

# Curriculum Vitae

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## 1 Degrees

- 1998 Ph. D. (Biology), Moscow State University.  
Thesis title: Plantains (genera *Plantago* L. and *Psyllium* Mill., Plantaginaceae) of European Russia and adjacent territories (advisor: Dr. Vadim Tikhomirov; reviewers: Dr. Vladimir Novikov, Dr. Alexander Luferov)
- 1990 M. Sc. (Biology), Moscow State University.  
Thesis title: Knotweeds (*Polygonum aviculare* L. and allies) of Central Russia (advisor: Dr. Vadim Tikhomirov; reviewer: Dr. Vladimir Novikov)

## 2 Employment

- 2019–present Kyoto University, The Kyoto University Museum, Visiting Professor
- 2016–2019 Department of Biology, Minot State University (Minot, ND), Associate Professor
- 2010–2016 Department of Biology, Minot State University (Minot, ND), Assistant Professor

2008–2010	Marine Biological Laboratory, Woods Hole, Massachusetts, U.S., Associate Researcher with EOL (Encyclopedia of Life).
2006–2008	Idaho State University, Moscow, Idaho, U.S., Associate researcher.
2003–2006	Institute of Information Technologies, Lecturer.
2002–2003	Royal Botanic Gardens, Kew, Associate researcher.
1997–2002	Corporation “Small School”, Lecturer.
1992–2006	Moscow South-West High School, Lecturer, Specialist.
1995–1998	The department of higher plants of Moscow State University.
1992–1995	All-Russian Preparation Courses (VZPK), Chief of the biology department.
1990–1992	Moscow technical college No. 155, Lecturer in botany.
1989–1994	Cooperative “Prepare to College”, Lecturer in biology.

### 3 Teaching and Mentoring Experience

2016–present ***Machine Learning with R classes:***

2018	Machine learning with R for botanists: workshop on Botany 2018 conference (Rochester, Minnesota)
2017	Machine learning with R for botanists: workshop on Botany 2017 conference (Fort Worth, Texas)
2017	Machine learning with R for biologists: workshop on 2017 annual North Dakota INBRE Symposium (Grand Forks, ND)

2010–present ***Teaching classes in Minot State University:***

2013–present	Biogeography (original, with a Tropical Biology laboratory part built in connection with the field trip to tropics) <a href="http://ashipunov.me/shipunov/school/biol_330">http://ashipunov.me/shipunov/school/biol_330</a>
2012–present	Concepts of Biology (original, taught as a history of life course) <a href="http://ashipunov.me/shipunov/school/biol_111">http://ashipunov.me/shipunov/school/biol_111</a>
2012–present	Biometry (original, based on the original textbook) <a href="http://ashipunov.me/shipunov/school/biol_240">http://ashipunov.me/shipunov/school/biol_240</a>
2011–present	Systematic Botany (original, taught as a field botany course) <a href="http://ashipunov.me/shipunov/school/biol_448">http://ashipunov.me/shipunov/school/biol_448</a>
2011–present	Ethnobotany (original) <a href="http://ashipunov.me/shipunov/school/biol_310">http://ashipunov.me/shipunov/school/biol_310</a>
2011–2012	Working with Organisms in the Classroom. Plants <a href="http://ashipunov.me/shipunov/school/biol_592">http://ashipunov.me/shipunov/school/biol_592</a>
2011–2013	Advanced Cell Biology <a href="http://ashipunov.me/shipunov/school/biol_250">http://ashipunov.me/shipunov/school/biol_250</a>
2010–present	Introduction to Botany (based on the original textbook) <a href="http://ashipunov.me/shipunov/school/biol_154">http://ashipunov.me/shipunov/school/biol_154</a>
2017–present	Computer literacy for biology majors <a href="http://ashipunov.me/shipunov/school/univ_110">http://ashipunov.me/shipunov/school/univ_110</a>

