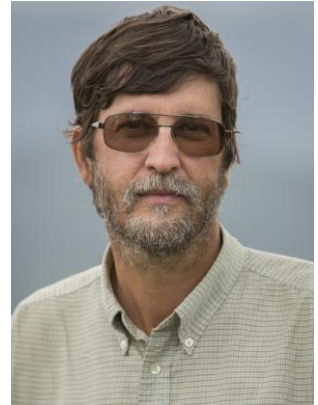


## CURRICULUM VITAE MOLNÁR, ZSOLT (ethnoecologist, botanist)

**Summary:** Zsolt Molnár, botanist, ethnoecologist, Doctor of Science, scientific advisor, MTA Centre for Ecological Research, Head of the „Traditional Ecological Knowledge” Research Group, former member of the IPBES Indigenous and Local Knowledge Task Force, Coordinating Lead Author in the IPBES Global Assessment, born in 1966 in Hungary, married, two children. Main interests: traditional, indigenous and local ecological knowledge of herders and farmers in Hungary, Romania, Serbia, Mongolia and Iran, knowledge co-production with herders and farmers to avoid or resolve conflicts with conservation; traditional land management, perception of landscape change and nature’s contributions to people by locals; conservation management, monitoring using local indicators, conservation and agri-environmental policy; land-use and vegetation history of the Hungarian Plain (1780-present); habitat classifications, actual habitat mapping, trend analysis of Natura 2000 habitats (1783-2013).



Date and place of birth: May 26 1966, Celldömök, Hungary, married (Marianna Biró), two children (Ábel Péter - 1991, Margaréta Kata - 1993)

### Research experience

Ethnoecology, traditional and local ecological knowledge (TEK, ILK)  
Historical landscape ecology, vegetation dynamics, and drivers of habitat change  
Traditional, small-scale management of biodiversity and ecosystem services  
Mapping of actual vegetation, development of habitat classifications for mapping  
Conservation management, conservation and agricultural policy

### Professional background

2015- Scientific advisor (MTA Centre for Ecological Research)  
2015 Doctor of Science (equivalent to professor; Hungarian Academy of Sciences, ethnoecology)  
2013- Founder and head of the „Traditional Ecological Knowledge” Research Group  
2013 Habilitation (Pécs University)  
2010-2011 Vice director (Institute of Ecology and Botany, Hungarian Academy of Sciences)  
2009-2015 Senior researcher (Institute of Ecology and Botany, Hungarian Academy of Sciences)  
2007 PhD (Pécs University)  
1993-2009 Researcher (Institute of Ecology and Botany, Hungarian Academy of Sciences)  
1991-1992 TEMPUS exchange program (Nottingham University)  
1990-1993 Research assistant (Institute of Ecology and Botany, Hungarian Academy of Sciences)  
1985-1990 BSc and MSc in Ecology (Szeged University)

### Selected publications

#### Journal papers (and some chapters) related to Indigenous and Local Knowledge (ILK)

Ulicsni, V., Babai, D., Vadász, Cs., Vadász-Besnyői, V., Báldi, A., Molnár, Zs. (2019): Bridging conservation science and traditional knowledge of wild animals: the need for expert guidance and inclusion of local knowledge holders. *Ambio* 48: 769-778.

Reyes-García, V. Fernández-Llamazares, A., McElwee, P., Molnár, Zs., Öllerer, K., Wilson, S., E. Brondízio (2019): The contributions of Indigenous Peoples and Local Communities to ecological restoration. *Restoration Ecology* 27: 3–8.

Biró, M., Molnár, Zs., Babai, D., Dénes, A., Fehér, A., Barta, S., Sáfián, L., Szabados, K., Kis, A., Demeter, L., Öllerer, K. (2019): Reviewing historical traditional knowledge for innovative conservation management: a re-evaluation of marshland grazing. *Science of the Total Environment* 666, 1114-1125.

Molnár, Zs. Berkes, F. (2018): Role of Traditional Ecological Knowledge in Linking Cultural and Natural Capital in Cultural Landscapes. In: M. L. Paracchini and P. Zingari (eds). *Reconnecting Natural and Cultural Capital – Contributions from Science and Policy*. Office of Publications of the European Union, Brussels, pp. 183-194.

Díaz, Pascual, Stenseke, Martín-López, Watson, Molnár, Hill, Chan, et al. (2018): Assessing nature’s contributions to people. *Science* 359: 270-272.

