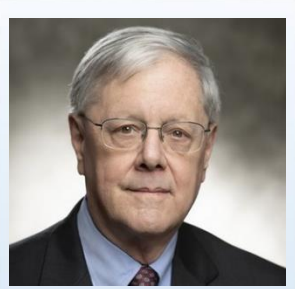




U.S. Department of Energy officials involved in Ukrainian projects



J. Stephen Binkley

Principal Deputy Director in the Office of Science (SC) at the U.S. Department of Energy (DOE)



Ronald Leman

Director of the Center for Global Security Research at the U.S. Department of Energy's Lawrence Livermore National Laboratory;
Chair of the Governing Board of International Science and Technology Center;
Member of the Department of Defence Threat Reduction Advisory Committee



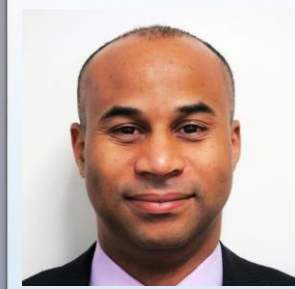
Steven Ashby

Director of the Department of Energy's Pacific Northwest National Laboratory (since 04.2015); Senior Vice President at Battelle (since 04.2015)



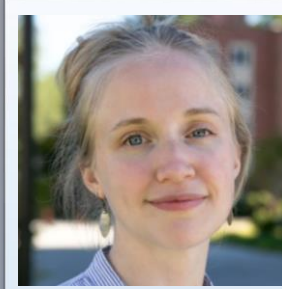
Richard Weller

Department of Energy's Pacific Northwest National Laboratory: Research Scientist (10.1980 – 04.2014) Staff Scientist (10.1993 – 04.2005)
Senior Program Manager (10.2005 – 04.2014)



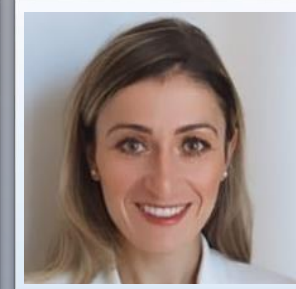
Shawn Anderson

U.S. Department of Energy Office Director – Energy Attaché U.S. Embassy Ukraine (since 11.2022)



Heather Bell

U.S. Department of Energy Office Director – Energy Attaché U.S. Embassy Ukraine (07.2018 – 07.2020, 07.2021 – 08.2021)



Valerie Brusilovsky

U.S. Department of Energy Office Director – Energy Attaché U.S. Embassy Ukraine (09.2020 – 07.2021)



Andrew Vogt

U.S. Department of Energy Office Director – Energy Attaché U.S. Embassy Ukraine (12.2014 – 07.2018)





U.S. Department of Energy involvement in implementation of dual-use projects

Implementation of projects in Ukraine under the auspices of the Pacific Northwest National Laboratory



Pacific Northwest National Laboratory (Richland, Washington)



BRaVE main research areas

- Interpretation of real-time host-pathogen dynamics for new mitigation strategies
- Identifying molecular interactions at the biological scale to develop targeted interventions
- Determining multi-scale ecosystem complexities for reliable epidemiological modelling
- Implementing an understanding to accelerate the design, detection, and production of biohazard preparedness materials
- Promoting innovation in user object instrumentation, experimental methods, and data analysis

U.S. DOE Biopreparedness Research Virtual Environment (BRaVE) Project

**DEPARTMENT OF ENERGY
OFFICE OF SCIENCE
ADVANCED SCIENTIFIC COMPUTING RESEARCH (ASCR)
BASIC ENERGY SCIENCES (BES)
BIOLOGICAL AND ENVIRONMENTAL RESEARCH (BER)**

FY 2023 BIOPREPAREDNESS RESEARCH VIRTUAL ENVIRONMENT (BRaVE)

DOE NATIONAL LABORATORY PROGRAM ANNOUNCEMENT NUMBER: LAB 23-2955

ANNOUNCEMENT TYPE: INITIAL

Announcement Issue Date: January 24, 2023
Submission Deadline for Pre-Proposal: February 28, 2023, at 5:00 PM Eastern Time
Pre-Proposals must be submitted by an authorized institutional representative: April 4, 2023, at 5:00 PM Eastern Time
Pre-Proposal Response Date: May 4, 2023, at 5:00 PM Eastern Time
Submission Deadline for Proposals: May 9, 2023, at 5:00 PM Eastern Time

