



SEAB2017
www.seab2017.com

the 3rd International
symposium on
euroasian
biodiversity

Abstract eBook

JULY 05-08
2017 MINSK
BELARUS

EDITORS

Assoc. Prof. Dr. Gürkan SEMİZ
Assist. Prof. Dr. Gürçay Kivanç AKYILDIZ

©2017 The 3rd International Symposium on
EuroAsian Biodiversity. All rights reserved.



BELARUSIAN
STATE
UNIVERSITY



IPBB



SEAB2017
www.seab2017.com

JULY 05-08
2017 MINSK
BELARUS

Dear Colleagues,

It is great pleasure that we invite you to the The 3rd International Symposium on EuroAsian Biodiversity (SEAB2017) which will be held from June 5th to 8th, 2017 at Belarusian State University in Minsk, BELARUS.

Symposium will include invited talks, plenary talks given by selected pioneers of biodiversity, panel discussions and oral/poster presentations. The sessions will focus on the most recent scientific findings in the area of biodiversity and its related issues. By providing a highly interactive platform, this symposium will seek the views and creative ideas on novel approaches in biodiversity research and its other field applications.

We look forward to your participation in the The 4th International Symposium on EuroAsian Biodiversity (SEAB2018).

Best Regards,

SEAB2017 Organization Committee



SEAB2017
www.seab2017.com

JULY 05-08
2017 MINSK
BELARUS

HONORARY CHAIR

Prof. Dr. Sergey V. ABLAMEYKO (Rector of Belarusian State University, BY)

Prof. Dr. Hüseyin BAĞ(Rector of Pamukkale University, TR)

