14th European Bat Research Symposium

Donostia, The Basque Country

1-5 August 2017

EBRS2017

BOOK OF ABSTRACTS

14th European Bat Research Symposium

Donostia, The Basque Country

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EBRS2017

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MONDAY, JULY 31th

17:30-20:00 Registration Desk open at Miramar Palace
19:00-20:00 **Welcome Ceremony** at Miramar Palace

TUESDAY, AUGUST 1st

8:00 Registration Desk open at Barriola
8:15-8:30 **Official opening**
8:30-9:15 Invited talk:

Emma Teeling (University College Dublin)
"Bats are special and we should care: the genomic bases of bats' extraordinary adaptations"

*Student

Morning Session 1

Subject: Population genetics, phylogenetics and taxonomy
Convenor: Gary F MacCraken

9:15	When the extant bats arose? Fossil record and molecules illuminate the history of the bat fauna in Western Palearctics. **Ivan Horacek**
9:30	Phylogeography of Daubenton's Bat *Myotis daubentonii* in Europe. **Javier Juste**
9:45	Population genetic structure of Bechstein's bats (*Myotis bechsteinii*) across Europe and Britain: has Brexit already happened? **Patrick Wright***
10:00	Complex hybridization before complete speciation: interesting mito-nuclear discordances among three *Rhinolophus* species. **Tong Liu***
10:15	Genetic structure in the mediterranean bat *Myotis capaccinii*: multiple refugia, post glacial dispersal and mito-nuclear discordance. **Elizabeth M Hemond**
10:30	General Discussion

10:45-11:15 Coffee/Tea break
(Sponsored by Pettersson Elektronik)

Morning Session 2 Tuesday, August 1st

Subject: Population genetics, phylogenetics and taxonomy
Convenor: Dina Dechmann

11:15	Contrasting phylogeography and population structure in two ecologically similar *Rhinolophus* species, *R. euryale* and *R. mehelyi*. **Sebastien J Puechmaille**
11:30	Geneflow within and among species of *Plecotus* bats in the Alpine range. **Tommy Andriollo**
11:45	The role of biotic interactions in shaping the range of cryptic bat species. **Roberto Novella***
12:00	Coexistence of two sympatric cryptic bat species of French Guiana: genetic, acoustic and ecological characterization. **Ondine Filippi-Codaccioni**
12:15	A bat out of Africa: new insights on the existence of a North African refugium for Western Palearctic bat fauna. **Francisco Amorim***
12:30	General Discussion

12:45-14:30 Lunchtime

Afternoon Session 1 Tuesday, August 1st

Subject: Population genetics, phylogenetics and taxonomy
Convenor 1A: Ostaizka Aizpurua **Convenor 1B**: Jasja Dekker

	Session 1A	Session 1B	WS
14:30	Integrating landscape genetics with connectivity analyses to prioritize regional conservation of *Plecotus auritus begognae* in the Iberian Peninsula. **Helena Santos**, presented by **Hugo Rebelo**	Rapid assessment of bats on Bougainville Island: searching for monkey-faced fruit bats and spare tires. **Frank J Bonaccorso**	Wildlife Acoustics Workshop I | 1h duration
14:45	Genetic and echolocation divergence in *Rhinolophus hipposideros*: is the population of the Maltese Islands distinct? **Clare Mifsud***	Insular bats and research efforts: a review of global patterns and priorities. **Irene Conenna**	

