

TSE's mission is preservation the unique diversity of birds, butterflies and their habitats in Armenia, through introduction of sustainable patterns of resource use, and contribution in forming of balanced relations between natural ecosystems and human activities.

Annual Report, 2017

Projects

European Breeding Bird Atlas 2 / National Atlas "The State of Breeding Birds of Armenia"

This project is a pan-European initiative of European Bird Census Council. The main aim of the project is to illustrate trends of changes in distribution and number of breeding species of Europe, during 30 years after publication of the first Atlas. Armenia joined this initiative in 2014, already having a scheme of monitoring and a developing net of birdwatchers. During implementation of the project the network of birders increased more than three times, the bird monitoring scheme was re-established a bird monitoring scheme into more sustainable way, and the data collection and analysis techniques have been significantly improved. The information, collected for European Atlas will serve as a basis for creation of National Atlas "State of Breeding Birds of Armenia", for assessment of Emerald Sites under Bern Convention and National Protected Areas, for assessment of industrial initiatives and sustainable management of natural ecosystems, and also for further development of birdwatching in Armenia and Caucasus. In 2017 TSE obtained funds for continuation of the data collection for Armenia.

Participants: P. Voricek, V.Keller, H-G. Bauer, S. Herrando, K. Aghababyan, G. Khanamirian, H. Ter-Voskanyan, S. Tumanyan, A. Khachatryan, A. Sarkisyan; Funding: MAVA Grant through European Bird Census Council; Duration: 2014–2018.

Assessment of Emerald Sites in Armenia for protection under Bern Convention

After ratification of Bern Convention in 2008, Armenia was given a task to select Emerald Sites, based on species listed in Appendix II of the Convention, including 117 bird species. This important initiative is a first important step in habitat conservation. Our contribution to this program includes regular consultation of National Experts' Group of Bern Convention; suggestion of new territories as potential Emerald Sites; and assessment of the sites based on our own database on bird species. Our collaborative efforts in 2014 resulted in accepting of a new territory "Arevik"; in 2015 our efforts together with National Experts' Group and WWF Armenia allowed in identification and assessment of five new territories, including one of the most spectacular bird areas - Armash Fish Ponds. In 2016 the list of Emerald Sites was finalized and the species compositions and abundances have been detailed. In 2017 the final discussions about the site selection were conducted.

Participants: G. Fayvush, M. Arakelyan, K. Aghababyan, A. Aleksanyan, A. Aslanyan, A. Ghazaryan, M. Oganessian, M. Kalashyan, S. Nahapetyan; Funding: Bern Convention Secretariat; Duration: 2013-2017.

Development of butterfly-watching in Gnishik community-managed protected area

Gnishik Community-Managed Protected Area of Armenia is a rangeland, important for conservation of biodiversity at species and ecosystem levels. It is represented by calcareous grasslands, inhabited by wide variety of plants and animals, including endemics of South Caucasus, and globally threatened species. The area is under exploitation of two communities: vill. Areni, and vill. Khachik. The primary income of the mentioned communities comes from various sectors of agriculture: livestock husbandry, horticulture, and apiculture. The livestock husbandry has tendency towards hyper-exploitation (overgrazing), which can significantly affect species diversity and cause erosions. From another side the area is an important site for several branches of nature tourism – butterfly-watching, birdwatching, and mammal observation. Local communities can potentially benefit from providing hospitality and logistical service for the tourists; the new income can partly substitute intensive use of rangeland and support in development of sustainable, environmentally friendly mechanisms of livestock husbandry. A newly established Gnishik Community-Managed Protected Area can also potentially benefit from this initiative, as the project will contribute to building the capacity and enhancement of sustainability of the Protected Area. At current the obstacles are related to lack of appropriate infrastructure. Taking above mentioned into account, we propose (1) to construct the Nature Tourism and Accommodation Center in Areni community, (2) to develop necessary human capacity and information infrastructure for butterfly-watching and other nature tourism activities in the area, (3) to broadcast the information about new opportunities among tour operators and tourists, (5) to identify environmentally friendly livestock farming practice for the area.

Participants: K. Aghababyan, G. Khanamirian; Funding: UNDP Small Grant Program; Duration: 2016 - 2018.