SEAB2017 ORGANIZING COMMITTEE

Prof. Dr. Ramazan MAMMADOV

Prof. Dr. Olcay DÜŞEN

Assoc. Prof. Dr. Serdar DÜŞEN

Assoc. Prof. Dr. Gürkan SEMİZ

Assist. Prof. Dr. Gürçay Kıvanç AKYILDIZ

SYMPOSIUM SECRETARIAT

Assoc. Prof. Dr. Gürkan SEMİZ

Assist. Prof. Dr. Gürçay Kıvanç AKYILDIZ



SEAB2017

www.seab2017.com

JULY 05-08
2017 MINSK
BELARUS

SCIENTIFIC COMMITTEE

- Prof. Dr. Oleg IVASHKEVICH (Belarusian State Univ., Belarus)
Prof. Dr. Vasili SAFONOV (Belarusian State Univ., Belarus)
Prof. Dr. Alexander KILCHEVSKY (NAS of Belarus, Belarus)
Prof. Dr. Mikhail NIKIFOROV (NAS of Belarus, Belarus)
Prof. Dr. Sergey USANOV (NAS of Belarus, Belarus)
Prof. Dr. Nikolay SERDJUCHENKO (NAS of Belarus, Belarus)
Prof. Dr. Vladimir RESHETNIKOV (Central Botanical Garden of NAS, Belarus)
Prof. Dr. Ivan SHEIKO (Scientific and Practical Center of Animal Breeding of NAS, Belarus)
Prof. Dr. Nikolay LAMAN (V.F.Kuprevich Institute of Experimental Botany of NAS, Belarus)
Prof. Dr. Viktor PARFYONOV (V.F.Kuprevich Institute of Experimental Botany of NAS, Belarus)
Prof. Dr. Emily KOLOMIETS (Institute of Microbiology of NAS, Belarus)
Prof. Dr. Vladimir KULCHITSKY (Institute of Physiology of NAS, Belarus)
Prof. Dr. Andrey MOISEENOK (Institute of Biochemistry of Biologically Active Compounds of NAS, Belarus)
Prof. Dr. Vitaliy SEMENCHENKO (Scientific and Practical Center for Bioresources of NAS, Belarus)
Prof. Dr. Nikolai SHALYGO (Institute of Biophysics and Cell Engineering of NAS, Belarus)
Prof. Dr. Vladimir SHKUMATOV (Institute of Physico-Chemical Problems of Belarusian State Univ., Belarus)
Prof. Dr. Vladimir TITOK (Central Botanical Garden of NAS, Belarus)
Prof. Dr. Iosif ZALUTSKIY (Institute of Physiology of NAS, Belarus)
Prof. Dr. Sergey BUGA (Belarusian State Univ., Belarus)
Prof. Dr. Vyacheslav BUKO (Institute of Biochemistry of Biologically Active Compounds of NAS, Belarus)
Prof. Dr. Aleksander CHIRKIN (Vitebsk State Univ. n.a. P.M.Masherov, Belarus)
Prof. Dr. Anatoly CHUMAK (Belarusian State Univ., Belarus)
Prof. Dr. Vadim DEMIDCHIK (Belarusian State Univ., Belarus)
Prof. Dr. Anatoly EVTUSHENKOV (Belarusian State Univ., Belarus)
Prof. Dr. Vasily GRITCHIK (Belarusian State Univ., Belarus)