	Session 1A	Session 1B	WS
15:00	Species-specific impact of habitat fragmentation on the population genetic structure of Neotropical bats. **Tanja Halczok***	Bats activity in a well preserved high Alpine forest. **Dino Scaravelli**, presented by **Pamela Priori**	Wildlife Acoustics Workshop I: Hands-on Workshop with the New Echo Meter Touch 2 Handheld Bat Detector
15:15	Genetic variability of *Rhinolophus mehelyi* at the northern margin of distribution range. **Alexandra Corduneanu***	New Data on the Greater Noctule, *Nyctalus lasiopterus* (Schreber, 1780) in France. **Marie-Jo Dubourg-Savage**	
15:30	Twins or cousins: two species of "desert" big-eared bats (*Plecotus*; Vespertilionidae, Chiroptera) coexist in Mongolia. **Sergei V Kruskop**	The importance of biotic and abiotic interactions for understanding bat species distributions in an insular system. **Ana Rainho**	
15:45	Comparative phylogeography of two cryptic serotine bats in the Iberian Peninsula and gene flow consequences of being too similar. **Alejandro Centeno-Cuadros,** presented by **Javier Juste**	Distribution patterns of selected bat species in Poland – spatial modelling improved by application of fine-scale forest data. **Mateusz Ciechanowski**	
16:00	General Discussion	General Discussion	

16:15-16:45 Coffee/Tea break

Afternoon Session 2 Tuesday, August 1st

Subject: Diversity and distribution
Convenor 2A: I Ruczynski **Convenor 2B**: Julie Dahl Møller

	Session 2A	Session 2B
16:45	Determinants of spring migration onset in female common noctule bats. **Dina KN Dechmann**	A Model for the Assessment of the Favourable Conservation status of bats in a concrete planning area. **Herman JGA Limpens**

	Session 2A	Session 2B
17:00	The genetics of migration of the tequila bat (*Leptonycteris yerbabuenae*). **Angelica Menchaca Rodriguez***	Monitoring urban bat populations. **Marcel J Schillemans**
17:15	Are all mountains the same? Changes in South American bat diversity patterns along environmental gradients. **Cristina Rios-Blanco***	Changes in numbers and reproductive status of bats during swarming in Natura 2000 site PLH080003 "Nietoperek". **Justyna Blesznowska**, presented by **Tomasz Kokurewicz**
17:30	Landscape population genetics of the greater horseshoe bat (*R. ferrumequinum*) in West-Eastern France. **Orianne Tournayre***	Calculating bat trends based on car-transect monitoring data. **Thomas van der Meij**
17:45	An investigation of the social structure, species boundaries, hybridization and phylogeography of three *Miniopterus* species (Mammalia: Chiroptera). **Kanat Gürün***	Long-term bat population trends in East, Central and South-West Romania. **Georgiana Marginean**, presented by **Oana M Chachula**
18:00	Are secondary woodlands providing suitable resources for biodiversity? Bats as a case study. **Elisa Fuentes-Montemayor**	Distribution and size of summer bat colonies around a lowland wetland area – the example of 'Drużno Lake' nature reserve. **Marta Szurlej**
18:15	General Discussion	General Discussion

20:15 **European Gastro-party** at DOKA pub theatre

WEDNESDAY, AUGUST 2nd

8:00 Registration Desk open
8:15-9:00 Invited talk:

Kristine Bohmann (University of Copenhagen)
"Bat diet studies – past, present and future"

Morning Session 1

Subject: Dietary ecology
Convenor: Fabio Bontadina

9:00	Bats Aloft. **Gary McCracken**
9:15	Scrutinizing key steps for reliable metabarcoding of bat fecal samples. **Antton Alberdi**
9:30	The poop experiment: defining sampling procedures for metabarcoding dietary studies in bats. **Vanessa Mata***
9:45	Trait-based diet analysis of an insectivorous bat: novel insights into foraging ecology. **Aitor Arrizabalaga**
10:00	Diet composition and variability of the common bent-wing bat (*Miniopterus schreibersii*) in Iberia. **German Velayos-Gainza***
10:15	Regional mismatches between agricultural pest and biocontrol services by bats. An example from continental Portugal. **Javier Rodríguez-Pérez**
10:30	General Discussion

