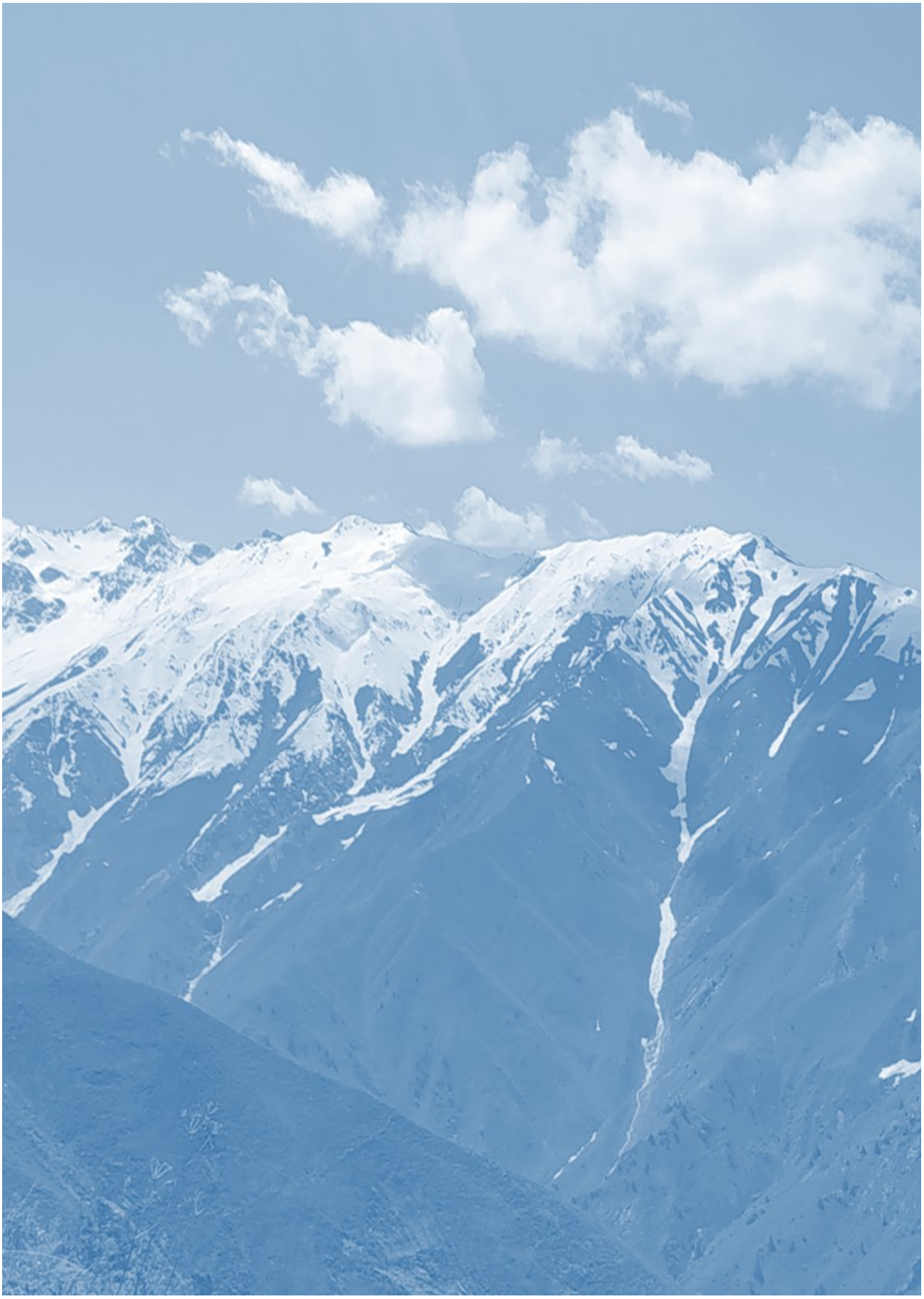
2024

The Second International Symposium on the Frontiers of Plant Diversity Conservation Research in the Pan-Third Pole Region

SYMPOSIUM MANUAL

September 4-6, 2024

Uzbekistan, Tashkent



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Warm Reminder

Dear Esteemed Conference Participants,

Welcome to the Second International Symposium on the Frontiers of Plant Diversity Conservation Research in the Pan-Third Pole Region! We are delighted to have you with us and are committed to ensuring a productive and enjoyable experience.

To facilitate a smooth and efficient conference, please take note of the following services and guidelines:

1.**Familiarize Yourself with the Symposium Manual**: Please read the conference manual thoroughly to understand the agenda and schedule. Your punctual participation in all activities is crucial. If special circumstances arise that prevent your attendance, kindly notify our staff promptly.

2.**Identification Credentials**: Keep your identification credentials provided for the forum safely and carry them at all times. If you lose your credentials, contact our staff immediately.

3.**Accommodation and Dining**: Arrangements for accommodation and dining have been made for your convenience. Should you have any additional needs, please inform our staff as soon as possible.

4.**Communication Devices**: To maintain a conducive conference atmosphere, please set your communication devices to silent or turn them off during sessions. Avoid wandering or making loud noises within the conference Venue to maintain order.

5.**Safekeeping of Materials**: Ensure the safekeeping of conference materials and personal valuables during the forum.