2007	Dendrology (University of Idaho) <a href="http://www.uidaho.edu/cnr/">http://www.uidaho.edu/cnr/</a>
2003–2005	Computer methods in science (Moscow Institute of Information Technologies) <a href="http://www.ekurs.ru/">http://www.ekurs.ru/</a>
1997–2002	<b>Teaching classes in Moscow State University:</b>
2000–2001	Contemporary methods in flowering plants systematics
1998	General Biology: Botany
1998–2002	Mathematical methods in plant systematics
1997	Morphology of plants
2002	Principal of (“Small Shool”) <a href="http://smallschool.ru/">http://smallschool.ru/</a>
1997–2002	Biology (“Small Shool”) <a href="http://smallschool.ru/">http://smallschool.ru/</a>
1992–present	General Biology, Botany (Moscow South-West High School) <a href="http://www.1543.ru/">http://www.1543.ru/</a> , <a href="http://www.bioclass.ru/">http://www.bioclass.ru/</a>
1990–1992	Botany, Dendrology (Moscow Technical College #155) <a href="http://18kld.ru/">http://18kld.ru/</a>
1989–1994	General Biology (All-Russian Preparation Courses, “VZPK”, Moscow, Russia).
1989–1992	Biology (“Gotovim v VUZ”, Moscow, Russia)
1985–2002	Biology (Open College “VZMSh”) <a href="http://www.vzms.ru/">http://www.vzms.ru/</a>
1982–present	Organizing and managing Moscow Biology Science Olympiad at Moscow State University. Member of the Panel of Judges from 1990, vice-chairman of the Panel from 2002 <a href="https://shbo.ru/">https://shbo.ru/</a>
1992–present	<i>Mentoring</i> high school, undergraduate and graduate students (in all, 117 students). Organized scientific expeditions and summer practices, supervised student scientific research.
1992–present	<i>Supervising</i> of master and doctoral theses. The last one (2019) is “A Survey of the Vascular Flora of Adams County, North Dakota” (Raymond Krueger, MSU, master’s degree)
2017–present	YouTube channel “Tales from Greenhouse” <a href="https://www.youtube.com/channel/UCxPchT-Zp8ADvsVR91HCRmA">https://www.youtube.com/channel/UCxPchT-Zp8ADvsVR91HCRmA</a>

## 4 Awards and Funding

2014	Research grant, North Dakota INBRE/NIH
2013	Research grant, Prairie Biotic Research, Inc.
2012	Research grant, University of North Dakota
2011, 2013–2018	Small research grants, Minot State University
2011	International Initiative Grant, Minot State University
2011	Research Grant, Great Plains Center for Community Research and Service
2011–2012	Pilot research grant, North Dakota INBRE/NIH
2006	Research grant from the Norwegian Research Council

2005	NSF/IGER research grant for the Center for Research on Invasive Species & Small Populations (CRISSP)
2005	Testimonial Letter, Moscow Department of Education
2005	Special Diploma, Andrei Sakharov Conference
2003	Research grant from Royal Society, United Kingdom
2001	Moscow Grant, Government of Moscow
1995	George Soros Grant in Teaching Biology

## 5 Research Interests

### Geography and Evolution of Plants

2010–present	Geography and evolution of boxwoods and allies (Buxineae), chokeberries ( <i>Aronia</i> , Rosaceae) and tropical American Picramniaceae.
1994–present	Geography, biology and diversity of plantains ( <i>Plantagineae</i> tribe). Prepared the critical review of the species of the genera <i>Plantago</i> and <i>Littorella</i> of the European Russia and Northeastern United States. It is published the review of the Plantagineae for the volume XVII of the “Flora of North America”.
1994–2014	Biogeography of Northern and Middle Russia and Caucasus. I have studied evolution and geography of plants on small islands of the Russian White Sea. Researched evolution of the <i>Carex salina</i> hybrid complex; cataloged vascular plants of the Guba Tchupa and Dalnie Zelentsy regions; conducted a comparative study of the flora of Guba Kiv islands and lakes in this region. I have cataloged vascular plants of lake Moldino environs; studied multi-colored primrose ( <i>Primula vulgaris</i> ) geography and evolution; the diversity of Caucasus and Crimea ivy ( <i>Hedera</i> ) species; composed a textbook with description key of the spring flora of Black Sea coast.
2011–present	Flora of North Dakota. I have prepared a comprehensive, illustrated checklist for the plants in the state. Minot State University herbarium (MISU) significantly improved, databased, geo-referenced, and imaged with intravital photographs. Created North Dakota ethnobotany database ( <a href="http://ashipunov.me/shipunov/school/biol_310/nd_ethnobotany.htm">http://ashipunov.me/shipunov/school/biol_310/nd_ethnobotany.htm</a> ).
2002–2015	Evolution, geography and conservation biology multiple plant groups including: knotweeds ( <i>Polygonum</i> ), spruces ( <i>Picea</i> ), alders ( <i>Alnus</i> ) and dactylorhizids ( <i>Dactylorhiza</i> ) of European Russia. Developed and studied microsatellite and polymorphic fragments markers, determined origin, geographical patterns, and possible maternal parents of allopolyploids; employed simultaneous analysis of morphometric and molecular data and geometric morphometry analyses.  Described three new families of flowering plants, one species of fungi, descriptions of two new plant genera, four species, and several taxa of intermediate ranks are under preparation. More than 1400 submissions to GenBank and Barcoding of Life projects: <a href="https://www.ncbi.nlm.nih.gov/nuccore?term=Shipunov">https://www.ncbi.nlm.nih.gov/nuccore?term=Shipunov</a>