10:45-11:15 Coffee/Tea break

Morning Session 2

Subject: Dietary ecology
Convenor: Ivan Horáček

11:15	Does the gut microbiota contribute to the dietary shift of fishing bats? **Ostaizka Aizpurua**
11:30	Food availability affects energy management and reproductive tissue development in male parti-coloured bats, *Vespertilio murinus*. **Ewa Komar**, presented by **Ireneusz Ruczynski**

11:45	Sitka Spruce plantations: A potential opportunity for bat populations? **Lucinda Kirkpatrick***
12:00	Saving trees for saving bats: treed landscape elements as key foraging habitats for insectivorous bats in intensively farmed landscapes. **Sílvia Barreiro**
12:15	The importance of temporary lakes and ponds for bat conservation in Neotropical rainforests. **Laura Torrent***
12:30	General Discussion

12:45-14:30 Lunchtime

Afternoon Session 1 Wednesday, August 2nd

Subject: Behavioural ecology
Convenor 1A: SJ Puechmaille **Convenor 1B**: MJ Dubourg-Savage

	Session 1A	Session 1B	WS
14:30	Sociality as a driver of thermoregulatory and roost-switching behaviors in a forest bat. **Danilo Russo**, presented by **Leonardo Ancillotto**	Modelling roost dispersal of greater horseshoe bats using landscape connectivity models. **Domhnall Finch***	Wildlife Acoustics Workshop II: Hands-on Workshop, From the SM4BAT Recorder to Kaleidoscope Pro Analysis
14:45	New insights into the hibernation strategy of Bechstein's Bat (*Myotis bechsteinii*) in Germany. **Karl Kugelschafter**	Microhabitat density predicts roost use by a rare tree-dwelling bat. **Andrew Carr***	
15:00	Why and when do bats fly out in winter ? A field study in the north of Flanders, Belgium. **Ralf Gyselings**	Effects of forest gaps on bat communities: a case study in Valsaín. **Elena Tena***	
15:15	An influence on climatic factors on numbers of bats hibernating underground – the consequences for methodology of winter monitoring. **Tomasz Kokurewicz**	Lifetime reproductive success of fecund female greater horseshoe bats is affected by matrilineal rank and grandmother's parturition. **Roger D Ransome**	

	Session 1A	Session 1B	WS
15:30	Object characteristics, temperature regimes and hanging site selection in hibernating bats. **Luc De Bruyn**	Physiological plasticity of *Carollia perspicillata* (Seba's short-tailed bat) related to ecological and social environment. **Nicolas Fasel**	Wildlife Acoustics Workshop II | 1h duration
15:45	Behavioural and physiological responses in *Rhinolophus euryale* to hibernation. **Edita Maxinová***	Intelligent Virtual Personal Assistant for Bat Scientists. **Angel Ivanov**	
16:00	General discussion	General discussion	

16:15-16:45 Coffee/Tea break

17:00-19:00 **Poster Session**

THURSDAY, AUGUST 3rd

8:30-17:00 Field trip to Aizkorri-Aratz Natural Park and Sanctuary of Arantzazu

The Franciscan Sanctuary of Arantzazu was built in the 1950s and provides access to the meadows of Urbia and the Aizkorri-Aratz mountain range. Photo: Wikimedia Commons.

Aizkorri peak (1511m) and the meadows of Urbia (1100m) are one of the most visited mountain destinations in the Basque Country. Photo: Wikimedia Commons.

FRIDAY, AUGUST 4th

8:15-9:00 Invited talk:

Danilo Russo (University of Naples)
"How to be a successful bat in the Anthropocene: coping with urbanisation, climate change and livestock grazing"

Morning Session 1

Subject: Conservation ecology
Convenor: Eeva-Maria Kyheröinen

9:00	The impact of climate on trends in common bat species. **Niamh Roche**
9:15	Activity patterns of bats at the top of wind turbines has implications for efficient mitigation. **Stefan Pettersson**, presented by **Jens Rydell**
9:30	Effectiveness of bat mitigation on roads - a review. **Morten Elmeros**
9:45	Long-term effects of flood-lights on brown long-eared bats in churches. **Sonia Sánchez-Navarro**
10:00	Why bat boxes are not effective as compensation for the loss of roost trees. **Andreas Zahn**
10:15	Using landscape genetics to understand bat responses to climate change. **Orly Razgour**
10:30	General discussion