6.**Return Arrangements**: Liaise with our staff promptly to confirm your return arrangements and avoid any flight or train delays.

We sincerely appreciate your cooperation and wish you a fruitful and enjoyable forum.

Basic Information

I. Forum Date: September 4-6, 2024

II. Forum Venue: Panaramas Tashkent Hotel – Tashkent

III. Forum Theme: The Frontiers of Plant Diversity Conservation Research in the Pan-Third Pole Region

IV. Organized By:

(I) Organizers:

Institute of Botany, Academy Sciences of the Republic of Uzbekistan;
Kunming Institute of Botany, Chinese Academy Sciences;
Tashkent Botanical Garden Named after Academician F.N. Rusanov;
GBIF (Global Biodiversity Information Facility): Uzbekistan Branch.

The IT Electronics Eleventh Design&Research Institute Scientific and Technological Engineering Corporation Limited（EDRI）.
Research Center for Energy Transition and Social Development, School of Social Sciences, Tsinghua University.

Schedule

September 4, 2024 (Wednesday)		
9:30-18:00	Sign and register	Hotel Lobby, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod
16:00-18:00	Visit to Tashkent Botanical Garden (optional)	Bogishamol St. 232, Yunusabad district
18:00-20:00	Dinner	Tashkent local restaurant, Uzbek cuisine

September 5, 2024 (Thursday)		
9:00-10:30	Opening Ceremony	Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2
10:30-11:00	Group Photo, tea break	Group photo - outside of the Hotel, tea break— Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2
11:00-13:00	Keynote Speeches	Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2
13:00-14:00	Lunch	International Restaurant of Panarams Tashkent Hotel 1F – Tashkent , Yashnabod district, BoyKurgon St. 2
14:00-17:30	Keynote Speeches	Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2
18:00-20:00	Dinner	Tashkent local restaurant, Uzbek cuisine

Schedule

September 6, 2024 (Friday)		
09:30-11:00	Keynote Speeches	Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2
11:00-11:30	Tea break	Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKur gon St. 2
11:30-15:00	Keynote Speeches	Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2
13:00-14:00	Lunch	Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2
15:00-15:15	Closing Ceremony	International Restaurant of Panarams Tashkent Hotel 1F – Tashkent , Yashnabod district, BoyKurgon St. 2
15:30-18:00	Trip to Tashkent (optional)	Tashkent museums, shopping (see page: 11-14)
18:00-21:00	Closing Ceremony Dinner	Tashkent local restaurant, Uzbek cuisine



Conference Agenda

Date: September 4, 2024

Venue: Panaramas Tashkent Hotel – Tashkent, Uzbekistan

Arrival & Registration

Date: 9:00-18:00, September 4, 2024

Venue: Conference Hall, 1F, Panarams Tashkent Hotel.

Agenda: Sign and Regester

Visit: Botanical Garden (optional)

Date: 16:00-18:00, September 4, 2024

Venue: Conference Hall, 1F, Panarams Tashkent Hotel.

Agenda: Visit to Tashkent Botanical Garden Bogishamol St. 232, Yunusabad district

Dinner: 18:00-20:00

Venue: Tashkent local restaurant, Uzbek cuisine

Conference Agenda

Opening Ceremony

Date: 9:00-10:30, September 5, 2024

Venue: Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2

Moderator:

Komiljon Tojibaev
Director, Institute of Botany, Academy of Sciences of the Republic of Uzbekistan

(I) Opening and Welcoming Remarks

1. Turdiqulova Shahlo (10 min)

Vice-president of the Academy of Sciences of the Republic of Uzbekistan for chemical and biological sciences

2. Rajabbaev Sharof Raximberdievich (10 min)

Director of the Innovative Development Agency

3. Pema-Teinzin Puno (10 min)

Director, Kunming Institute of Botany, CAS, China

4. Hang Sun (10 min)

Kunming Institute of Botany, CAS, China

5. Dr. He Jijiang (10 min)
Research Center for Energy Transition and Social Development, School of Social Sciences, Tsinghua University, China

(II) Group photo

Tea Break: 10:30-11:00

Venue: International Restaurant of Panarams Tashkent Hotel 1F – Tashkent , Yashnabod district, BoyKurgon St. 2

Conference Agenda

Keynote Speeches:

Date: 11:00-13:00, September 5, 2024

Venue: Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2

Moderator:

Acad. Sun Hang

Kunming Institute of Botany, CAS, China

Agenda:

1. Dr. Dmitry D. Sokoloff (11:00-11:30)

School of Plant Sciences and Food Security, Faculty of Life Sciences, Tel Aviv University, Israel

Title: A multi-disciplinary view on the diversity of *Acorus* (Acoraceae)

2. Dr. habil Nikolai Friesen (11:30-12:00)

University of Osnabrueck, Botanical Garden, Germany

Title: Genus *Allium*: Classification, phylogeny and origin.