### Structure and Behavior of Plants

1998–2008	Behavior of plants, with the emphasis on carnivorous sundews ( <i>Drosera</i> ) and “biological clock” water-lilies ( <i>Nymphaea</i> ) investigated employing the original method of continuous observations.
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### Biodiversity Informatics

1994–present	Global taxonomy databases. Participated in the “Encyclopedia of Life” project. Hemihomonyms database ( <a href="http://ashipunov.info/shipunov/os/homonyms">http://ashipunov.info/shipunov/os/homonyms</a> ) has been created in 2010 and continuously updated since. The original classification of living organisms
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(<http://ashipunov.info/shipunov/os>) has been made (1995) and continuously updated since. Taxonomy of anamorphic fungi was studied; numerous new fungal lineages of anamorphic ascomycetes were described. The original classification of flowering plants (<http://ashipunov.info/shipunov/ang>) has been made (1991) and constantly updated since.

## 6 Research and Education Goals and Principles

Integration	I always argue for the synthetic approach to scientific problems; this synthesis, in my view, should be most parsimonious but include all contemporary data and the widest spectrum of methods.
Service	I believe that scientific knowledge must be accessible to everybody. Hence the knowledge delivery to the maximally broad audience is one of the most important aspects of my education strategy.

## 7 Publications

### Peer-Reviewed Articles

- [1] Iwanycki Ahlstrand N., Shipunov A., and many others. Travel tales of a worldwide weed: genomic signatures of *Plantago* major L. reveal distinct genotypic groups with links to colonial trade routes. *Front. Plant Sci.* <https://doi.org/10.3389/fpls.2022.838166>
- [2] Shipunov A., Fernández-Alonso J.L., Hassemer G., Alp S., Lee H.J., Pay K. 2021. Molecular and morphological data improve the classification of Plantagineae (Lamiales). *Plants*. 10: 2299. <https://doi.org/10.3390/plants10112299>
- [3] Oskolski A., Vuza N., Shipunov A. 2021. Stem and leaf anatomy of *Aragoa* (Plantaginaceae): in search of lost rays. *Plants*. 10:1773. <https://doi.org/10.3390/plants10091773>
- [4] Hassemer G., dos Santos A.P., Shipunov A.B., Funez L.A. 2020. *Plantago australis* (Plantaginaceae) produces both chasmogamous and cleistogamous flowers: field work, herbarium and literature-based evidence. *Flora*. <https://doi.org/10.1016/j.flora.2020.151724>
- [5] Shipunov A., Carr S., Furniss S., Pay K., Pirani J.R. 2020. First phylogeny of Bitterbush Family, Picramniaceae (Picramniales). *Plants*. 9: 284. <https://doi.org/10.3390/plants9020284>
- [6] Shipunov A., Gladkova S., Timoshina P., Lee H.J., Choi J., Despiegelaere S. and Connolly B. 2019. Mysterious chokeberries: new data on the diversity and phylogeny of *Aronia* Medik. (Rosaceae). *European Journal of Taxonomy* 570: 1–14. <https://doi.org/10.5852/ejt.2019.570>
- [7] Hassemer G., Bruun-Lund S., Shipunov A., Briggs B.G., Meudt H.M., Rønsted N. The application of high-throughput sequencing for taxonomy: The case of *Plantago* subg. *Plantago* (Plantaginaceae). *Molecular Phylogenetics and Evolution*. 2019. 138: 156–173. <http://dx.doi.org/10.1016/j.ympev.2019.05.013>
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- [9] Hassemer G., Shipunov A., Roensted N., Meudt H. Taxonomic and geographic novelties in the genus *Plantago* (Plantaginaceae) in Chile, including the description of a new species. *Phytotaxa*. 2018. 340: 137–156. <https://doi.org/10.11646/phytotaxa.340.2.3>
- [10] Shipunov A. Portion of Plantaginaceae, the Plantain Family: *Littorella* and *Plantago*. Online edition. In: R.F.C. Naczi, J.R. Abbott, and Collaborators, *New Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, compiled in 2016, 2017. NYBG Press, New York. <http://dx.doi.org/10.21135/893275471.060>