Section 1 - DOE NATIONAL LABORATORY OPPORTUNITY DESCRIPTION

AB INQUIRIES ABOUT THIS ANNOUNCEMENT SHOULD BE DIRECTED TO:
BRaVE@science.doe.gov

SUMMARY

The DOE Office of Science (OS) announces its interest in receiving proposals from multi-disciplinary and multi-institutional teams led by DOE National Laboratories for support of national biopreparedness and response capabilities that can be advanced with DOE's distinctive capabilities. In 2020, DOE established the National Virtual Biotechnology Laboratory (NVBL) to assemble capabilities and expertise across all of DOE's 17 national laboratories to address key technical issues in the fight against COVID-19. Within a few months, the NVBL delivered highly impactful results that provided epidemiological information to decision makers, assessed and developed new virus testing protocols, identified high potential candidates for antiviral drugs, provided information on the fate and transport of the virus in buildings and other enclosed spaces, and delivered manufacturing solutions to stem the shortages of face masks, test kits, and other supplies. In addition, DOE's user facilities supported researchers from academic, industry, and government in the fight against COVID-19, including providing x-ray structural information that supported the development of all three vaccines approved in the U.S., as well as FDA-approved antiviral drugs and antibodies. In FY 2022, Biopreparedness Research Virtual Environment (BRaVE) was initiated, which leverages the highly successful framework established by the NVBL and broadens its capabilities to provide new capabilities for "biopreparedness" taking advantage of its unique capabilities and facilities in physical, computational, and life sciences and its integrative, cross-disciplinary, and collaborative tradition across experiments, models, and analyses.

Towards this goal, OS announces its interest in receiving research proposals from multi-disciplinary and multi-institutional teams led by DOE National Laboratories to advance capabilities in the following areas:

Information below. Achieving these research objectives would revolutionize our understanding of the science underlying a range of potential biological events and transform the nation's ability to prepare for, and respond to, future biological threats. Research supported by this program announcement may be synergistic with related activities your other federal agencies, such as the Centers for Disease Control and the National Institutes of Health.

SUPPLEMENTAL INFORMATION

...Achieving these research objectives would revolutionize our understanding of the science underlying a range of potential biological events and transform the nation's ability to prepare for, and respond to, future biological threats.

ESTIMATED FUNDING

DOE anticipates awarding Lab Program Announcements. Any awards made under this announcement, subject to the availability of future year appropriations.

DOE expects a total of \$105 million in current and future fiscal year funds will be used to support activities proposed under this Announcement, subject to the availability of future year appropriations.

DOE is under no obligation to pay for any costs associated with the preparation or submission of an announcement. DOE reserves the right to fund, in whole or in part, any, all, or some of the:

ANTICIPATED AWARD SIZE

Final award size will depend on the number of meritorious proposals, the results of peer review, program policy factors, and the availability of appropriated funds.

PERIOD OF PERFORMANCE

Participants making awards with a project period of up to three years as besting the project.

16

Information from the U.S. Chamber of Accounts on the accumulation of funds at the Department of Energy

FEDERALTIMES

Energy Department offices fail to spend over \$14 billion in allocated funds

By Molly Weisner

Energy Department offices fail to spend over \$14 billion in allocated funds before newer ones, these can exceed the minimum programs, thereby tying up resources that could be put to other uses.

A report from the U.S. Government Accountability Office found that while most federal funding has an expiration date, with unspent funds returned to the U.S. Treasury, the Department of Energy receives billions of dollars in allocations that are not time-limited, with unspent funds carried over from one year to the next.

For fiscal 2021, a total of \$14.1 billion accumulated in carryover balances from the department's Office of Environmental Management and the National Nuclear Security Administration, it said.

Energy Department offices fail to spend over \$14 billion in allocated funds before newer ones, these can exceed the minimum programs, thereby tying up resources that could be put to other uses.

These massive rollovers happen because many funds appropriated to EM and NNSA by Congress are available until they are expended. With the authority to keep hold of "no-need" funds, these offices may retain as much as \$14 billion in unexpended balances, and NNSA had \$10.9 billion. appropriated by Congress for other priorities.