3. Dr. Marcin Nobis (12:00-12:30)

Institute of Botany, Faculty of Biology, Jagiellonian University, Kraków, Poland

Title: Taxonomy and phytogeography of the genus *Stipa* (Poaceae) in Middle Asia

4. Prof. Weibang Sun (12:30-13:00)

Kunming Institute of Botany, CAS, China

Title: Application of Species Distribution Models in the Conservation of Rare and endagred plants

Lunch: 13:00-14:00

Venue:e International Restaurant of Panarams Tashkent Hotel 1F – Tashkent , Yashnabod district, BoyKurgon St. 2

Conference Agenda

Moderator:
Prof. Jang Chang-gee
South Korea

Agenda:

5. Dr. Margarita V. Remizowa (14:00-14:30)

M.V. Lomonosov Moscow State University, Russia

Title: Time of inflorescence initiation potentially affects seed set in rare and endangered species

6. Dr. Jianguo Chen (14:30-15:00)
Kunming Institute of Botany, CAS, China

Title: Degeneration of cushion species and its potential impacts on alpine plant communities

7. Dr. Shahrokh Kazempour-Osaloo (15:00-15:30)

Tarbiat Modares University, Tehran, Iran

Title: Evolutionary History of the Inverted Repeat Lacking Clade of Papilionoid Legumes in Iran

8. Dr. Mengmeng Sun (15:30-16:00)
Changchun Chinese Medicine University, China.

Title: Investigation of species and environmental effects on medicinal rhubarb using delayed luminescence combined with HPLC fingerprint and metabolomics

9. Dr. Ewelina Klichowska (16:00-16:30)
Institute of Botany, Jagiellonian University, Poland

Title: Genomic footprints of climatic adaptation in Central Asian chasmophytes

10. Alexander Rudov (16:30-17:00)

Institute of Botany after A.L. Takhtajyan of National Academy of Sciences of Armenia

Title: Mapping gypsum vegetation in the Irano-Turanian region - case study Armenia

11. Dr. Min He (17:00-17:30)

Changchun Chinese Medicine University, China.

Title: Integration of transcriptomics and metabolomics reveals the anti-inflammatory effect of *Perilla* essential oil in zebrafish.

Dinner: 18:00-20:00

Venue: Tashkent local restaurant, Uzbek cuisine

Conference Agenda

Keynote Speeches:

Date: 09:30-13:00, September 6, 2024

Venue: Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKurgon St. 2

Moderator:

Dr. habil Nikolai Friesen

University of Osnabrueck, Germany

Agenda:

1. Prof. Hyeok Jae Choi (9:30-10:00)

Changwon National University, South Korea

Title: New insights into the phylogenetic relationships among wild onions (*Allium*, Amaryllidaceae), with special emphasis on the subgenera *Anguinum* and *Rhizirideum*, as revealed by plastomes

2. Dr. Hossein Akhani (10:00-10:30)

University of Tehran, Iran

Title: Golestan National Park (NE Iran), a hot spot biodiversity in Southwest and Central Asia

3. Prof. Volis Sergei (10:30-11:00)

Institute of Botany, Uzbekistan

Title: Plant conservation in China and Uzbekistan

Tea Break: 11:00-11:30

Venue: Conference Hall, 1F, Panarams Tashkent Hotel – Tashkent , Yashnabod district, BoyKur gon St. 2

Conference Agenda

Moderator:
Dr. Dmitry D. Sokoloff
Tel Aviv University, Israel

4. Prof. Yang Niu (11:30-12:00)

Kunming Institute of Botany, CAS, China

Title: The evolution of plant camouflage in SW China

5. Prof. Marina V. Olonova (12:00-12:30)

Tomsk state University, Russia

Title: Some problems of studying and demonstrating of the floristic diversity concerning the conservation

6. Prof. Xiangguang Ma (12:30-13:00)

Kunming Institute of Botany, CAS, China

Title: Genomic insights into multispecies introgression in Himalayan-Hengduan subalpine oaks

Lunch: 13:00-14:00

Venue: International Restaurant of Panarams Tashkent Hotel 1F – Tashkent , Yashnabod district, BoyKurgon St. 2

Moderator: Alexander Rudov Institute of Botany, Armenia

7. Dr. Shukherdorj Baasanmunkh (14:00-14:30)

Changwon National University, South Korea

Title: iNaturalist projects represent a valuable resource for aggregating plant observations and engaging society: a case study of the Flora of Mongolia project

8. Prof. Bo Song (14:30-15:00)
Kunming Institute of Botany, CAS, China

Title: Reproductive adaptations of alpine plants in the Himalaya-Hengduan Mountains

Closing Ceremony: 15:00-15:15

Trip to Tashkent (optional): 15:30-18:00

Tashkent Museums, Shopping (see page: 11-14)

Dinner: 18:00-21:00

Venue: Tashkent local restaurant, Uzbek cuisine

1-DAY SPEAKERS

1. Dr. Dmitry D. Sokoloff
School of Plant Sciences and Food Security, Faculty of Life Sciences, Tel Aviv University



Title: A multi-disciplinary view on the diversity of *Acorus (*Acoraceae)

Abstract:

The genus *Acorus*, an ancient angiosperm and order Acorales, includes plants with diverse uses, including medicinal, ornamental, and pest control applications. Recent studies, including whole genome analyses, have clarified taxonomic and evolutionary aspects of *Acorus*. The *Acorus calamus* group, found in the Holarctic regions, has complex taxonomic issues. This research reveals that diploids and tetraploids are distinct species (*A. americanus* and *A. verus*) with stable molecular and micromorphological differences, while triploids are sterile hybrids. Diploids and tetraploids coexist with specific pollinating beetles, and the distribution of these species suggests that the Irtysh River valley in Kazakhstan may be a key region for the origin of triploid *A. calamus*, challenging previous ideas about its tropical origin.