Prof. Dr. Dmitriy IVANOV (Belarusian State Univ., Belarus)
Prof. Dr. Aleksandr KHOKHA (Grodno State Agrarian Univ., Belarus)
Prof. Dr. Vladimir KOSTYUK (Belarusian State Univ., Belarus)
Prof. Dr. Petr KRASOCHKO (The S.N.Vyshelesskij Institute of Experimental Veterinary Medicine of NAS, Belarus)
Prof. Dr. Viktor MALASHKO (Grodno State Agrarian Univ., Belarus)
Prof. Dr. Natalia MAXIMOVA (Belarusian State Univ., Belarus)
Prof. Dr. Tamara MIKHEYEVA (Belarusian State Univ., Belarus)
Prof. Dr. Liliya NADOLNIK (Institute of Biochemistry of Biologically Active Compounds of NAS, Belarus)
Prof. Dr. Leonid NEFEDOV (Y. Kupala State Univ. of Grodno, Belarus)
Prof. Dr. Vladimir PROKULEVICH (Belarusian State Univ., Belarus)
Prof. Dr. Alexander SIDOROV (Belarusian State Univ., Belarus)
Prof. Dr. Anatoly TAGANOVICH (Belarusian State Medical Univ., Belarus)
Prof. Dr. Ilya ZAVODNIK (Y. Kupala State Univ. of Grodno, Belarus)
Assoc. Prof. Dr. Vladimir LYSAK (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Boris ADAMOVICH (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Vera ANOKHINA (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Svetlana BABITSKAYA (Institute of Bioorganic Chemistry of NAS, Belarus)
Assoc. Prof. Dr. Viktor BELYAVSKIY (Grodno State Agrarian Univ., Belarus)
Assoc. Prof. Dr. Oleg BORODIN (Scientific and Practical Center for Bioresources of NAS, Belarus)
Assoc. Prof. Dr. Alexander BUDEVICH (Scientific and Practical Center of Animal Breeding of NAS, Belarus)
Assoc. Prof. Dr. Sergey EMELYANCHIK (Y. Kupala State Univ. of Grodno, Belarus)
Assoc. Prof. Dr. Andrei GILEP (Institute of Bioorganic Chemistry of NAS, Belarus)
Assoc. Prof. Dr. Anton GLAZEV (Y. Kupala State Univ. of Grodno, Belarus)
Assoc. Prof. Dr. Vasily GRINEV (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Vladimir KAPITSA (Int. Sakharov Environmental Institute of Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Elena KORIK (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Valentina LEMESH (Institute of Genetics and Cytology of NAS, Belarus)
Assoc. Prof. Dr. Valentina POLIKSENOVA (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Nikolay POPKOV (Scientific and Practical Center of Animal Breeding of NAS, Belarus)