- Garnett, S.T., Burgess, N.D., Fa J.E., Fernández-Llamazares, Á., Molnár, Zs., Robinson, C.J., Watson, J.E.M., Zander, K.K. et al. (2018): A spatial overview of the global importance of Indigenous lands for conservation. *Nature Sustainability* 1: 369–374.
- Molnár, Zs., Sáfián, L., Máté, J., Barta, S., Sütő, D. P., Molnár, Á., Varga, A. (2017): “It does matter who leans on the stick” - Hungarian herders’ perspectives on biodiversity, ecosystem services and their drivers. In: Roué, M., Molnár, Zs. (eds.): *Knowing our Land and Resources: Indigenous and local knowledge of biodiversity and ecosystem services in Europe & Central Asia*. Knowledges of Nature 9. UNESCO: Paris, pp. 42-56.
- Molnár, Zs. (2017): “I see the grass through the mouths of my animals” – folk indicators of pasture plants used by traditional steppe herders. *Journal of Ethnobiology* 37: 522-541.
- Ulicsni, V., Svanberg, I., Molnár, Zs. (2016): Traditional knowledge of invertebrates in Central Europe - folk taxonomy, nomenclature, medicinal and other uses, folklore, and nature conservation. *Journal of Ethnobiology and Ethnomedicine* 12:47.
- Molnár, Zs., Kis, J., Vadász, Cs., Papp, L., Sándor, I., Béres S., Sinka G., Varga, A.: (2016): Common and conflicting objectives and practices of herders and nature conservation managers: the need for a conservation herder. *Ecosystem Health and Sustainability* 2(4) Paper e01215. 16 p.
- Molnár Zs., Gellény K., Margóczy K., Biró M. (2015): Landscape ethnoecological knowledge base and management of ecosystem services in a Székely-Hungarian pre-capitalistic village system (Transylvania, Romania). *Journal of Ethnobiology and Ethnomedicine* 11: 3.
- Babai D., Tóth A., Szentirmai I., Biró M., Máté A., Demeter L., Szépligeti M., Varga A., Molnár Á., Kun R., Molnár Zs. (2015): Do conservation and agri-environmental regulations support effectively traditional small-scale farming in East-Central European cultural landscapes? *Biodiversity and Conservation* 24: 3305-3327.
- Varga A., Molnár Zs. (2014): The Role of Traditional Ecological Knowledge in Managing Wood-pastures. In: Hartel T., Plieninger T. (eds.): *European Wood-pastures in Transition. A Social-ecological Approach*. London: Routledge, pp. 187-202.
- Molnár Zs. (2014): Perception and Management of Spatio-Temporal Pasture Heterogeneity by Hungarian Herders. *Rangeland Ecology and Management* 67: 107-118.
- Biró É., Babai D., Bódis J., Molnár Zs. (2014): Lack of knowledge or loss of knowledge? Traditional ecological knowledge of population dynamics of threatened plant species in East-Central Europe. *Journal for Nature Conservation* 22: 318-325.
- Babai D., Molnár Zs. (2014): Small-scale traditional management of highly species-rich grasslands in the Carpathians. *Agriculture, Ecosystem & Environment* 179: 123-130.
- Ulicsni V., Svanberg I., Molnár Zs. (2013): Folk knowledge of non-domestic mammals among ethnic Hungarians in North-Western Romania. *North-Western Journal of Zoology* 9: 383-398.
- Molnár Zs. (2013): Traditional vegetation knowledge of the Hortobágy salt steppe (Hungary): A neglected source of information for vegetation science and conservation. *Phytocoenologia* 43: 193-205.
- Babai D., Molnár Zs. (2013): Multidimensionality and scale in a landscape ethnoecological partitioning of a mountainous landscape (Gyimes, Eastern Carpathians, Romania). *Journal of Ethnobiology and Ethnomedicine* 9: 11.
- Molnár Zs. (2012): Classification of Pasture Habitats by Hungarian Herders in a Steppe Landscape (Hungary). *Journal of Ethnobiology and Ethnomedicine* 8: 28.
- Dénes A., Papp N., Babai D., Czucz B. Molnár Zs. (2012): Wild plants used for food by Hungarian ethnic groups living in the Carpathian Basin. *Acta Societatis Botanicorum Poloniae* 81: 381-396.
- Molnár Zs., Bartha S., Babai D. (2008): Traditional ecological knowledge as a concept and data source for historical ecology, vegetation science and conservation biology: A Hungarian perspective. In: Szabó P. & Hedl, R. (eds.): *Human Nature. Studies in Historical Ecology and Environmental History*. Institute of Botany of the ASCR, Brno, pp. 14-27.
- Journal papers (and a chapter) related to vegetation ecology, landscape change and drivers**
- Kun R., Bartha S., Malatinszky Á., Molnár Zs., Babai B. (2019): „Everyone makes it a bit differently!”: Evidence for positive relationship between micro-scale land-use diversity and plant diversity in a cultural landscape. *Agriculture, Ecosystem & Environment* (accepted)
- Biró M., Bölöni J., Molnár Zs. (2018): Use of long-term data to evaluate loss and endangerment status of Natura 2000 habitats and effects of protected areas. *Conservation Biology* 32: 660-671.
- Molnár Zs., Király G., Fekete G.†, Aszalós R., Barina Z., Bartha D., Biró M., Borhidi A., Bölöni J., Csiky J., Czucz B., Dancza I., Dobor L., Farkas E., Farkas S., Horváth F., Kevey B., Lőkös L., Molnár V. A., Magyar E., Németh Cs., Papp B., Pinke Gy., Schmidt D., Schmotzer A., Solt A., Sümegi P., Szmorad