2. Dr. habil Nikolai Friesen
University of Osnabrueck, Botanical Garden



Title: Genus *Allium*: Classification, phylogeny and origin.

Abstract:

The genus *Allium*, part of the Amaryllidaceae family and subfamily *Allioideae*, includes over 1,100 species distributed from the Mediterranean to Central Asia and North America. Research over the past 35 years has focused on its phylogeny, addressing its taxonomic relationships, origin, migration to America, and evolutionary factors. Studies have identified 15 subgenera within three evolutionary lineages, with hybridization and reticulate evolution influencing its phylogeny. The genus is believed to have migrated to America via the Beringian Bridge, with its ancestors likely reaching Eurasia from India. The genus shows its greatest diversity north of the Himalayas.

1-DAY SPEAKERS

3. Dr. Marcin Nobis

Jagiellonian University,Kraków, Poland



Title: Taxonomy and phytogeography of the genus *Stipa* (Poaceae) in Middle Asia

Abstract:

The genus *Stipa* comprises over 150 species distributed in warm temperate regions throughout Europe, Asia and North Africa. It is one of the largest genera in the family Poaceae in Middle Asia, represented by 70 species, 4 subspecies, and 21 varieties. Among the listed species, 24 are of hybrid origin (nothospecies). In Middle Asia, feather grasses can be found at elevations from (0–)300 up to 4500(–5000) m a.s.l., however, most of these are mountain species. The highest level of feather grass richness is observed at the altitudes between 1000 and 2500 m a.s.l. Areas situated above 3000 m a.s.l. are occupied by less than 20 species, but in the highest elevations, above 4000 m, only less than 10 species can be found. The richest Middle Asian countries in terms of *Stipa* taxa include: Tajikistan (40 taxa), Kazakhstan (38) and Kyrgyzstan (36). Of the 74 taxa of Stipa (species and subspecies) recorded in Middle Asia, 40 are endemic, with distribution restricted to a particular country or mountain range, or the region in general.

4.Prof. Weibang Sun

Kunming Institute of Botany, CAS, China



Title: Application of Species Distribution Models in the Conservation of Rare and endagred plants

Abstract:

The study uses Species Distribution Models (SDMs) to conserve rare and endangered Acer and Corybas plants amid climate change. Using MaxEnt, the researchers assessed the current and future distribution of 20 threatened Acer species in China, finding significant habitat loss threats, especially highlighting southeastern Tibet. For *Corybas*, a niche differentiation tree and ESMs were used, noting soil characteristics' importance in their distribution. The study emphasizes SDMs' value in conservation planning, recommending nature reserves, ex-situ populations, and priority conservation areas, showcasing SDMs' crucial role in protecting vulnerable species under climate change.

1-DAY SPEAKERS

5. Dr. Margarita V. Remizowa

M.V. Lomonosov Moscow State University, Russia



Title: Time of inflorescence initiation potentially affects seed set in rare and endangered species

Abstract:

Seed production and plant reproduction depend on various internal and external factors. In angiosperms, seed propagation starts with the transition to flowering and flower initiation. This study investigated the timing of inflorescence initiation and development in rare perennial herbs and trees, finding that many species begin inflorescence in summer or autumn before the flowering season. Fruiting occurs at the end of the vegetative season, regardless of when inflorescence initiation happens. Plants with earlier inflorescence initiation endure environmental stress longer, including winter. Understanding inflorescence phenology is crucial for plant conservation and propagation, especially in the context of global warming, which requires long-term studies.

6. Dr. Jianguo Chen

Kunming Institute of Botany, CAS, China



Title: Degeneration of cushion species and its potential impacts on alpine plant communities

Abstract:

Cushion plants, such as *Arenaria polytrichoides*, play a crucial role in organizing alpine community structures and maintaining biodiversity but are vulnerable to climate change. This study assessed the population dynamics of Arenaria polytrichoides across eight plant communities along a climatic gradient. Reproductive functions and seedling establishment are constrained by factors like temperature, water, light availability, extreme climate events, and interspecific competition, which can lead to the degeneration of cushion populations. As these plants decline, communities shift from cushion-dominated to sedge-dominated, potentially altering ecosystem functions. Climate warming may accelerate this degeneration, highlighting the importance of understanding cushion plant dynamics for conserving alpine biodiversity.

1-DAY SPEAKERS

7. Dr. Shahrokh Kazempour-Osaloo
Tarbiat Modares University, Tehran, Iran



Title: Evolutionary History of the Inverted Repeat Lacking Clade of Papilionoid Legumes in Iran

Abstract:

Iran's angiosperm flora includes over 8,000 species across 1230 genera and 132 families. The largest family, Fabaceae, features the IRLC clade, which lacks the IR region in its plastid genome. The largest genera in this clade are Astragalus, with over 900 species (half endemic), and *Onobrychis*, with over 75 species (many endemic). Research on the IRLC's evolution used nuclear and plastid DNA, revealing significant plastome rearrangements and gene changes. The ycf4 plastid gene, more variable in the tribe Fabeae, was studied, and new molecular markers were identified for future research.