SEAB2017

www.seab2017.com

JULY 05-08
2017 MINSK
BELARUS

- Assoc. Prof. Dr. Marya SHAPCHITS (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Mikhail SHOLUKH (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Elena SPIRIDOVICH (Central Botanical Garden of NAS, Belarus)
Assoc. Prof. Dr. Valery TIKHOMIROV (Belarusian State Univ., Belarus)
Assoc. Prof. Dr. Leu ZAVODNIK (Grodno State Agrarian Univ., Belarus)
Dr. Alexei BABKO (Belarusian Research Center «Ecology», Belarus)
Dr. Maryna YERESKO (Belarusian Research Center «Ecology», Belarus)
Prof. Dr. Ahliman AMIRASLANOV (ANAS, Azerbaijan)
Prof. Dr. Ahmet AKSOY (Akdeniz University, Turkey)
Prof. Dr. Aida KISTAUBAEVA (Al-Farabi Univ., Kazakhstan)
Prof. Dr. Alexander SOLOVIEV (Timirjazev Agrarian Univ., Russia)
Prof. Dr. Ali SATAR (Dicle Univ./Turkey)
Prof. Dr. Amangeldy BISENBAEV (Al-Farabi Univ., Kazakhstan)
Prof. Dr. Atila OCAK (Osmangazi Univ./Turkey)
Prof. Dr. Axel HOCHKIRCH (Universität Trier, Germany)
Prof. Dr. Azhar ZHUBANOVA (Al-Farabi Univ., Kazakhstan)
Prof. Dr. Bartolomey PALEZ (Lodz Univ. Poland)
Prof. Dr. Betül BÜRÜN (Muğla S.K. Univ./Turkey)
Prof. Dr. Chandrakant B. SALUNKHE (Shivaji Univ., India)
Prof. Dr. Elena KALASHNÍKOVA (Timirjazev Agrarian Univ., Russia)
Prof. Dr. Elif İpek SATAR (Dicle Univ./Turkey)
Prof. Dr. Esra MARTİN (Necmettin Erbakan Univ./Turkey)
Prof. Dr. Elşad GURBANOV (Baku State Univ., Azerbaijan)
Prof. Dr. Fevzi YILMAZ (Muğla S.K. Univ./Turkey)
Prof. Dr. Füsun GÜLSER (Yuzuncu Yıl Univ./Turkey)
Prof. Dr. Galina PRYADKINA (NAS, Ukraine)
Prof. Dr. Gürcan GÜLERYÜZ (Uludağ Univ./Turkey)
Prof. Dr. Güven GÖRK (Muğla S.K. Univ./Turkey)
Prof. Dr. Hakan AKÇA (Pamukkale Univ./Turkey)
Prof. Dr. Hasan KALYONCU (Suleyman Demirel Univ./Turkey)
Prof. Dr. Hasan SEVGİLİ (Ordu Univ./Turkey)
Prof. Dr. Hatice GÜNEŞ (Muğla S.K. Univ./Turkey)
Prof. Dr. Helen KRAVETS (NAS, Ukraine)
Prof. Dr. Irade HUSEYNOVA (ANAS, Azerbaijan)
Prof. Dr. Irina SAVISKAYA (Al-Farabi Univ., Kazakhstan)
Prof. Dr. Iva URGRINOVA (Bulgarian Academy of Sciences, Bulgaria)
Prof. Dr. İzzet KARA (Pamukkale Univ./Turkey)
Prof. Dr. Jamal RAKHMETOV (National Botanical Garden, Kiev, Ukraine)
Prof. Dr. Kabul ZAMBAKIN (Inst. of Plant Biology and Biot., Kazakhstan)
Prof. Dr. Ashimkhan KANAEV (Al-Farabi Univ., Kazakhstan)
Prof. Dr. Kani İŞIK (Akdeniz Univ./Turkey)
Prof. Dr. Kuddusi ERTUĞRUL (Selçuk Univ./Turkey)
Prof. Dr. A. Levent TUNA (Muğla S.K. Univ./Turkey)
Prof. Dr. M. Oğuz ÖZTÜRK (Afyon Kocatepe Univ./Turkey)
Prof. Dr. Mehmet ÖZ (Akdeniz Univ./Turkey)
Prof. Dr. Mehmet ÖZASLAN (Gaziantep Univ./Turkey)
Prof. Dr. Murat BARLAS (Muğla Univ./Turkey)
Prof. Dr. Mustafa DURAN (Pamukkale Univ./Turkey)
Prof. Dr. Nadir ERBİLGİN (University of Alberta/Canada)
Prof. Dr. Naime ARSLAN (Osmangazi Univ./Turkey)
Prof. Dr. Namik RASHIDOV (NASU, Ukraine)
Prof. Dr. Nazim MAMMADOV (Massachusetts Univ./ USA)
Prof. Dr. Niyazbek KALIMOV (Baytursinov State Univ. Kostana, Kazakhstan)
Prof. Dr. Nusret AYYILDIZ (Erciyes Univ./Turkey)
Prof. Dr. Ömer VAROL (Muğla S.K. Univ./Turkey)
Prof. Dr. Olcay DÜŞEN (Pamukkale Univ./Turkey)
Prof. Dr. Oleksii M. DUGAN (National Technical Univ., Ukraine)
Prof. Dr. Osman TUGAY (Selçuk Univ./Turkey)



