY

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The purpose of this study was to evaluate the general profile of wildlife in Turkey in terms of injured wild animals, their treatment and re-introduction to the nature. It was analysed the records regarding the Treatment and Rehabilitation of wild animal, collected from 2012 to 2015 and determined the number of wild animals injured in nature and treated, the number reintroduced to nature, the amount settled in zoos and having died during this process. Of 11,110 treated animals, 50.18 % were reintroduced into nature, 24.95 % were settled into zoos and the remaining 24.87 % died. However, the evaluation in this study also showed that the number of both harmed and dead animals in nature has been gradually increasing by years ($p < 0.05$). This study covered a general evaluation of the damage on the wild animals in Turkey; therefore there is a need for detailed exploration of these damages, including the causes, consequences and proposals for solutions in the future. In this context, it is also important to increase opportunities for cooperation between Ministry of Forestry and Water Affairs, other countries, universities and relevant NGOs.

*This study was published in Applied Ecology and Enviromental Research, 2017, 15(4), 1757-1763.

Poster_44

PHARMACEUTICAL DRUG 'DICLOFENAC' AND POISONS MIGHT BE CAUSING MORTALITIES OF THREATENED LAPPET-FACED, EGYPTIAN, GRIFFON VULTURES AND OTHER RAPTORS IN SAUDI ARABIA

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As it is evident in South Asia that vultures feeding on the carcasses of animals treated with the drug, which is a non-steroidal anti-inflammatory drug used to treat livestock suffer renal failure and die as particular enzyme is missing in vultures that break down diclofenac in their body. It is investigated the availability of diclofenac in Saudi Arabia and found 11 different drugs are sold around Mahazat reserve and in Taif and somewhere else as well in Saudi Arabia. The NSAID are freely available for the livestock treatment and are sold by manufacturers with many trade names. During last 10 years around 40 Lappet-faced Vultures found dead in Mahazat as-Sady PA, which has significant breeding population. The population of Egyptian, Griffon, Cinereous and Bearded vultures showing sharp decline in other parts of Saudi Arabia. The main threats for vultures and other raptors include lack of food, illegal use of poisoned baits set for predators, habitat destruction and degradation, illegal persecution or possibly use of diclofenac for livestock. It is highly recommended to ban the diclofenac, while there are safe, equally effective and comparably priced veterinary drugs that could be prescribed as an alternative to diclofenac in Saudi Arabia.

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