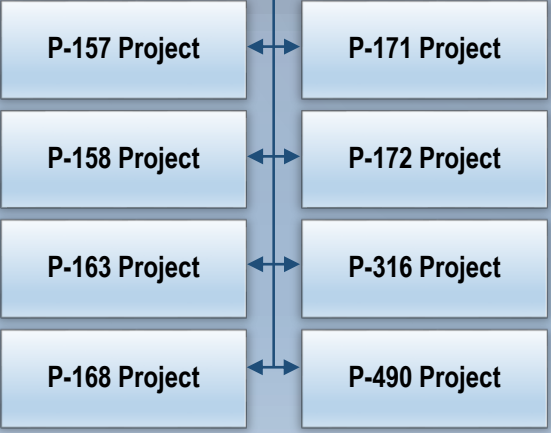
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For fiscal 2021, a total of \$14.1 billion accumulated in carryover balance...

Statement by Robert Kennedy Junior on military-biological researches

HILLSDALE COLLEGE
PUBLISHING TRUTH - DEFENDING LIBERTY SINCE 1844

...[in the early 2000s], (Washington) immediately started giving \$2 billion a year to bioweapons development. The Pentagon didn't want to do it because it was nervous about the legality, cause it was a death penalty to violate the Geneva Convention...
 ...And so they funneled it through DETRA ad DAPRA. They funneled all of that money to NIH to NIAID, which became the primary spear tip of bioweapons development. So Tony Fauci became the bioweapon czar in 2001...





Study of avian influenza, Newcastle disease, paramyxoviruses among wild birds from the Azov-Black Sea region within the framework of P444 Project.

Partner Project Agreement P444

P444 PROJECT

Monitoring of Avian influenza, Newcastle disease, Paramyxoviruses among wild birds from Azova-Black Sea region

PARTNER PROJECT AGREEMENT P444 between USDA Agriculture Research Service the Science and Technology Center in Ukraine, and National Scientific Centre, "Institute of Experimental and Clinical Veterinary Medicine"

Partner Project Agreement P444 between USDA Agriculture Research Service the Science and Technology Centre in Ukraine, and National Scientific Centre, "Institute of Experimental and Clinical Veterinary Medicine"

'...Monitoring of Avian influenza, Newcastle disease, Paramyxoviruses among wild birds from Azova-Black Sea region...'

Human cases of highly pathogenic avian influenza (2009–2023)

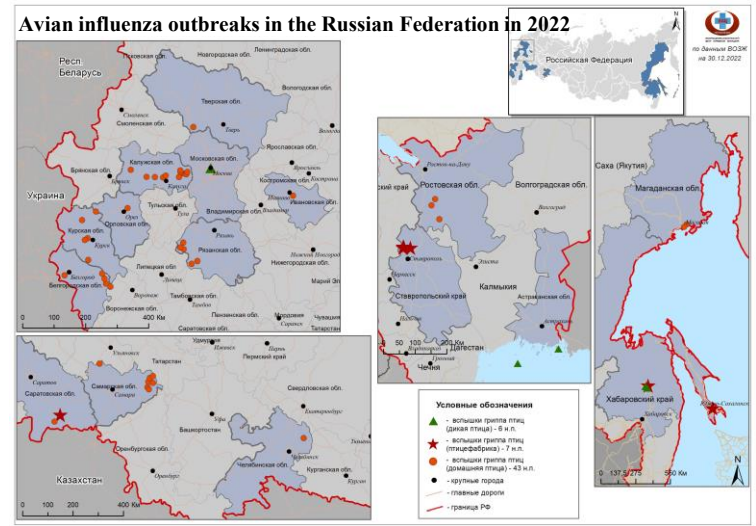
Cumulative number of confirmed human cases for avian influenza A(H5N1) reported to WHO, 2003-2023

Table with columns: Country, 2003-2009* (cases, deaths), 2010-2014* (cases, deaths), 2015-2019* (cases, deaths), 2020 (cases, deaths), 2021 (cases, deaths), 2022 (cases, deaths), 2023 (cases, deaths), Total (cases, deaths). Rows include Azerbaijan, Bangladesh, Cambodia, Canada, China, Djibouti, Ecuador, Egypt, India, Indonesia, Iraq, Lao People's Democratic Republic, Myanmar, Nepal, Nigeria, Pakistan, Spain, Thailand, Turkey, United Kingdom of Great Britain and Northern Ireland, United States of America, Viet Nam, and Total.