- F., Szurdoki E., Tiborc V., Varga Z., Vojtkó A. (2018): Vegetation. In: Kocsis K. (ed.): *National Atlas of Hungary: Natural Environment*. Research Centre for Astronomy and Earth Sciences of the Hungarian Academy of Sciences, Geographical Institute, Budapest, pp. 94-103.
- Erdős, L., Ambarli, D., Anenkhonov, O.A., Bátori, Z., Cserhalmi, D., Kiss, M., Kröel-Dulay, Gy., Liu, H., Magnes, M., Molnár, Zs., Naqinezhad, A., Semenishchenkov, Y.A., Tölgyesi, Cs., Török, T. (2018): The edge of two worlds: A new review and synthesis on Eurasian forest-steppes. *Applied Vegetation Science* 21: 345–362.
- Varga, A., Molnár, Zs., Biró, M., Demeter, L., Gellény, K., Miókovics, E., Molnár, Á., Molnár, K., Ujházy, N., Ulicsni, V., Babai, D. (2016): Changing year-round habitat use by extensively herded cattle, sheep and pigs in East-Central Europe between 1940 and 2014: Consequences for conservation management. *Agriculture Ecosystems & Environment* 234 :142–153.
- Biró M., Szitár K., Horváth F., Bagi I., Molnár Zs. (2013): Detection of long-term landscape changes and trajectories in a Pannonian sand region: comparing land-cover and habitat-based approaches at two spatial scales. *Community Ecology* 14: 219-230.
- Biró M., Czúcz B., Horváth F., Révész A., Csatári B., Molnár Zs. (2013): Drivers of grassland loss in Hungary during the post-socialist transformation (1987–1999). *Landscape Ecology* 28: 789-803.
- Somodi, I., Molnár, Zs., Ewald, J. (2012): Towards a more transparent use of the Potential Natural Vegetation concept – an answer to Chiarucci et al. *Journal of Vegetation Science* 23: 590-595.
- Molnár, Zs., Biró, M., Bartha, S., Fekete, G. (2012): Past Trends, Present State and Future Prospects of Hungarian Forest-Steppes. In: Werger, MJA, van Staalduinen, MA (eds.): *Eurasian Steppes. Ecological Problems and Livelihoods in a Changing World*. Springer, Dordrecht, Heidelberg, New York, London, pp. 209-252.
- Czúcz, B., Molnár Zs., Horváth, F., Nagy, G., Botta-Dukát, Z., Török, K. (2012): Using the natural capital index framework as a scalable aggregation methodology for local and regional biodiversity indicators. *Journal for Nature Conservation* 20: 144–152.
- Czúcz B., Csecserits A., Botta-Dukát Z, Kröel-Dulay Gy. Szabó R., Horváth F., Molnár Zs. (2011): An indicator framework for the climatic adaptive capacity of natural ecosystems. *Journal of Vegetation Science* 22: 711-725.
- Seregélyes T., Molnár Zs., Csomós Á., Bölöni J. (2008): Regeneration potential of the Hungarian (semi-)natural habitats. *Acta Botanica Hungarica* 50: 229-248.
- Molnár Zs., Bölöni J., Horváth F. (2008): Threatening factors encountered: Actual endangerment of the Hungarian (semi-)natural habitats. *Acta Botanica Hungarica* 50: 199-217.
- Bölöni J., Molnár Zs., Horváth F. (2008): Naturalness-based habitat quality of the Hungarian (semi-)natural habitats. *Acta Botanica Hungarica* 50: 149-159.
- Molnár Zs., Bartha S., Seregélyes T., Illyés E., Tímár G., Horváth F., Révész A., Kun A., Botta-Dukát Z., Bölöni J., Biró M., Bodoncz L., Deák J.Á., Fogarasi P., Horváth A., Isépy I., Karas L., Kecskés F., Molnár Cs., Ortmann-né Ajkai A., Rév Sz. (2007): A grid-based, satellite-image supported, multi-attributed vegetation mapping method (MÉTA). *Folia Geobotanica* 42: 225-247.