8. Dr. Mengmeng Sun
Changchun Chinese Medicine University, China



Title: Investigation of species and environmental effects on medicinal rhubarb using delayed luminescence combined with HPLC fingerprint and metabolomics

Abstract:

Chromatographic fingerprinting is commonly used for assessing the quality of medicinal herbs but faces challenges in robustness and reproducibility. This research aimed to develop rapid, cost-effective, and comprehensive tools for herbal quality control by incorporating biological activities into the assessment. The study used HPLC fingerprinting, metabolomics, and delayed luminescence (DL) to analyze rhubarb samples from various species and environments. Statistical methods classified these samples, and DL properties were correlated with specific chemical components to reflect rhubarb's bioactivities.

1-DAY SPEAKERS

9. Dr. Ewelina Klichowska

Jagiellonian University,Kraków, Poland



Title: Genomic footprints of climatic adaptation in Central Asian chasmophytes

Abstract:

In the last few decades, rapid climate changes have affected all levels of biodiversity, and extinction risks will accelerate along with future global temperatures. Undoubtedly, the regions most influenced by climate are the mountains.

We examine adaptive variation and its significance in the context of future climate change in the wild populations of high alpine endemics that occurred in three climatically distinct mountain ranges (Tian-Shan, Alai, and Zeravshan-Hissar Mts.). We used a large-scale genome-wide study, combining genome-environment association studies, landscape genomics, and niche modeling. Results show different population-specific adaptations to local climates and different vulnerability to future climate change of populations related to separate mountain ranges.

10. Dr. Min He

Changchun Chinese Medicine University, China



Title: Integration of transcriptomics and metabolomics reveals the anti-inflammatory effect of perilla essential oil in zebrafish.

Abstract:

Perilla frutescens L. essential oil (PFO) has antioxidant and antifungal properties and is used in flavoring and supplements. This study found that PFO, at 3.0μg/ml, reduces neutrophil movement and regulates proinflammatory cytokines in a zebrafish model. Transcriptomic and metabolomic analyses revealed that PFO affects key genes and metabolites related to amino acid and glucose metabolism, suggesting its potential as an anti-inflammatory functional food.

1-DAY SPEAKERS

11. Alexander Rudov
Institute of Botany after A.L. Takhtajyan of National Academy of Sciences of Armenia



Title: Mapping gypsum vegetation in the Irano-Turanian region - case study Armenia

Abstract:

The Republic of Armenia is located between two important biodiversity hotspots with about 3800 plant species and a diversity of landscapes and vegetation that ranges from subalpine communities to sand deserts. The semidesert belt in Armenia has a big diversity of soil types, including gypsum. However, botanists of the former century have often misclassified plant communities as gypsophile, while in fact dealing with marls and clays. Due to these misconceptions, up to date no detailed map and no complete floristic inventory of gypsum rich soils has been published.

2-DAY SPEAKERS

1. Prof. Hyeok Jae Choi
Changwon National University, South Korea



Title: New insights into the phylogenetic relationships among wild onions (*Allium*, Amaryllidaceae), with special emphasis on the subgenera *Anguinum* and *Rhizirideum*, as revealed by plastomes

Abstract:

The genus *Allium*, with over 900 species, is a major monocotyledonous genus, divided into 15 subgenera and 72 sections. A study of 76 species (84 accessions) using plastome phylogenetics clarified its subgeneric and sectional relationships. The two subgenera *Anguinum* and *Rhizirideum* are monophyletic, while others are polyphyletic. Subgenus *Anguinum* includes East Asian and Eurasian-American clades, with *Allium tricoccum* in North America linked to Eurasia. In subgenus *Rhizirideum*, *A. dumebuchum* and A. minus share a common ancestor, with Ulleung Island endemics originating independently.

2-DAY SPEAKERS

2. Dr. Hossein Akhani

University of Tehran, Iran



Title: Golestan National Park (NE Iran), a hot spot biodiversity in Southwest and Central Asia

Abstract:

The Golestan National Park (GNP) in northeastern Iran is a biodiversity hotspot and the country's first national park, designated a UNESCO reserve in 1957. Its diverse habitats support various flora and fauna, including Arcto-Tertiary relic plants, mammals like red deer, roe deer, wild boar, brown bear, and leopard, and the Persian ibex. The Illustrated Flora of Golestan National Park, Iran (University of Tehran Press, 2005, 2023) documents the park's vascular plants, with 1418 species belonging to 568 genera and 114 families, nearly 19% of Iran's known species. However, the park faces threats like overgrazing, deforestation, and road construction, necessitating urgent action from national and international organizations to preserve this unique Middle Eastern biosphere reserve.

3. Prof. Volis Sergei

Institute of Botany, Academy of Sciences of the Republic of Uzbekistan



Title: Plant conservation in China and Uzbekistan

Abstract:

An analysis of plant conservation practices in China and Uzbekistan highlights common issues such as poor protected area management, weak links between ex situ and in situ conservation, and a lack of recovery plans for threatened species. The proposed strategy includes prioritizing the most endangered local endemics, focusing on these species in reserve design and seed banks, incorporating ex situ and in situ components in species recovery plans, and assessing success based on regeneration in natural populations. Successful implementation requires better management of protected areas, botanical gardens, seed banks, and training of qualified personnel.