- [11] Shipunov A. Buxaceae, the Boxwood Family. Online edition. In: R.F.C. Naczi, J.R. Abbott, and Collaborators, *New Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, compiled in 2016, 2017. NYBG Press, New York.  
<http://dx.doi.org/10.21135/893275471.041>
- [12] Logacheva M., Shipunov A. Phylogenomic analysis of *Picramnia*, *Alvaradoa*, and *Leitneria* supports the independent Picramniales. *Journal of Systematics and Evolution*. 2017. 55: 171–176.  
[doi:10.1111/jse.12246](https://doi.org/10.1111/jse.12246)
- [13] Doweld A.B., Shipunov A. Proposal to reject the name *Plantago indica* (Plantaginaceae). *Taxon*. 2017. 66: 205–206. [doi:10.12705/661.25](https://doi.org/10.12705/661.25)
- [14] Volkova P.A., Vinogradova T.A., Kopylov-Gyskov Yu.O., Lyskov D.F., Petrov P.N., Shipunov A. Results of ten years monitoring of population status of *Epipogium aphyllum* (F.W. Schmidt) Sw. on the Asafij island (Kandalaksha Gulf of the White Sea). *Phytodiversity of East Europe*. 2016. 10: 4.
- [15] Mushegian A., Shipunov A., S.F. Elena. Changes in the composition of the RNA virome mark evolutionary transitions in green plants. *BMC Biology*. 2016. 14: 68.  
[doi:10.1186/s12915-016-0288-85](https://doi.org/10.1186/s12915-016-0288-85)
- [16] Shipunov A., P. Efimov “Northern tetraploids” clarified: a study of dactylorhizids (*Dactylorhiza*, Orchidaceae) from the North European Russia. *Flora*. 2015. 215: 40–45.  
[doi:10.1016/j.flora.2015.07.005](https://doi.org/10.1016/j.flora.2015.07.005)
- [17] Choi J., H.J. Lee, Shipunov A. All that is gold does not glitter? Age, taxonomy, and ancient plant DNA quality. *PeerJ*. 2015. 3: e1087. [doi:10.7717/peerj.1087](https://doi.org/10.7717/peerj.1087)
- [18] Oskolski A., M. von Balthazar, Y. Staedler, Shipunov A. Inflorescence and Flower Morphology of *Haptanthus hazlettii* (Buxaceae, Buxales). *Botanical Journal of Linnean Society*. 2015.  
[doi:10.1111/boj.12303](https://doi.org/10.1111/boj.12303)
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- [24] Volkova P., Shipunov A., P. Borisova, R. Moseng, R. Ivens. In search of hybridity: the case of Karelian spruces. *Silva Fennica*. 2014. 48: 1072.
- [25] Shipunov A. We need at least two baskets for our eggs: PDF alone is not enough for e-publication. *Taxon*. 2014. 63: 134–135.
- [26] Shipunov A., P. Volkova, L. Abramova, P. Borisova. Lost and found: short-term dynamics of the flora on 100 small islands in the White Sea. *Acta Oecologica*. 2013. Vol. 52. P. 50–56.
- [27] Raghavendra, A.K.H., G. Newcombe, Shipunov A., M. Baynes, D. Tank. Exclusionary interactions among diverse fungi infecting developing seeds of *Centaurea stoebe*. *FEMS Microbiology Ecology*. 2013. 84(1): 143–153.
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- [32] Shipunov A., Shipunova E. *Haptanthus* story: rediscovery of enigmatic flowering plant from Honduras. *American Journal of Botany*. 2011. 98: 761–763.
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## 8 Attended Symposia