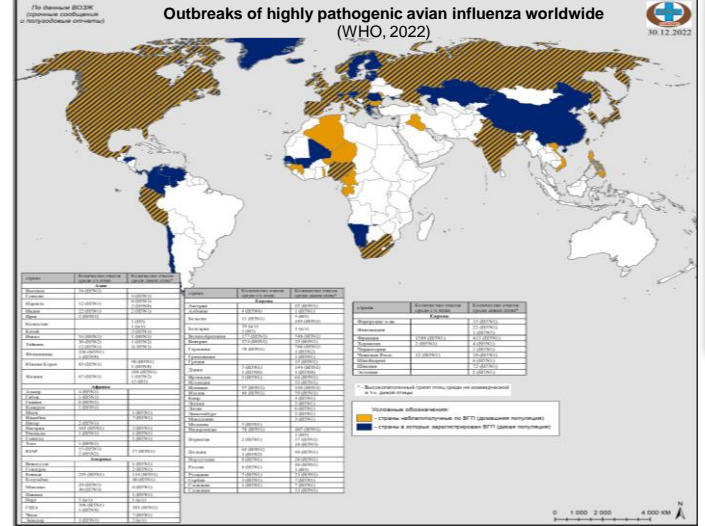
World Health Organization logo and text: 'Чрезвычайные ситуации' (Extraordinary situations), 'Общая информация' (General information)

Новости о вспышках болезней (News about disease outbreaks). Последние новости ВОЗ о вспышках болезней... (Latest WHO news about disease outbreaks...)

Outbreaks of highly pathogenic avian influenza in Russia and worldwide



In the Russian Federation in 2020–2022, the damage exceeded RUB 4,500,000,000.0, with more than 10,000,000 poultry eliminated



In Europe in 2020–2022, the damage amounted to €3,000,000.0. '...Avian influenza is no longer just a seasonal threat <...> Poultry farmers expect avian influenza throughout the year...'

German article snippet: 'Geflügelzüchter rechnen innerhalb eines Jahres mit der Vogelgrippe' (Poultry breeders expect avian influenza within a year). Includes image of chickens and text about seasonal threats.



Study on the possibility of spreading highly dangerous pathogens through migratory birds in the UP-4 Project

UP-4 PROJECT

Study of the spreading highly dangerous pathogens through migratory birds

The LPAIV and HPAIV situation in Ukraine (2005-2020)

- Poultry farming: industrial and backyard (235-250 million birds). Ukraine is a major exporter of poultry products.
- LPAIV was not reported in poultry (2001-2020).
- HPAIV H7 subtype has never been reported in Ukraine.

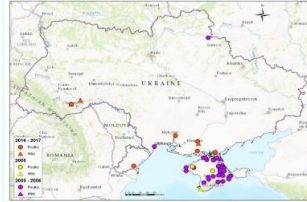
•HPAIV H5N1 and H5N8: Ukraine had four waves of HPAIV H5.

2005-2006 (H5N1) - 42 outbreaks (AR Crimea, Kherson, Odessa, Sumy)

2008 (H5N1) - 3 outbreaks (AR Crimea)

2016-2017 (H5N8) - 9 outbreaks (Kherson, Mykolaiv, Odesa, Ternopil, Chernivtsy)

2020 (H5N8) - 1 outbreak (Vinnytsa Oblast)



HPAIV H5N1 and H5N8 outbreaks in Ukraine in 2005-2006, 2008, 2016-2017

Affected species:

- Poultry: hen, duck, geese, turkey
- Wild Birds: Mute Swan (*Cygnus olor*), Cormorant (*Phalacrocorax carbo*), Great Crested Grebe (*Podiceps cristatus*)



Data Sources: Report to OIE; mapping IVM/UAA.

Photo Google (pictures are free)

BUILDING A WORLD OF DIFFERENCE™

Ukraine Biological Threat Reduction Program (BTRP) Cooperative Biological Research (CBR) Project

Risk assessment of selected especially dangerous pathogens potentially carried by migratory birds over Ukraine

UP-4 PROJECT OPTION YEAR 2 QUARTERLY REPORT for the period 31 October 2019 – 30 January 2020 (Q4)

Prepared for:



Prepared by:

BLACK & VEATCH SPECIAL PROJECTS CORP.

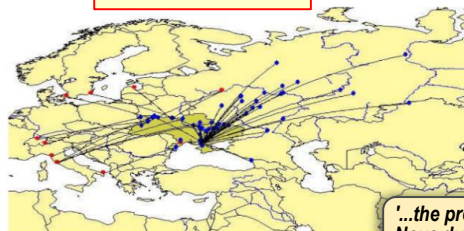


In collaboration with:



13 February 2020

Ringing results



Directions of migration of wild ducks from the South Ukraine by the Center for Bird Ringing, Poluda A.M.)