2-DAY SPEAKERS

4. Prof. Yang Niu

Kunming Institute of Botany, CAS, China



Title: The evolution of plant camouflage in SW China

Abstract:

In Southwest China, over 40 plant species use camouflage as a defense against herbivores. This study over the past decade has explored plant-animal interactions to understand the evolutionary drivers, physiological mechanisms, and reproductive success related to plant camouflage. Researchers investigated trends, patterns of divergence and convergence, and the parallels between plant and animal camouflage. This understudied phenomenon offers valuable insights into key ecological and evolutionary questions.

5. Olonova M.V.

Tomsk State University, Russia



Title: Some problems of studying and demonstrating of the floristic diversity concerning the conservation

Abstract:

Mountains in Central and Middle Asia are biodiversity hotspots with high plant species richness and endemism, but they face threats from climate change and human activity. Accurately identifying species is challenging due to varying species concepts and incomplete data. Taxonomic complexities, such as those seen in bluegrass (*Poa*), further complicate conservation efforts. To address these issues, conservation should prioritize endemic and relic species, integrate morphological and genetic data, involve local communities, and foster international cooperation. Continuous monitoring and adaptation of strategies are essential for effective conservation in these rapidly changing environments.

2-DAY SPEAKERS

6. Prof. Xiangguang Ma
Kunming Institute of Botany, CAS, China



Title: Genomic insights into multispecies introgression in Himalayan-Hengduan subalpine oaks

Abstract:

In the Himalayan–Hengduan subalpine oaks of southwest China, a phylogenomic study using genome-wide SNP data revealed that most species are genetically coherent, but some are interconnected through introgression. Shared plastomes and complex gene trees indicate that phylogenetic relationships are obscured by high levels of gene flow and incomplete lineage sorting. Analysis of *Quercus aquifolioides* and its sympatric relatives showed broad genomic introgression, with some regions indicating positive selection and adaptive introgression. This study confirms that these oaks form a syngameon and highlights the role of local introgression in providing novel alleles for adaptation.

7. Dr. Shukherdorj Baasanmunkh
Changwon National University, South Korea



Title: iNaturalist projects represent a valuable resource for aggregating plant observations and engaging society: a case study of the Flora of Mongolia project

Abstract:

The iNaturalist Flora of Mongolia project, launched in January 2019, has harnessed contributions from 665 citizen scientists who have made 52,286 observations of 2,238 plant taxa. This project has documented 60% of Mongolia's vascular plants, including many threatened and endemic species, surpassing other databases in observation numbers. Most observations are concentrated in western and central Mongolia. The project's success underscores the value of citizen science in enhancing biodiversity data, monitoring invasive species, and addressing climate change impacts on rare plants.

2-DAY

8. Prof. Bo Song
Kunming Institute of Botany, CAS, China



Title: Reproductive adaptations of alpine plants in the Himalaya-Hengduan Mountains

Abstract: The alpine zone of the Himalaya-Hengduan Mountains in Southwest China presents extreme conditions such as low temperatures, intense UV radiation, heavy rainfall, poor soil, and a short growing season. Over 15 years, research focused on glasshouse plants, which have large, translucent cream-colored bracts believed to be adaptations to these alpine habitats. Key questions addressed include the development of these bracts, pollination strategies in low pollinator environments, resource accumulation for reproduction, and responses to global changes. Studies found that the bracts enhance pollen germination and protect from environmental stress. Pollination of the model species *Rheum nobile* relies on female fungus gnats, which pollinate while consuming pollen and seeds.

Special invited guest

Dr. He Jijiang
Tsinghua University



Title: China's Practice on photovoltaic for desert ecological restoration and cooperation between China and Uzbekistan in Fergana Valley

Abstract: PV installed capacity has exceeded 600 GW in China by the end of 2023, while using up to 1 million hectares of land. Many photovoltaic power stations built in arid and semi-arid areas have achieved ecological conditions better than before the construction of photovoltaic power stations, due to reduced evaporation and rainwater redistribution. China is implementing an ambitious solar plan to combat desertification. By combining engineering, ecological desertification control and the construction of photovoltaic power plants, the ecology of nearly one million hectares of desertified land is expected to be improved by 2030. Chinese and Uzbek energy companies are trying to replicate the practice of photovoltaic power plants promoting ecological restoration in Central Asia's densely populated Fergana Valley.