- 2019 Flora Malesiana Symposium XI – Universiti Brunei Darussalam. June 30 – July 5, 2019 (oral presentation).
- 2018 XII Congreso Latinoamericano de Botanica. 21–28 Octubre 2018. Quito, Ecuador (oral presentation)
- 2018 Botany 2018. Rochester, Minnesota, July 21–25, 2018 (poster presentation)
- 2018 North Dakota Academy of Science. 109th Annual meeting. Minot, North Dakota (poster presentation).
- 2017 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (poster presentation).
- 2017 XIX International Botanical Congress. July 17–21, 2017. Shenzhen (oral and poster presentations).
- 2017 Botany 2017. Fort Worth, Texas, June 24–28, 2017 (poster presentation)
- 2017 North Dakota Academy of Science. 108th Annual meeting. Fargo, North Dakota (poster presentation).
- 2016 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (poster presentation).
- 2016 Botany 2016. Savannah, Georgia (oral presentation).
- 2016 Indigenous Plant Use Forum (IPUF). 19th Annual Conference. Port St. Johns, Eastern Cape, South Africa (oral presentation).
- 2016 North Dakota Academy of Science. 107th Annual meeting. Fargo, North Dakota (oral presentation).
- 2015 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (poster presentation).
- 2015 Botany 2015. Edmonton, Alberta, Canada (poster presentation).
- 2014 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (poster and oral presentation).
- 2014 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (poster presentation).
- 2014 Botany 2014. Boise, Idaho (poster and oral presentation).

- 2014 North Dakota Academy of Science. 106th Annual meeting. Valley City, North Dakota (oral presentation).
- 2013 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (poster presentation).
- 2013 Botany 2013. New Orleans, Louisiana (oral presentation).
- 2013 North Dakota Academy of Science. 105th Annual meeting. Grand Forks, North Dakota (oral presentation).
- 2012 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (poster presentation).
- 2012 Botany 2012. Columbus, Ohio (two oral presentations).
- 2012 North Dakota Academy of Science. 104th Annual meeting. Bismarck, North Dakota (oral presentation).
- 2011 North Dakota INBRE Annual Symposium. Grand Forks, North Dakota (two poster presentations).
- 2011 Northwest Rural Consortium 2011 Meeting. Minot, North Dakota (oral presentation).
- 2011 XVIII International Botanical Congress. Melbourne, Australia (oral presentation).
- 2011 Botany 2011. St. Louis, Missouri (oral presentation).
- 2010 Botany 2010. Providence, Rhode Island (poster presentation).
- 2009 Towards building code compliance within biodiversity informatics. The Systematics Association 7th Biennial Meeting. Leiden, Holland (oral presentation).
- 2008 Updating the Linnaean Heritage: Names as tools for thinking about animals and plants. Padua, Italy (participant).
- 2008 "Nomina 2" workshop. Woods Hole, Massachusetts (organization).
- 2007 Plant Biology and Botany 2007. The Joint Congress of ASPB, BSA, ASPT and AFS. Chicago, Illinois (two oral presentations).
- 2007 Idaho Weed Conference. Idaho Weed Control Association. Nampa, Idaho (oral presentation).
- 2006 Botany 2006. The Annual Meeting of BSA, ASPT, AFS and ABL. California State University, Chico (two posters and oral presentation).
- 2006 VI Scientific Symposium about flora of Middle Russia. Tver (poster presentation).
- 2005 XVII International Botanical Congress. Vienna, Austria (three posters).
- 2005 Study of the flora of East Europe: Achievements and prospects. St.-Petersburg (poster presentation).
- 2004 Fundamental problems of botany and botanical educations: problems and perspectives. International Conference. Moscow (poster presentation).
- 2003 The Systematics Association 4th Biennial Meeting. Trinity College, Dublin (poster presentation).
- 2003 International Polyploidy Conference, London (poster presentation).
- 2003 IV scientific session of Marine Biological Station of Saint-Petersburg State University. St. Petersburg (poster presentation).
- 2003 XI International Conference of Plant Phylogeny. Moscow (poster presentation).
- 2003 Apiales 2003. Symposium of University of Pretoria, Pretoria, South Africa (poster presentation).
- 2002 International conference "Ecological botany: science, education and applied aspects". Syktyvkar (poster presentation).
- 2002 N.A. Pertzov Conference. White Sea Biological Station of Moscow State University (poster presentation).