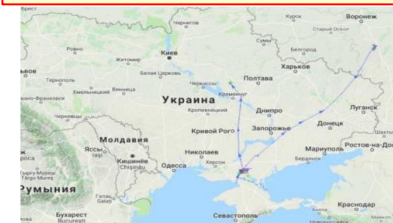


'...the predominant direction of mallards from Askania-Nova during spring migration is Eastern and Northern...'
'...the largest migratory distance is 3,206 km...'

According to the ringing results in the Southern Ukraine, the geography of the ring findings is very wide. The predominant direction of mallards from Askania-Nova during spring migration is Eastern and Northern and much less - to the West and South. The maximum duration of return of ring is up to 10.5 years, and the largest migratory distance is 3206 km.

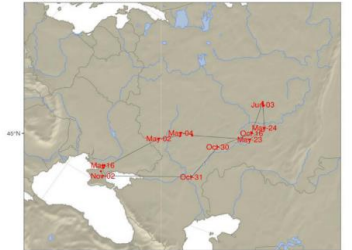
Species	Label number	Date	Place	Date of band return	Location of band return	Distance, km	Time after the labeling, days
Mallard	DB-410759	17.01.2018	Kherson region 46.28 N/33.50 E	05.05.2018-14.05.2018	Vovchansk, Sverdlov Region, Russia	2284	108
Mallard	DB-410791	29.01.2018	Kherson region 46.28 N/33.50 E	23.09.2018	Dniprovsk Oblast, Ukraine	273	237
Mallard	DB-410916	13.02.2018	Kherson region 46.28 N/33.50 E	12.05.2018	Tumen Region, Russia	3206	88

GPS tracking of duck in Ukraine

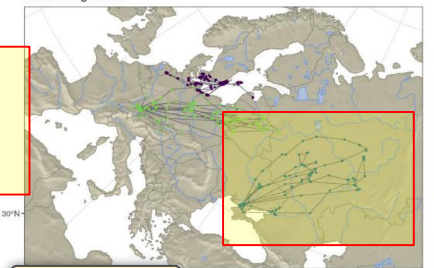


Directions of migration of wild ducks from the South Ukraine by the results of GPS tracking (March 2019)

Mallards '003017' (2019)



Mallard migrations



Askania-Nova

- During spring migration, all birds migrated to the North-East also. The biggest distance was over 2000 km and some birds covered this distance in 3-4 days.
- The birds stayed for breeding in the central Russia.
- With the beginning of autumn migration, birds returned in Kherson region (Ukraine).



Study of pathogens of economically significant infections with biosafety violations

Ukrainian experts involved in the Active Surveillance in Wild Birds project



Denis Muzyka

Deputy Director for International Cooperation, National Scientific Centre of Experimental and Clinical Veterinary Medicine (IECMV), Head of the Laboratory of Poultry Viral Diseases at IECVM



Viktor Gavrilenko

Director of the Falz-Fein Biosphere Reserve "Askania Nova" of the National Academy of Agrarian Sciences of Ukraine (since 1995), scientist-biologist and ecologist, specialist in the field of nature conservation and environmental protection



Aleksandr Mezinov

Director of the Falz-Fein Biosphere Reserve "Askania Nova" of the National Academy of Agrarian Sciences of Ukraine (since 2001)

Implementation of the Active Surveillance in Wild Birds project

STCU PARTNER PROJECT PROPOSAL P PR-1

1. Title of Project: **Active surveillance in wild birds.**

2. Partner (signing authority to partner project agreement):

'Project's Title: Active Surveillance in Wild Birds'

3. a. Participating CIB Institution(s):
National Scientific Centre Institute of Experimental and Clinical Veterinary Medicine
Address: Ukraine, 01001, Shchepanivska, 20
Tel: +380 572 792 20 03 Fax: +380 572 794 30 06 E-mail: [icvm](mailto:icvm@icvm.gov.ua)

b. Participating CIB Institution(s): the Falz-Fein Biosphere Reserve "Askania Nova"
Address: Ukraine, 75230, Askania-Nova, Pashcha, 13
Tel: +380 5038 6 12 32 Fax: +380 5038 6 12 32 E-mail: askania_app@rambler.ru

4. Person-days of Effort of Weapons Scientists/ Total Person-days of Effort: 16/28

5. Project Duration: 22

6. Total Estimated Project Cost

Payments to participants	3230
Equipment	1800
Materials	6000
Other Direct Costs	6000
Travel	5000
Overhead	5000
Estimated Project Cost	33000
STCU Fee	0
Total Cost	33000
Financial Contribution from Partner	33000

7. Project Location and Equipment Location (s):
Department of Asian Diseases
National Scientific Centre Institute of Experimental and Clinical Veterinary Medicine

PARTICIPATING INSTITUTION CONCURRENCE PR-4

Title of Project: Active surveillance in wild birds.