10:45-11:15 Coffee/Tea break

Morning Session 2

Subject: Conservation ecology
Convenor: Hugo Rebelo

11:15	Should we use *Myotis daubentonii* as an ecological indicator to evaluate riparian ecosystems health? **Adrià López-Baucells***
11:30	A national-scale assessment of the effects of wind energy installations on bats: what have we learnt, and how useful are current approaches to minimising risk? **Fiona Mathews**

11:45	Influence of local landscape features on road collision risks. **Charlotte Roemer***
12:00	Quantifying the impact of light pollution at the city scale: urban-dweller bats are negatively affected by artificial light. **Julie Pauwels***
12:15	Population genetic structure of *Pseudogymnoascus destructans* in the Western Palearctic: where did it all start? **Sebastien J Puechmaille**
12:30	General Discussion

12:45-14:30 Lunchtime

Afternoon Session 1 Friday, August 4th

Subject: Conservation ecology
Convenor 1A: Tomasz Kokurewicz **Convenor 1B**: Fiona Mathews

	Session 1A	Session 1B	WS
14:30	Bats and windfarms monitoring and mitigation measures implementation across Western Palearctic and what can be done? **Daniela Hamidovic**	Investigating the role of environmental reservoirs in the persistence and transmission of *Pseudogymnoascus destructans*, the causative agent of White-Nose Disease. **Nicola M Fischer***	Apodemus Workshop "Test your bat detector" | 1h duration
14:45	Predicting commuting corridors of bats. **Thomas Ravessoud**, presented by **Martin K Obrist**	Do the bats obey Rensch's rule? **Zuzanna Wikar***	
15:00	Re-assessing the potential benefits of hedgerows on bats - a multi-scale approach. **Jérémy SP Froidevaux***	Less common synchronized rewarming in WNS tolerant bats as hibernation strategy. **Tomáš Bartonička**	
15:15	Movements of barbastelle bats in a wind farm. **Grzegorz Apoznánski***	Validation of a field-portable, hand-held qPCR system for detecting *Pseudogymnoascus destructans*, the causative agent of White-nose Syndrome in Bats. **Sybill K Amelon**	

	Session 1A	Session 1B	WS
15:30	The effects of LED street lighting on bat activity. **Elizabeth G Rowse***	Importance of host ecology for the presence of Bartonella spp. in the ectoparasites of insectivorous bats in Central and SE Europe. **Attila D Sándor**	Apodemus Workshop "Test your bat detector" | 1h duration
15:45	Bat boxes and climate change: The impact of changing environmental temperatures on the thermic response in the Mediterranean region and its consequences as a tool for conservation. **Garazi Martin***	Differences in whole-transcriptome gene expression control susceptibility to white-nose syndrome in *Myotis lucifugus* and *Eptesicus fuscus*. **Thomas M Lilley**	
16:00	General discussion	General discussion	

16:15-16:45 Coffee/Tea break

Afternoon Session 2 Friday, August 4th

Subject 2A: Conservation
Convenor 2A: Ana Rainho

Subject 2B: Developmental biology
Convenor 2B: Kirsty Park

	Session 2A	Session 2B	
16:45	Status of Romanian bat populations: the 2010-2017 review of research and conservation. **Szilárd-Lehel Bücs**	Development of a body condition scoring system validated by DEXA and deuterium oxide in big brown bats (*Eptesicus fuscus*). **Sarah E Hooper***	Titley Scientific Workshop "What's new from Titley Scientific" | 1h duration
17:00	Reproduction and post-natal growth of *Rhinolophus hipposideros* roosting in illuminated buildings. **Jasmina Kotnik**	Bat skull in three dimensions: photogrammetry as portable and reliable scanning solution. **Giada Giacomini***	
17:15	Call activity and species diversity of bats at nacelle height in wind parks of Austrian montane forests. **Senta Huemer**	Are aggressive vocalizations the honest signals of body size and quality in female Asian particolored bat (*Vespertilio sinensis*)? **Xin Zhao***	