SEAB2017

www.seab2017.com

JULY 05-08
2017 MINSK
BELARUS

Prof. Dr. Ramazan MAMMADOV (Pamukkale Univ./Turkey)
Prof. Dr. Ramazan Süleyman GÖKTÜRK (Akdeniz Univ./Turkey)
Prof. Dr. Raşit URHAN (Pamukkale Univ./Turkey)
Prof. Dr. Rezo JABNIDZE (Batumi Shota Rustaveli Univ., Georgia)
Prof. Dr. Sayyare IBADULLAYEVA (ANAS, Azerbaijan)
Prof. Dr. Sulika BERIDZE (Deputy of Minister of Ajaria, Georgia)
Prof. Dr. Tariyel TALIBOV (ANAS, Azerbaijan)
Prof. Dr. Tofik MAMMADOV (ANAS, Azerbaijan)
Prof. Dr. Turgut ULUTİN (Cerrahpaşa Faculty of Medicine, Turkey)
Prof. Dr. Vagif ATAMOV (Recep Tayyip Erdoğan Univ./Turkey)
Prof. Dr. Vagif NOVRUZOV (Ganja State Univ., Azerbaijan)
Prof. Dr. Valide ALİZADE (ANAS, Azerbaijan)
Prof. Dr. Volodymyr FESHENKO (Nati. Agroecology Univ., Zhitomyr, Ukraine)
Prof. Dr. Wade Cutting SHERBROOKE (American MNH/USA)
Prof. Dr. Yaroslav BLUM (NAS of Ukraine)
Prof. Dr. Yavuz BAĞCI (Selçuk Univ./Turkey)
Prof. Dr. Yüksel ÇOŞKUN (Dicle Univ./Turkey)
Prof. Dr. Zayadan BOLATKHAN (Al-Farabi Univ., Kazakhstan)
Assoc. Prof. Dr. Abbas MOL (Aksaray Univ./Turkey)
Assoc. Prof. Dr. Ahmet DEMİRAK (Muğla S.K. Univ./Turkey)
Assoc. Prof. Dr. Ali Nafiz EKİZ (Usak Univ./Turkey)
Assoc. Prof. Dr. Belgin GÖÇMEN (Muğla S.K. Univ./Turkey)
Assoc. Prof. Dr. Deniz İNNAL (MAE Univ./Turkey)
Assoc. Prof. Dr. Deniz ŞİRİN (Namık Kemal Univ./Turkey)
Assoc. Prof. Dr. Elena KİSTANOVA, (Bulgarian Academy of Sciences, Bulgaria)
Assoc. Prof. Dr. Ersin MİNARECİ (Celal Bayar Univ./Turkey)
Assoc. Prof. Dr. Gennady BORYAEV (Penza State Agrarian Univ., Russia)
Assoc. Prof. Dr. Gürkan SEMİZ (Pamukkale Univ./Turkey)
Assoc. Prof. Dr. Hasan YILDIRIM (Ege Univ./Turkey)
Assoc. Prof. Dr. Ilgaz AKATA (Ankara Univ./Turkey)
Assoc. Prof. Dr. Kamuran AKTAŞ (Celal Bayar Univ./Turkey)
Assoc. Prof. Dr. Lyudmila BOLSHAKOVA (Timirjazev Univ, Russia)
Assoc. Prof. Dr. Nedim ÖZDEMİR (Muğla S.K. Univ./Turkey)
Assoc. Prof. Dr. Mesut KIRMACI (Adnan Menderes Univ./Turkey)
Assoc. Prof. Dr. Metin ARMAĞAN (Yüzüncü Yıl Univ./Turkey)
Assoc. Prof. Dr. Michail CHEREDNICHENKO (Timirjazev Univ, Russia)
Assoc. Prof. Dr. Natalya KARSUNKINA (Timirjazev Univ., Russia)
Assoc. Prof. Dr. Necmi AKSOY (Düzce Univ./Turkey)
Assoc. Prof. Dr. Serdar DÜŞEN (Pamukkale Univ./Turkey)
Assoc. Prof. Dr. Serdar Gökhan ŞENOL (Ege Univ./Turkey)
Assoc. Prof. Dr. Tamraz TAMRAZOV (ANAS, Azerbaijan)
Assoc. Prof. Dr. Tuncay DIRMENCİ (Balıkesir Univ./Turkey)
Assoc. Prof. Dr. Valentina MURSALIYEVA (Inst. of Plant Biol. Kaz.)
Assoc. Prof. Dr. Yeşim KARA (Pamukkale Univ./Turkey)
Assist. Prof. Dr. Arzu ÇIĞ (Siirt Univ./Turkey)
Assist. Prof. Dr. Fatih ÇIĞ (Siirt Univ./Turkey)
Assist. Prof. Dr. Füsun AKGÜL (MAE Univ./Turkey)
Assist. Prof. Dr. Ali SALUR (Hittit Univ./Turkey)
Assist. Prof. Dr. Aslı SEMİZ (Pamukkale Univ./Turkey)
Assist. Prof. Dr. Barış SEMİZ (Pamukkale Univ./Turkey)
Assist. Prof. Dr. Bülent YORULMAZ (Muğla S.K. Univ./Turkey)
Assist. Prof. Dr. Emine Şükran OKUDAN ASLAN (Akden.Univ./Turkey)
Assist. Prof. Dr. Ersin KARABACAK (ÇOMU/Turkey)
Assist. Prof. Dr. Gülsen ULUKÖY (Mugla S.K. Univ. /Turkey)
Assist. Prof. Dr. Gürçay Kıvanç AKYILDIZ (Pamukkale Univ./Turkey)
Assist. Prof. Dr. Mahmut YILDIZTEKİN (Mugla Univ./Turkey)
Assist. Prof. Dr. Mustafa YAVUZ (Akdeniz Univ./Turkey)
Assist. Prof. Dr. Ergun KAYA (Muğla S.K. Univ./Turkey)