Trip to Tashkent

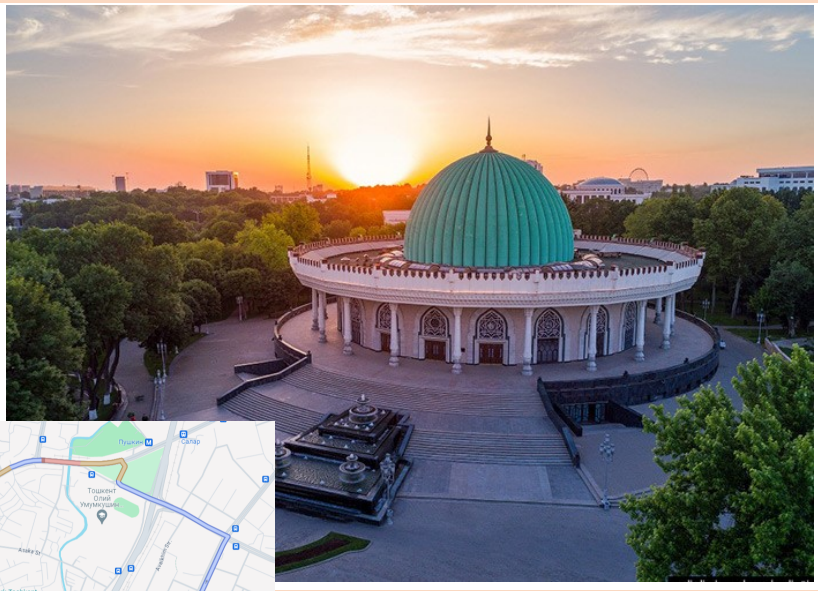
The State Museum of Timurids History

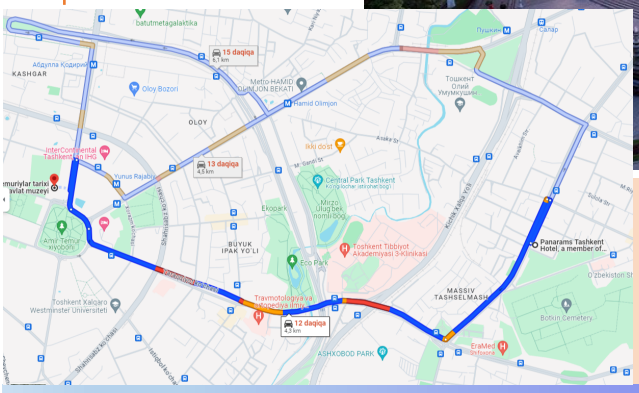
The solemn opening of the State Museum of Timurids History was held on October 18, 1996 in honor of the 660th anniversary of the birth of the great statesman and Commander Amir Temur.

It is three-storey building. There is an exposition of the museum on the second and the third floor. There is a unique exposition of man's costume as well as women's dresses from gold and satin. There is a copy of Muslim holy book – Osman's Koran in the centre of the main hall.

You will be amazed by size of large picture "The Great Timur is the great creator", made in the style of miniature by group of Uzbek artists in 1996. The picture reflects Amir Temur's life from birth to death.

The Nearest subway station is AMIR TEMUR XIYOBONI





Address: Tashkent, 700000, Amir Temur Street, 1
Phone: (+998 71) 232 07 66, 232 02 13, 232 02 12
Working hours: from 10.00am to 17.00pm
Day off: Monday

Trip to Tashkent

The State Museum of History of Uzbekistan

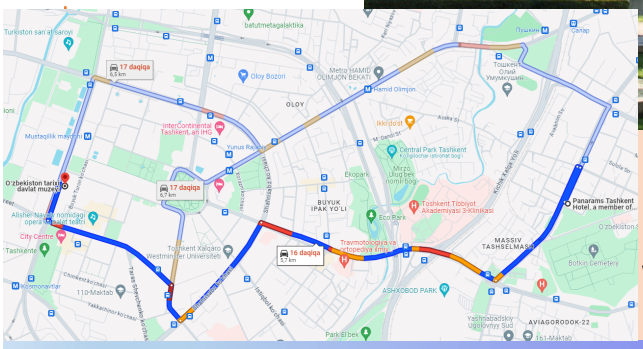
The State Museum of History of Uzbekistan, previously known as the National Museum of Turkestan, was founded in 1876 and is one of the oldest museums of the Central Asia. It is located in Tashkent.

Formerly known as the Lenin Museum, the History Museum of Uzbekistan has since been renovated and more exhibits have been added. The museum fund lists over 250,000 exhibits, including over 60,000 archeological, over 80,000 numismatic and 16,000 ethnographical items reflecting Uzbek history from the pre-historic times up to the present.

There is a gift shop under the museum where one can buy items of Uzbek applied arts: embroidery, carpets, miniatures and ceramics.

Nearest subway station is MUSTAQILLIK MAYDONI





Address: 3, Rashidov AVenue, Tashkent
Phone: (+99871) 239-17-79, 239-17-78, 239-10-83
Working hours: from 10:00 a.m. to 05:00 p.m. (w/o lunch)
Closed: on Monday

Trip to Tashkent

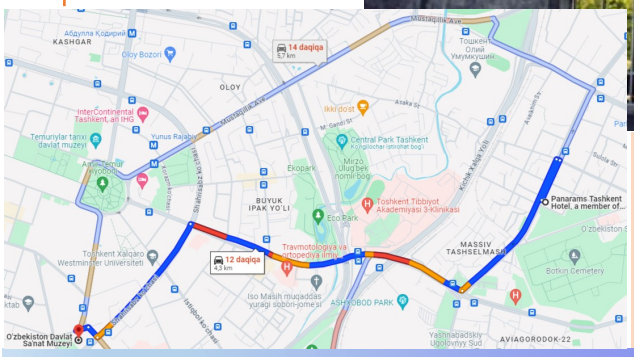
The State Art Museum of Uzbekistan

The State Art Museum of Uzbekistan was established in 1918. Its initial fund comprised of 100 works of sculpture, paintings, drawings, porcelain by Russian and Western European masters from the collections of the Prince Romanov and other private collections of that time, nationalized by the Soviet government after the revolution.