	Session 2A	Session 2B	
17:30	Testing the performance of bats as indicators of habitat quality in riparian ecosystems. **Carmelina De Conno***	Use of body condition index to describe phenology of french bats populations from mist-netting data. **Julie Marmet**	Titley Scientific Workshop "What's new from Titley Scientific" | 1h duration
17:45	Why are rocket boxes favored by a maternity colony of social bark-roosting bats? **Julia PS Hoeh***	Differential effects of climate change on the body condition of bats. **Xavier Puig-Montserrat**	
18:00	Roads and bats: are overpasses attractive for bats? **Fabien Claireau***	Using DNA techniques to improve national population estimates of a threatened Irish bat species, the lesser horseshoe bat. **Andrew P Harrington***	
18:15	General Discussion	General Discussion	

20:30 **Banquet** at Tenis Ondarreta Restaurant

SATURDAY, AUGUST 5th

8:15-9:00 Invited talk:

Gloriana Chaverri (University of Costa Rica)
"Social communication in bats: so far and the way forward"

Morning Session 1

Subject: Acoustic ecology and taxonomic identification
Convenor: Frank Bonaccorso

9:00	From bat calls in the field to validated species records – the approach of the Swiss Bat Bioacoustics Group SBBG. **Elias Bader**
9:15	Detection distances for bats in southern African savannas. **Ara Monadjem**
9:30	Do we need to include the aerosphere in our conservation efforts? **Christian Voigt**
9:45	Identification of Rhinolophid bat nursery roosts from recordings of adult ultrasound social calls and ultrasound development calls made by infants. **Margaret M Andrews**
10:00	Optimization of automatic bat identification tools for long term acoustic monitoring schemes. **Bruno Silva**
10:15	Articulating citizen science, semi-automatic identification and free web services for long-term acoustic monitoring: examples from France and UK. **Yves Bas**
10:30	General Discussion

10:45-11:15 Coffee/Tea break

11:15-12:15 **Closing Ceremony**

TOWARDS THE CLARIFICATION OF THE PHYLOGENY, TAXONOMY AND DISTRIBUTION OF SOUTH-EAST ASIAN *HYPSUGO* [P]

GÁBOR CSORBA[1]**, VUONG TAN TU[2], NEIL M. FUREY[3], SERGEI V. KRUSKOP[4], LEE-SIM LEE[5], TÁMAS GÖRFÖL[1], **csorba.gabor@nhmus.hu
[1]*Department of Zoology, Hungarian Natural History Museum, Budapest, Hungary;*
[2]*Institute of Ecology and Biological Resources, Vietnam Academy of Science and Technology, Hanoi, Vietnam;*
[3]*Fauna & Flora International, Cambodia Programme, Phnom Penh, Cambodia;*
[4]*Zoological Museum, Moscow State University, Moscow, Russia;*
[5]*School of Distance Education, University Sains Malaysia, Penang, Malaysia.*