2002	Conference of young botanists-scientists of Ukraine. Lviv (poster presentation).
2002	III scientific session of Marine Biological Station of Saint-Petersburg State University. St. Petersburg (poster presentation).
2002	International scientific conference on systematics of higher plants. Moscow (lectures, seminar presentation).
2001	Scientific and educational resources in Moscow State University. Moscow (poster presentation).
2001	Population, ecosystem and evolution. All-Russian seminar. Kazan (poster presentation).
2001	Information technology in biodiversity research. 2nd International Symposium. St. Petersburg (poster presentation).
2001	IX Workshop on theoretical plant morphology “Types of similarities and principles of the homologies revealed in plant morphology”. St. Petersburg (poster presentation).
2001	Floristic Researches in Central Russia. Conference. Rjazan (poster presentation).
2000	International conference in memory of A.A. Uranov. Moscow (oral presentation).
2000	X Moscow Meeting of Plants Phylogeny (poster presentation)
1999	VI International Conference on the Morphology of the Plants in Memory I.G. and T.I. Serebryakovs (poster presentation)
1997	Puschino-na-Oke winter school on plant morphology. Puschino-na-Oke (poster presentation)
1997–2006	Multi-Subjects Winter Schools in Puschino-na-Oke, organized by Moscow South-West High School. Puschino-na-Oke (lectures and seminars).
1994–1996	Puschino-na-Oke winter schools of plant cell biology. Puschino-na-Oke (lectures)
1994, 1995	Seminar for the teachers of biology in Obninsk, organized by “Alta” company. Obninsk (lectures)
1996	IX Moscow Meeting of Plants Phylogeny (poster presentation)
1992	VIII Moscow Meeting of Plants Phylogeny (poster presentation)
1989	Seminar for the teachers of biology in Kaluga (lecture)
1984, 1985	All-Russian undergraduate student Olympiad in biology (participant)

## 9 Field Experience

### Expeditions

1981–2014	Eurasia: Central Russia, Caucasus, Russian Arctic
2006–present	North America: Rocky Mountains, North Dakota and adjacent territories of Great Plains
2010–present	Central and South America: Honduras, Puerto Rico, Mexico, Costa Rica, Panama, Colombia, Ecuador, Peru, Chile, Brasil
2016	Africa: South Africa
2017–present	Pacific, East and South Asia: Hawaii, Indonesia, China, Japan, Brunei, New Caledonia
2011, 2019	Australia: Victoria, New South Wales

## 10 Service and Outreach

### Service and Outreach Activities

1982–present	Moscow State University Biology Olympiad: during the fall and first half of winter requires participation in Olympiad Panel meetings and development of assignments.
1992–present	Public excursions into greenhouses, gardens and into the field
1998–present	My on-line databases: support of the two classifications databases which requires biweekly review of new publications and biannual updates; database of hemihomonyms which is constantly updated with new names finding; ethnobotanical database for North Dakota which is also regularly updated.
1998–present	Public Domain materials on my personal Web site are mostly educational materials and plant photographs; they require regular updates, metadata development and communication with customers.
1998–present	Support journals online: provided for several (mostly botanical) scientific journals (e.g., Proceedings of the North Dakota Academy of Sciences, Ukrainian Botanical Journal and others) which have no or little resources to organize it themselves.
2003–present	Taxonomic expertise for herbaria (including international collections in Indonesia, China and Japan) and individuals: mostly identification of <i>Dactylorhiza</i> , <i>Plantago</i> and flora of North Dakota.
2006–present	Support of multiple Web services: “Plant Science / Herba” botanical Internet forum, Minot State University Department of Biology Web site,
2010–2019	Greenhouse: support of the Minot State University greenhouse
2010–present	Curation: Minot State University Herbarium (MISU)
2012–2019	Landscaping and beautification: support of Minot State University campus dendrarium