It was originally called the Museum of National University. Only in 1935 it became the State Museum of Art, and has retained its name since then.

The Nearest subway station is MING O'RIK





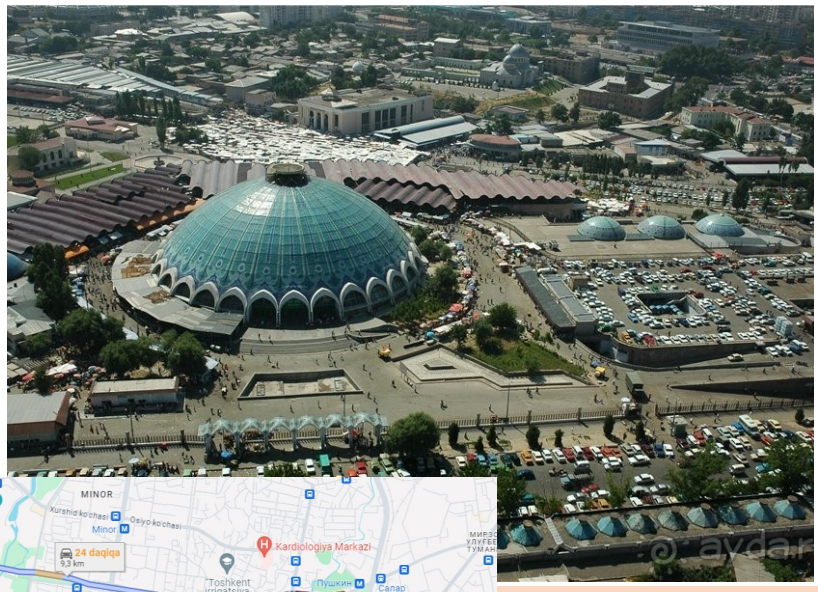
Address: 16, Movarounnakhr str., Tashkent
Phone: (+998 71) 236-74-36, 236-34-44
Working hours: from 09:00 a.m. to 06:00 p.m (w/o lunch)
Closed: on Monday

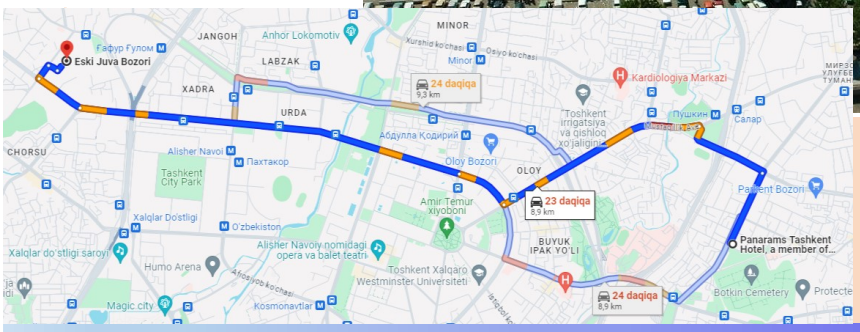
Trip to Tashkent

Shopping in Chorsu Bazaar

"Chorsu" in translation means literally "four waters", but figuratively "confluence", the place where people of four *daha* meet, traded and communicated. Chorsu-bazaar existed continuously since at least the Mongol invasion. The blue dome of bazaar became one of the symbols of Tashkent even though it was built after the earthquake of 1966, but it brilliantly blended into the architecture of Central Asia with its centuries -old tradition of trading domes like in Bukhara, Samarkand and Shakhris-abz. But with 80 meters in diameter and 30 meters height (approximate dimensions) it is undoubtedly the largest dome in Uzbekistan.

The Nearest subway station is CHORSU





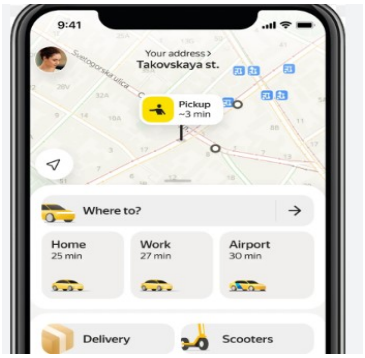
Chorsu Bazaar Location: 57 Tafakkur ko'chasi, Tashkent, Uzbekistan

Chorsu Bazaar Contact Number: +998-711335414

TRANSPORTATION SYSTEM APPS

TAXI

Yandex Go



BUS

3 TM



NAVIGATION

Yandex navigator



SUBWAY

Tashkent Metro Map



STAFF INFORMATION

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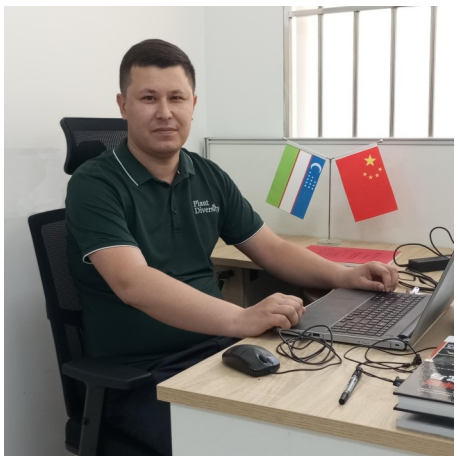


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