Although species of *Hypsugo* were often included in *Pipistrellus* by many authors in the past, external, dental and bacular investigations as well as phylogenetic reconstructions proved that they form separate genera. The majority of the 10 South-east Asian species of *Hypsugo* are rare bats, known only from a handful of specimens and their evolutionary relationships, distribution, ecology and conservation status are largely unknown. In 2014, a new species was described by our research group based on specimens from Lao PDR and Vietnam. After careful re-examination of museum holdings and recently collected material, the species is now confirmed from further SE Asian countries. The new data revealed that it may be a cave-dweller, which sheds light on the importance of these underground habitats. *Hypsugo macrotis*, a species from the Sundaland Biogeographical Region was known only from a few specimens. In consequence, nearly nothing was known on its roosting habits and phylogenetic relationships. A house-dwelling colony was found in Peninsular Malaysia in 2013, which confirmed the importance of anthropogenic habitats for bats. The newly obtained barcoding gene sequence can help the identification of further specimens and also suggests that the species belongs to the "cadornae-group". Recent morphological investigations proved that specimens from the Indian Subcontinent identified previously as *Philetor brachypterus*, in fact belong to *Hypsugo joffrei*, which was originally described in the genus *Nyctalus*. In a Vietnamese expedition carried out in 2016, several individuals of the species were caught and a few voucher specimens were taken for further analysis. The new morphological and genetic data suggest that *H. joffrei* has close evolutionary relationship with *Philetor* and *Tylonycteris*.

UNHEEDED DIVERSITY: ATTEMPT TO REVISE GENUS BARBASTELLA (PLECOTINI, VESPERTILIONIDAE) [P]

SERGEI V. KRUSKOP[1]**, KUNIKO KAWAI[2], MIKHAIL P. TIUNOV[3],
**selysius@mail.ru
[1]*Zoological Museum, Moscow State University, Moscow, Russia;*
[2]*Field Science Center for Northern Biosphere, Hokkaido University, Sapporo, Japan*
[3]*Instiutute of Biology and Soil Sciences RAS, Vladivostok, Russia*

The genus *Barbastella* has a vast distribution area from Great Britain and Canary Islands to Japan and Taiwan. Nonetheless, for many decades only two species were accepted occurring in all that range, with very limited total number of named forms. However, first serious morphological approach had shown that Asian *B. darjelingensis* and *B. leucomelas* from Sinai are not conspecific. Following studies from an isolated population in Beijing revealed a fourth separate species. Our analyses of mitochondrial genes cox I and cyt-b, demonstrate that the specimen from the Nepalese Himalayas (tentatively represent typical *B. darjelingensis*) is different from Asian specimens, usually assigned to the same species. Morphological comparison of 118 collection specimens, mainly from the *Barbastella* genus´ distribution range, let us reveal some undescribed or unaccepted taxa. Firstly, independent status of the Central Asian barbastelles was shown and the species name *B. caspica* was revived. All the other lineages within the genus inhabit mainly in forested areas and are similar in overall size and fur coloration. Two of them – one from south-west China, northern Indochina and Taiwan, and another from Japan and Kuril Islands – have no less than 10% divergence of mtDNA from other named forms. Principal Component analysis demonstrates quite limited overlap between Japanese race and "typical" *B. darjelingensis*. Discriminant Function analysis significantly discriminates Japanese samples from all other, and demonstrates that samples from Hokkaido and Honshu definitely belong to the same set. Besides, fur coloration and structure of Japanese animals differ somewhat from those of Asian mainland. Thus, there is no doubt about the separate taxonomic status of the Japanese form. Finally, despite being Chinese/Vietnamese lineage different, it is hardly distinguishable from *B. darjelingensis* and its status requires further revision.
The work was done with partial support thanks to RFBR 17-04-00689 and RNF 14-50-00029 grants.

TWINS OR COUSINS: TWO SPECIES OF "DESERT" LONG-EARED BATS (*PLECOTUS*; VESPERTILIONIDAE, CHIROPTERA) COEXISTING IN MONGOLIA [O]

SERGEI V. KRUSKOP[1]**, IRINA V. KURDYUKOVA[3], ILIYA V. ATRYUSHIN[2], VLADIMIR S. LEBEDEV[1], **kruskop@zmmu.msu.ru
[1]*Zoological Museum, Moscow M.V. Lomonosov State University, Moscow, Russia;*
[2]*Department of Vertebrate Zoology, Biological Faculty, Moscow M.V. Lomonosov State University, Moscow, Russia;*
[3]*Faculty of Biology and Chemistry, Moscow State University of Education, Moscow, Russia.*