Bird Monitoring in the Protected Areas of Armenia

In entire world, birds are known as sensitive and useful indicators of natural ecosystems, which can show both: degradation of the habitats as well as their improvement. In Armenia, the system of bird monitoring in the Protected Areas is still under development. However, some PAs already understood the necessity of using the easy manageable tools, as an integral part of conservation planning. Lake Sevan National Park is the first one which started collaboration with ABCC in regards of bird monitoring. The project is aimed at continuous monitoring of birds at the terrestrial and aquatic habitats of the Lake Sevan NP and its close proximity, and at regular generation of indexes of the bird diversity. Reports are planned to be regularly published for public use.

Participants: K. Aghababyan, G. Khanamirian, and over 30 volunteers; Funding: Lake Sevan National Park; Duration: 2016 - 2018.

Identification of bird and butterfly species: indicators of forest ecosystems for improving the forestry management practices in Lori and Tavush provinces of Armenia

Forestry management in modern Armenia was inherited from 1950-s and is based on a consumer's approach. Such an attitude was strengthened by economic and energy crisis in the country in 1990-s, which caused wide-scale logging and partial deforestation of many regions. Later the industrial production of hardwood was rehabilitated, while there are slight trends towards changing of methodological approach towards forest management. In particular there is a need of setting up an early-warning monitoring system. The current project aims at identification of forest indicators

among birds and butterflies, and introduction of their monitoring on practice through training of the staff of forestry enterprises and protected areas.

Participants: K. Aghababyan, G. Khanamirian; Funding: UNDP-GEF Project “Mainstreaming Sustainable Land and Forest Management in Mountain Landscapes of North-eastern Armenia”; Duration: 2016-2018.

Transboundary Biodiversity Monitoring between the Lake Arpi and Javakheti National Parks

In Armenia the monitoring of the biological diversity is not yet a common duty of Protected Areas, partly because of lack of understanding of its necessity and partly due to lack of capacity. The project is aimed at identification of several bird species which can serve as indicators of terrestrial and aquatic ecosystems of two high-mountain National Parks: Lake Arpi in Armenia and Javakheti in Georgia. With the next step the project aims to conduct training of NPs' personnel in species identification and data collection and storing. So far, such indicators as White Stork, Ruddy Shelduck, Marsh Harrier, Dalmatian Pelican and some others have been selected for tracking the freshwater ecosystems, while Montague's Harrier, Long-legged Buzzard, Quail and some others have been selected to represent the steppes and meadows of this area.

Participants: K. Aghababyan, G. Khanamirian, K. Karapetyan, L. Tevzadze, Z. Javakhishvili; Funding: WWF Armenia and Transboundary Joint Secretariat; Duration: 2016-2018.

Habitat requirements of Semi-collared Flycatchers in Northern forests of Armenia

Main focus of the project is to identify habitat preferences of globally threatened and little-studied forest specialist - Semi-collared Flycatcher. Having better understanding of required habitat characteristics it will be possible to create a tool for sustainable management of population of the species, which will become a foundation for forestry industry. It would become possible to model the planned forestry activities and to conduct monitoring of predicted consequences. In addition, the study will allow estimating the population of the species in Armenia. Information collected during implementation of the project will be used for next edition of Red Book of Animals of Armenia, for assessment of Emerald Sites under Bern Convention, for improvement of planning of Protected Areas, and forestry management practices. Also the information will be provided to IUCN Species Survival Commission, as a contribution for the next assessment.

Participants: K. Aghababyan, G. Khanamirian, H. Sayadyan, H. Ter-Voskanyan, A. Khachatryan, A. Sarkisyan, V. Gevorgyan; Funding: British Ornithologists' Union, Ornithological Society of the Middle East, Wilson Ornithological Society, Armenian National Science and Engineering Foundation; Duration: 2015–2017.

Assessment of global conservation status of *Polyommatus myrrha cinyrea* – endemic of Middle East and South Caucasus

Polyommatus myrrha (Herrich-Schäffer, [1852]), a rare, least studied species that is endemic to Asia Minor and the South Caucasus. Assessment of the conservation status of this species by the SSC IUCN was not carried out. The South Caucasus is inhabited by the subspecies *Polyommatus myrrha cyniraea* Nekrutenko & Effendi, 1979, whose status assessment was not carried out by the Red Book of the Republic of Armenia (2010). The territory occupied by this only population in Armenia, judging by the recorded individuals – does not exceed one hectare, and judging by the limited range of the species, it is a narrow specialist. Until now, the fodder plant of the species, its biological cycle, and habitat requirements are unknown, and, accordingly, the threats are unclear. The area where the

species was discovered is a unique community of animals and plants (about 900 species of animals and about 1100 species of plants, many of which are endemic to the Zangezur Range), but it is still not in the list of protected ones.