## 11 Developing

### Computer Experience

OS	Linux, MS Windows 3.11–10, macOS 9/X
Programming	C, Fortran, T <sub>E</sub> X(developer), Perl (developer), Python, PHP, JavaScript, S, UNIX shells (developer), sed, AWK
Data analysis	R (developer), S-PLUS, SPSS, Statgraphics, STATISTICA, Stadia, tpsRelw, NTSYSpc, Past <i>etc.</i>
Taxonomy	PAUP, PHYLIP, WinClada, MacClade, MrBayes, Mesquite, RAxML, and many others
DNA sequencing	Autoassembler, CLUSTAL, Sequence Navigator, Sequencher, VectorNTI, Staden, and many others
Databasing	MySQL, PostgreSQL, SQLite, MS Access, and others

### Software

L <sup>A</sup> T <sub>E</sub> X	multiple packages available on CTAN, <a href="https://ctan.org/author/shipunov/">https://ctan.org/author/shipunov/</a>
Perl	text converters (Perl), available on <a href="http://ashipunov.info/shipunov/software/misc">http://ashipunov.info/shipunov/software/misc</a>
Shell	DjVu tools img2djvu and djvupages, available on Github ( <a href="https://github.com/ashipunov">https://github.com/ashipunov</a> )
R packages:	Alexey Shipunov. 2012. smirnov: Provides two taxonomic coefficients from E.S. Smirnov “Taxonomic analysis” (1969) book. R package version 1.0-1. <a href="https://CRAN.R-project.org/package=smirnov">https://CRAN.R-project.org/package=smirnov</a>

Alexey Shipunov. 2019. tapkee: Wrapper for “tapkee” Dimension Reduction Library. R package version 1.0. <https://CRAN.R-project.org/package=tapkee>

Alexey Shipunov, Paul Murrell, Marcello D’Orazio, Stephen Turner, Eugeny Altshuler, Roland Rau, Marcus W. Beck, Sebastian Gibb, Weiliang Qiu, Emmanuel Paradis and R Core Team. 2019). shipunov: Miscellaneous Functions from Alexey Shipunov. R package version 1.1. <https://CRAN.R-project.org/package=shipunov>

Homonym Tools, available on Github (<https://github.com/ashipunov>)

## Web Sites developed

- [1] Materials of Alexey Shipunov. <http://ashipunov.info> (content and development)
- [2] Minot State University, Department of Biology. <http://msubiology.info> (primary developer, content and support)
- [3] Foundations of Complex Life. <http://www.complex-life.org> (developed first versions)
- [4] Proceedings of the North Dakota Academy of Sciences. <http://ashipunov.info/journals/pndas> (support)
- [5] Bulletin of Moscow Society of Naturalists. Biological series. <http://ashipunov.info/journals/bmsn> (support)
- [6] Flora of North Dakota project blog. <https://floraofnd.wordpress.com/> (most of content)
- [7] Plant science / Herba forum. <http://molbiol.ru/forums/index.php?&showforum=63> (content and support)

## 12 Professional Memberships

1990–present	Member of the Panel of Judges of Moscow Biology Science Olympiad at the Moscow State University
1991–present	Member of the Moscow Society of Naturalists (MOIP)
1993–1995	Editorial board of the “Repetitor” educational journal (Moscow, Russia)
2015–present	Member of the Editorial Council of “Bulletin of the Moscow Society of Naturalists”
1995–present	Member of the Russian Botanical Society (RBO)
2006–present	Member of the Botanical Society of America (BSA)
2011–present	Member of the North Dakota Academy of Science, as a Society historian, support the Web archive of the “Proceedings of the North Dakota Academy of Science” ( <a href="http://msubiology.info/journals/pndas">http://msubiology.info/journals/pndas</a> )
2012–present	Member of the Editorial Board of the “Modern Phytomorphology” journal ( <a href="https://www.phytomorphology.com/editorial-team.html">https://www.phytomorphology.com/editorial-team.html</a> )