The use of molecular methods totally changed the understanding of the genus *Plecotus*. Instead of the 2 to 4 previously accepted species, the presence of up to 19 putative species was shown, and later this amount has been even further enlarged. Though some of these species possess overlapping distribution areas and are sympatric in some territories (which implies their species status), most of Asiatic members of the genus demonstrate allopatric or parapatric distribution. Meantime, interrelations between some of those forms seem to be unclear and require revision. Studies in Mongolia reveal the presence of two putative *Plecotus* species in this country, adapted to the arid climate. According to some features, these two forms were provisionally associated with names *Plecotus kozlovi* and *P. turkmenicus*. Further studies have shown that both forms in southern Mongolia coexist in some areas and even in the same habitats, though little is known about their natural history. The two taxa are very close morphologically. They possess some qualitative features in dentition and baculum shape, which however may be treated as either interspecific or interpopulation characteristics, due to additional arguments. Morphometric PCA analysis did not reveal any difference in skull shape between the two forms, though well-discriminates them from two other Asian species – *P. ognevi* and *P. strelkovi*. Mitochondrial DNA divides these forms very substantially, making *P. kozlovi* a sister lineage to Siberian *P. ognevi*. In that case one may suppose that "*P. kozlovi*" represents a *P. turkmenicus* population with introgression of mtDNA from *P. ognevi*. However, preliminary data on nuclear DNA have also shown differences between the two forms, suggesting a more complicated microevolutionary scenario than just occasional ancient hybridization. This work was done with partial support from grants RFBR 17-04-00689 A and RNF 14-50-00029.

WHAT PROPORTIONS MAY TELL: CRANIO-DENTAL MORPHOMETRY IN COMMON SEROTINES *(EPTESICUS SEROTINUS S.* LATO; VESPERTILIONIDAE, CHIROPTERA) [P]

SERGEI V. KRUSKOP[1]**, VLADIMIR S. LEBEDEV[1], **kruskop@zmmu.msu.ru
[1] *Zoological Museum, Moscow M.V. Lomonosov State University, Moscow, Russia.*

In the last decade true serotines and in particular *Eptesicus serotinus* species complex became subjects of heated discussions in respect to their taxonomy. However, the majority of recent taxonomic conclusions were made mostly on genetic data (in accordance to the "genetic species concept"). To understand how morphological and genetic variability correlate within the complex, a set of 22 cranial and dental measurements was analyzed. Measurements were taken from 298 full-grown specimens, most of which were examined genetically or can be unequivocally assigned to a particular genetic clade. We used the model-based clustering algorithm as implemented in MCLUST software to determine the number and composition of clusters present in the morphometric data. For the complete data set as well as for size-adjusted data the optimal delimitation suggests the existence of three clusters that correspond essentially to the major taxonomic subdivisions of *E. serotinus s.*lato: *E. s. serotinus, E. s. turcomanus* and *E.* [*s.*] *pachyomus.* Less than 14% of specimens were identified incorrectly (i.e. not in agreement with a priori expectations). All Taiwanese and Korean specimens and most of specimens from India, Pakistan and south-east Iran were included in the "pachyomus" cluster. Generally, *"serotinus"* and *"turcomanus"* clusters seem to be slightly more similar to each other than to "pachyomus". The sample of *"shirazensis"* from Syria demonstrates strong association with the *"serotinus"* cluster. Samples from the Caucasus and, surprisingly, from the Syrdariya valley (central Kazakhstan) fall close to both *"serotinus"* and *"turcomanus"* clusters. Some of the analyses based on a reduced set of dimensions produced a larger number of clusters. New clusters are associated with several local samples otherwise belonging to *"pachyomus",* thus, indicating pronounced geographic variation within *E.* [*s.*] *pachyomus.* The work was done with support from grants RFBR 17-04-00689 А and RNF 14-50-00029.