The project aims at (1) assessing the conservation status of the species for IUCN SSC and the Ministry of Nature Protection of Armenia; (2) creation of necessary prerequisites for a full assessment of the species habitat according to the criteria of the Bern Convention.

Participants: K. Aghababyan, G. Khanamirian, V. Gevorgyan; Funding: Mohamed bin Zayed Species Conservation Fund; Duration: 2016–2017.

Publications

Aghababyan K., Ter-Voskanyan H., Khachatryan A., Gevorgyan V., Khanamirian G. 2017. The State of Semi-collared Flycatcher (*Ficedula semitroquata* Homeyer, 1885) in Armenia. Proceedings of III International Scientific Conference “Biological diversity and conservation problems of the fauna - 3”, Yerevan, Republic of Armenia. September 27-29, 2017.

Aghababyan K., Khanamirian G. 2017. Baseline study of the Birds at Lake Sevan for further monitoring – 2016-2017. Technical Report № TSE-2017-001. Prepared for Lake Sevan National Park. 45 pp. DOI: 10.13140/RG.2.2.10179.09766.

Aghababyan K., Khanamirian G. 2017. Assessment of global conservation status of *Polyommatus myrrha cinyraea* – endemic of Middle East and Southern Caucasus. The Mohamed bin Zayed Species Conservation Fund supported project № 150512030. Butterfly Conservation Armenia – TSE NGO, Technical Report № TSE-2017-002. 4 pp.

Aghababyan K., Khanamirian G., Ter-Voskanyan H., Khachatryan A. (*in review*). White Storks (*Ciconia ciconia* L.) in Armenia: over ten years of research for conservation. Bird Census News: European Atlas News.

Aghababyan K., Khanamirian G. (*in review*). State of *Polyommatus myrrha cinyraea* in Armenia. *Electronic Journal of Natural Sciences*, National Academy of Sciences of RA.

Aghababyan K., Khanamirian G. (*in review*). Assessment of conservation status of *Polyommatus myrrha cinyraea* Nekrutenko & Effendi, 1979 for IUCN SSC.

Contributions

Sheldon R., Mikander N., & Orueta J.F. 2017. CMS/AEWA International Single Species Action Plan for the Conservation of the White-headed Duck *Oxyura leucocephala*. Contribution. CMS / AEWA, 2017. 31 pp.

Communications

- White Storks in Armenia – Presentation at 6th International Convention of Environmental Laureates, Freiburg (Germany), 15-18 March, 2017.
- New bird and butterfly species as indicators of forest ecosystems – a tool for sustainable forestry. Presentation at Advisory Board meeting of UNDP-GEF Project “Mainstreaming Sustainable Land and Forest Management in Mountain Landscapes of North-eastern Armenia”
- Monitoring of indicator birds as a tool for sustainable management of the terrestrial and aquatic ecosystems in Lake Arpi National Park. Presentation for WWF Armenia and

Transboundary Joint Secretariat in frames of project “Transboundary bird monitoring in Lake Arpi and Javakheti National Parks”

- Identification and counting of Birds and Butterflies for forest monitoring. Trainings provided for 11 forestry enterprises of Lori and Tavush provinces of Armenia.
- Bird monitoring in Lake Arpi National Park: identification, data collection and storing. Trainings provided for the personnel of Lake Arpi National Park.
- Penalties for shooting birds of prey in Armenia do not frighten potential poachers – interview is given to the News.Am online media agency.
- Pelicans – the largest birds in Armenia – interview is given to the News.Am online media agency.
- Development of criteria and indicators for the sustainable forest management. Expert assistance for the workshop organized in frames of UNECE Project “Sustainable forest management in Caucasus”
- Ecoregional Conservation Plan Revision. Expert assistance for the Workshop organized by WWF Armenia and WWF Georgia.
- Gnishik Prime Butterfly Area – video clip at the channel of Butterfly Conservation Armenia.
- Kajaran Prime Butterfly Area – video clip at the channel of Butterfly Conservation Armenia.

Trained people

- Six rangers of Lake Arpi National Park
- 22 forestry specialists in 10 forestry enterprises of Lori and Tavush provinces

Membership

Number of members increased from 1,325 up to 1,663. The members took more active part in the life of the NGO.