#### **Books related to Indigenous and Local Knowledge (ILK)**

- Roué, M., Molnár, Zs. (eds.) (2017): *Knowing our Land and Resources: Indigenous and local knowledge of biodiversity and ecosystem services in Europe & Central Asia*. Knowledges of Nature 9. UNESCO: Paris.
- Babai D., Molnár Á., Molnár Zs. (2014): *Traditional ecological knowledge and land use in Gyimes (Eastern Carpathians)*. Budapest; Vácrátót: MTA Bölcsészettudományi Kutatóközpont Néprajztudományi Intézet; MTA Ökológiai Kutatóközpont Ökológiai és Botanikai Intézet, pp. 173.
- Molnár Zs. (2012): *Traditional Ecological Knowledge of Herders on the Flora and Vegetation of the Hortobágy Steppe*. Hortobágy Természetvédelmi Közalapítvány, Debrecen, pp. 160.

#### **Books (selected) related to vegetation ecology, landscape change and drivers**

- Bölöni J., Molnár Zs., Kun A. (eds.) (with 55 authors) (2011): *Habitats of Hungary. Guide and description to Hungarian vegetation types*. MTA ÖBKI, pp. 441.
- Molnár Zs. (2003): *Sand dunes of Hungary*. TermészetBÚVÁR Alapítvány Kiadó, Budapest. pp. 159.
- Takács G., Molnár Zs. (eds.) (2009): *Habitat mapping*. 2nd modified edition. Handbooks of National Biodiversity Monitoring System IX. MTA ÖBKI - KvVM, Vácrátót - Budapest, pp. 54.

**Total number of publications:** MTMT: 505 (including Hungarian publications), ResearchGate: 188

**Conference oral and poster presentations:** 196, **Citations:** MTMT: 4323, GoogleScholar 3223

**Hirsch index:** MTMT: 25, GoogleScholar: 30, **Cummulative Impact Factor:** ca. 155, **RG score:** 31.96

## **Expeditions and field work in Europe, Central Asia etc.**

Main places of field work: Hungary, Romania, Serbia, Mongolia

Field visits and short-term fieldwork in East-Central Europe: Albania, Bulgaria, Croatia, Czech Republic, Slovakia / in other European countries: Austria, France, Germany, Italy, Sweden, Switzerland, United Kingdom / in Central Asia: Kazakstan, Russia / other countries: Argentina, Bhutan, Brazil, Canada, Egypt, Kenya, Nepal, Thailand, USA.

## **Research projects**

### **Project leader, WP leader (selected)**

- 2016-2020: OTKA K, 119478 – Effects of extensive grazing on vegetation in non-conventional pasture-lands (project leader)
- 2016-2020: GINOP, Ökoszisztémák fenntartható működtetése – felfedezésekkel a klímaváltozás, a tájhasználat és az inváziók hatásának mérsékléséért. (GINOP-2.3.2-15-2016-00019 - ÖSZ-GINOP, 2016 - 2020, WP leader)
- 2012-2016: Swiss Contribution Project. 2012-2016: “Sustainable Conservation on Hungarian Natura 2000 Sites (SH/4/8)”, WP.2.2., Co-leader of WP.2.2. Trend analysis of 20 Natura 2000 habitats in Hungary.
- 2007-2008: Monitoring development for Bird and Habitat Directives (MTTM, 18/176.02.01., 2008, WP leader)
- 2006-2007: Country report for Art. 17 of the Natura 2000 Habitats Directive (KvVM-TvH, project leader)
- 2005-2008: Interrelations of natural and anthropogenic ecosystems: evaluation of biodiversity, ecosystem functions and land use in the Hungarian Plain (NKFP6-00013/2005, WP: Vegetation heritage of Hungary, WP leader)
- 2002-2005: Survey of the Hungarian natural vegetation heritage, MÉTA (NKFP 3B/0050, project leader, 199 mapping experts, 7000 field mapping days)
- 2000-2003: CORINE based Habitat Map of Hungary, 1:50 000 (CÉT) (MTA ÖBKI, FÖMI - project leader)
- 2000-2001: Development of the Natura2000 network in Hungary, Ministry of Environment, coordinator of the preparation of habitat maps (WP leader)
- 1998-2001: Possibilities and limitations of landscape historical reconstructions to understand present vegetation of the Hungarian Plain (OTKA 25200, project leader)
- 1996-2000: Actual and historical habitat mapping of the Kiskunság region (central Hungary, 1.3 mill hectares, scale 1: 25 000, project leader)
- 1996-1997: Biodiversity monitoring: Habitats, development of a new habitat guide (TvH-PHARE, project co-leader)
- 1995-1998: Isolation of habitat islands in a steppe landscape (National Science Foundation, OTKA, project leader)
- 1994-1997: Developing the Framework for Biodiversity Monitoring Programme: Habitat classification (EU Phare project HU 9203-W1/7/1992, WP leader)