SEAB2017
www.seab2017.com

JULY 05-08
2017 MINSK
BELARUS

Assist. Prof. Dr. Filiz ALTAN (Muğla S.K. Univ./Turkey)
Assist. Prof. Dr. Mehlika ALPER (Muğla S.K. Univ./Turkey)
Dr. Iuliia KUTSOKON (NAS/Ukraine)
Dr. Petre BRETCAN (Valahia Univ. of Targoviste/Romania)
Dr. Cennet ÖZAY (Pamukkale Univ./Turkey)
Dr. Dariya SATIBALDIYEVA (Al-Farabi Univ./Kazakhstan)
Dr. Gülçin İŞIK (Anadolu Univ./Turkey)
Dr. Nataliya KUTSOKON (NAS of Ukraine)
Dr. Mariia BELOVA (Timirjazev Agrarian Univ./Russia)
Dr. Paraskevi K. KARACHELE (Hellenic Centre of Marine Research/Greece)
Dr. Rauf ABBASOV (ANAS/Azerbaijan)
Dr. Tatyana JELEZNICHENKO (Central Siberian Botanical Garden/Russia)
Gülçinay BAŞDOĞAN (Yüzüncü Yıl Univ./Turkey)

Riparian and Rocky Vegetation of the Argözü Valley in Kibriscik, Bolu

Neval GÜNEŞ ÖZKAN¹, Necmi AKSOY¹, Bilge TUNÇKOL², Serdar ASLAN¹

¹Duzce University, Faculty of Forestry, Department of Forest Botany, Beciyorukler, Duzce, Turkey

²Bartın University Bartın Vocational School Department of Forestry and Forest Products Program, 74100 Bartın, Turkey
necmiaksoy@duzce.edu.tr

Aim of the study: The object of this study is to analyse the riparian and rocky vegetation of Argözü Valley in Kibriscık, Bolu (Turkey).

Material and Methods: The study area is situated on the southern slopes of Köroğlu Mountains and in Euxine province of Euro-Siberian Region. Volcanic with andesite characteristic rocks occur in the area. The climate of the region changes from less rainy Mediterranean to rainy Mediterranean type. Annual precipitation varies from 700 mm to 1200 mm depending on altitudinal zones and mean annual temperature is 11°C.

Results: As a result of classification and ordination, one riparian community and three rocky communities were defined. According to this definition following communities were proposed for riparian and rocky communities. For vegetation analysis, a total of 20 sample plots were taken from riparian vegetation and 65 sample plots were taken from rocky vegetation of the study area. Vegetation data were classified using TWINSPAN (Hill, 1979) under JUICE software and indirect ordination analysis were applied to the data.

Class: SALICI PURPUREAE-POPULETEA NIGRAE(Rivas-Martínez & Cantó ex Rivas-Martínez, Báscones, T.E. Díaz, Fernández-González & Loidi 1991)

Order: POPULETALIA ALBAE Br.-Bl. ex Tchou 1948

Alliance: SALICION ALBAE Soó 1930

Association 1: Heracleo-Salicetum albae ass. nova

Class: DAPHNETO-FESTUCETEA Quézel 1964

Order: DAPHNO-FESTUCETALES Quézel 1972

Alliance: HYPERICO-VERBASCION

Association 1: Sileno-Daphnetum oleoidi ass. nova

Upper Class: QUERCO-FAGEA Fukarek-Fabjanik 1968

Class: ASPLENIATEA TRICHOMANIS (Br.-Bl. 1934) Oberd. 1977

Order: SILENETALIA ODONTOPETALEA Quézel 1973

Alliance: SILENION ODONTOPETALEA Quézel 1973

Association 2: Centaureo-Sedetum confertiflorae ass. nova

Association 3: Saxifrago-Sedetum albae ass. nova

Most of the endangered endemic taxa in the research area, distributes in all the rocky communities. For this reason especially rocky communities are very important. Moreover, some of rocky communities in the study area are located within the high mountain ecosystem. Therefore they are very sensitive and under pressure of activities such as grazing, nature walk, mountaineering. In order to minimize the damage in such sensitive ecosystems, these activities should be conducted in a reduced or controlled manner.

Acknowledgements: This study was supported by Scientific Research Project Coordination Unit of Duzce University, Project number: DÜBAP2012.02.02.117.

Keywords: Riparian, Rocky, Communities, Kibriscik, Bolu, Türkiye.