Participating Institution: the Falz-Fein Biosphere Reserve "Askania Nova" has reviewed the above project proposal and fully accepts the goals and activities described in it. We acknowledge our responsibility to ensure that the project is implemented under the most favorable conditions in the relevant conditions required by the Agreement establishing the STCU, the STCU Status, decision of its Governing Board, and by a Partnership Agreement that the institution may enter into with the STCU and Universities.

Name and signature of individual authorized to make commitments on behalf of institution:
Name: Havrylenko Viktor
Title: Director
Signature: [Signature]
Date: [Date]

"Participating institution — the Falz-Fein Biosphere Reserve "Askania Nova"

viruses

Discovery of Avian Paramyxoviruses APMV-1 and APMV-6 in Shorebirds and Waterfowl in Southern Ukraine

Article

Discovery of Avian Paramyxoviruses APMV-1 and APMV-6 in Shorebirds and Waterfowl in Southern Ukraine

Any C. Khilka, O. Cherkashin, P. Malyk, M. Sushko, M. Maksym Boryshchyn, O. Kostiantyn Malozem, O. Cherkashin, G. Goshchak, N. Kozlov, A. Anon, D. Stoyko, M. Yurko, S. Gerasymenko, R. Ponomarev, et al.

Special Issue
Respiratory Disease Virus and Other Avian Paramyxoviruses
Edited by Dr. Kiril M. Dimitrov

'Utilization of this low cost method will identify gaps in viral evolution ad circulation in this understudied but important critical region for Eurasia.'

APMV-1 and APMV-6 are 12 genera of the family Paramyxoviridae (PMV) that have been identified in a variety of vertebrate species. Utilization of this low cost method will identify gaps in viral evolution and circulation in this understudied but important critical region for Eurasia.

Keywords: viral evolution; surveillance of avian paramyxoviruses (APMV); wild birds; non-avian paramyxoviruses; Askan-Nova; Ukraine

https://doi.org/10.3390/v13020089

Act of handover of bio-samples collected during mass mortality of poultry in Askania Nova Nature Reserve in 2021

Act No 2 of 29.03.2021

про передачу зразків біоматеріалу з біосферного заповідника «Асканія-Нова» Інституту зоології ім. І.І. Шмальгаузена НАН України

Згідно Договору № 1-2021 про взаємну співробітництво між Біосферним заповідником «Асканія-Нова» Інституту зоології ім. І.І. Шмальгаузена НАН України та Інститутом зоології ім. І.І. Шмальгаузена НАН України для проведення паразитологічних досліджень з біосферного заповідника «Асканія-Нова» Інституту зоології ім. І.І. Шмальгаузена НАН України

Журнал зразків (зразки): 1. 1811 – 48 шт.;
2. 1964 – 23 шт.;
3. 1778 – 32 шт.;
4. 1738 – 22 шт.;
5. 1758 – 24 шт.;
6. 1760 – 1 шт.;
7. 1761 – 1 шт.;
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42. 1796 – 1 шт.;
43. 1797 – 1 шт.;
44. 1798 – 1 шт.;
45. 1799 – 1 шт.;
46. 1800 – 1 шт.

Від Біосферного заповідника «Асканія-Нова» НААН
Сторони узгодили передачу біоматеріалу з біосферного заповідника «Асканія-Нова» Інституту зоології ім. І.І. Шмальгаузена НАН України

Начальник співробітник відділу паразитології, кандидат біологічних наук
[Signature] О.В. Гребенюк

29.03.2021

'Act No. 2 of 29.03.2021 on transfer of biomaterial samples from the Falz-Fein Biosphere Reserve "Askania Nova" of the National Academy of Sciences to the I.I. Schmalhausen Institute of Zoology of National Academy of Sciences of Ukraine'

'Gus communis, 46; Tadorna ferruginea, 23; Corvus frugilegus, 32; Corvus monedula, 22; Anas platyrhynchos, 2; Buteo lagopus, 1; Anser albifrons, 1; Larus cachinnans, 2'

Study of pathogenic biomaterials in violation of biosafety requirements