### **Organisation (selected)**

- Ethnoecological seminars I-VII. (series), MTA Centre for Ecological Research (2009-) (chief organizer)
- UN Permanent Forum on Indigenous Issues: IPBES side event, New York, USA, 2018. április 19. (side event)
- IPBES consultations, Convention on Biological Diversity, SBSTTA, WG8(j), 2017. december 9-16. (co-organizer)
- Meeting of the Indigenous and local knowledge Liaison group of the IPBES Global Assessment (organized with Eduardo Brondízio), 2017. március 31-április 2., Budapest.
- IPBES Global Assessment consultation (session and side event), 40<sup>th</sup> Annual Conference of the Society of Ethnobiology, Montreal, Kanada, 2017. május 10-13. (with Brondízio, Eduardo)
- Regional Indigenous and Local Knowledge Dialogue Workshop of the IPBES European and Central Asia Regional Assessment, 2016. január 11-13., (organizer with Marie Roué)
- International Seminar: Developing an Active Research Community in Traditional Ecological Knowledge for East-Central Europe, Young Scholars Program with Professor Fikret Berkes, 2015. April 27.- May 8.
- Comparative Landscape Ethnoecology: Changes in Space and Time. 36<sup>th</sup> Annual Meeting of the Society of Ethnobiology, 2013. May 15-18. Denton, USA (symposium co-organizer with Leslie M. Johnson)

Traditional ecological knowledge related to vegetation and habitats, 12th Congress of International Society of Ethnobiology, 2012. May 20-25. Montpellier, France (symposium co-organizer with Leslie M. Johnson)

### **Memberships and awards**

Member of the Indigenous and Local Knowledge Task Force of IPBES (2014-2018)

Co-founder (2010) of the Group of Eastern-European Ethnobiologists (as part of the International Society of Ethnobiology)

Member of the International Society of Ethnobiology, 2010- and the Society of Ethnobiology, 2010-

Editorial board member of People and Nature (British Ecological Society) (2018-)

Editorial board member of Bulletin of the Orenburg Scientific Center, Ural Branch of Russian Academy of Sciences (2018-)

Editorial board member of Journal of Ethnobiology and Ethnomedicine (2013-)

Editorial board member of Acta Botanica Hungarica (2015-)

Pro Natura award (2013)

Best Rural Developer of the Year award (2013)

Boros Ádám award (2008)

### **Teaching, and NGO-work**

45 university courses on landscape history, habitat mapping and ethnoecology in Hungary (also in Romania, France, Iran)

24 botanical field conferences and trainings and 8 other botanical field trips/courses

18 botanical or ethnobotanical summer research camps

Supervision of PhD students: 9 (2 finished), MSc students: 17, BSc students: 10

Students' Prizes in Hungarian Scientific Student Competitions: 3

Founder (2003) and honorary president (2012-) of Landscape and People NGO (Táj és Ember Népfőiskola), [http://tajesember.hu/?page\\_id=19](http://tajesember.hu/?page_id=19)

### **EXPERTATIONS**

2016-2019: Coordinating Lead Author (CLA) for Chapter 2 (Nature subchapter) of the IPBES Global Assessment

2016-2018: Leader and focal point of the Indigenous and Local Knowledge Liaison Expert Group of the IPBES European and Central Asian Regional Assessment

2014 - IPBES Indigenous and Local Knowledge Task Force

2014 - EEA-EIONET, expert for habitat mapping

2014-2016: Red Listing of European Habitats

2010 - 2012: Nekifut (network of ecological databases) and Lifewatch

2010 -2013 : Water Directive

2002 - 2003: Ecological Network of Central Hungary

2000 - 2008: Natura 2000 designations, monitoring and management plans

1999 -2000: Hungarian delegate of the EUNIS Habitat Classification team (European Environment Agency)

1997: Hungarian delegate for the Bern Convention (Endangered Habitats Committee)

1996 - : National Biodiversity program, Habitat monitoring