

## Professional biography

György Kriska (30 July 1964, Vác, Hungary) is a senior researcher at Danube Research Institute, Centre for Ecological Research, Hungarian Academy of Sciences and associate professor at Eötvös University in Budapest, Hungary. He has taught methodology in biology teaching and freshwater invertebrate identification for more than 20 years. He received his Ph.D. in biology from the Eötvös University, Budapest, in 2000. He has published numerous research papers in visual ecology, in addition to authoring a Springer monograph: *Freshwater Invertebrates in Central Europe*. His research interest is polarised light pollution and polarisation ecological traps.

### Education:

2011 - Univ. Habil., Eötvös Loránd University (Budapest); No.: 719/2011, Reg.No.: F180798;

2000 – PhD (Biology), Eötvös Loránd University (Budapest), No.: P299/2000;

1983 - 1988 secondary school teacher of biology and chemistry, Eötvös Loránd University (Budapest), No.: 1037/1988, Reg.No.: IV-29/1983-84;

1978 - 1982 Madách Imre High School (Budapest), final examination;

### Appointments:

2011 - senior researcher, Danube Research Institute, Centre for Ecological Research, Hungarian Academy of Sciences (Budapest);

1991 - associate professor, Group for Methodology in Biology Teaching, Biological Institute, Loránd Eötvös University (Budapest);

1988 - 1991 teacher, Babits Mihály High School (Budapest);

### Research topics (principal investigator, participant)

[1] 2007-2011 principal investigator: Direct and indirect polarotaxis in caddis flies and true flies", Hungarian Science Foundation (OTKA K-68462)

[2] 2009-2011 participant: EU 7. TabaNOid: Trap for the Novel Control of Horse-flies on Open-air Fields. No. 232366, Research for the Benefit of Small and Medium Enterprises, 265.000 EUR)

### Decorations:

[1] 1997 Hundedac Gold Prize by: Ministry of Education and Hundedac Society Achievement: Life of wetlands I. – film (70 min.) – ELTE

[2] 1997 Hundedac Bronze Prize by: Ministry of Education and Hundedac Society Achievement: Three-dimensional visual aid

[3] 1999 Hundedac Gold Prize by: Ministry of Education and Hundedac Society Achievement: Life of wetlands II. – film (70 min.) – ELTE

[4] 2001 Hundedac Gold Prize by: Ministry of Education and Hundedac Society Achievement: Újpest and the surrounding area's natural values – film (60 min.) – Ocean TV

[5] 2009 Researcher of the Month (January 2009) by: Hungarian Science Fund Achievement: Polarized light pollution, polarization insect traps

- [6] 2011 Innovative Researcher of the Year 2010 of the Eötvös University by: Eötvös Loránd University Achievement: Polarization insect traps, Reduction of polarized light pollution (2 Hungarian patents)
- [7] 2013 Master Teacher Gold Medal by: National Scientific Student Council Achievement: talent management
- [8] International Nature Film Festival Gödöllő, Carpathian Basin Filmreview 1 st prize: The adventurous life of the diving bell spider
- [9] 2016 Ig Nobel Prize, Physics Prize

#### Role in scientific community:

- [1] 2006 - Member of the Hungarian Biological Society: Didactical Department
- [2] 2007 - Instructor and dissertation supervisor of SzIE Doctoral School of Environmental Sciences
- [3] 2007 - Member of the Hungarian Biological Society: Zoology Department
- [4] 2007 - Member of the Hungarian Hydrological Society
- [5] 2007 - Member of the National Scientific Student Council, Committee of Education Methodology and Technology
- [6] 2008 - 'The teaching of biology - methodology journal', member of the editorial board
- [7] 2011 - Member of the International Association for Danube Research
- [8] 2013 - Member of the adhoc committee of HAS

#### Miscellaneous

##### Appearance in Nature and Science

##### NATURE

Ádám EGRI, Ákos HORVÁTH, György KRISKA, Gábor HORVÁTH (2010) Optics of sunlit water drops on leaves: Conditions under which sunburn is possible. *New Phytologist* 185: 979-987 + cover picture

Reviewed in:

Nature Photonics - volume 4, number 3, page 128 (1 March 2010) *Research Highlights - Environmental Optics: Sunburn myth dispelled*

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Gábor HORVÁTH, Miklós BLAHÓ, György KRISKA, Ramón HEGEDÜS, Balázs GERICS, Róbert FARKAS, Susanne AKESSON (2010) An unexpected advantage of whiteness in horses: The most horsefly-proof horse has a depolarizing white coat. *Proceedings of the Royal Society B* 277: 1643-1650

Reviewed in:

Nature - volume 463, number 7283, page 852 (18 February 2010) *Research Highlights - Ecology: Why horses wear white*

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György KRISKA, Gábor HORVÁTH, Sándor ANDRIKOVICS (1998) Why do mayflies lay their eggs en masse on dry asphalt roads? Water-imitating polarized light reflected from asphalt attracts Ephemeroptera. *Journal of Experimental Biology* 201: 2273-2286

Reviewed in:

Nature - volume 394, page 425 (30 July 1998) by Alison Mitchell: *News and Views - Ecology: Polarized flight.*

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##### SCIENCE

Ádám EGRI, Miklós BLAHÓ, György KRISKA, Róbert FARKAS, Mónika GYURKOVSKY, Susanne AKESSON, Gábor HORVÁTH (2012) Polarotactic tabanids find striped patterns with brightness and/or polarization modulation least attractive: an advantage of zebra stripes. *Journal of Experimental Biology* 215 (5): 736-745 + electronic supplement

Reviewed in:

Science - Jane J. Lee: Mystery of zebra's stripes finally solved?

<http://news.sciencemag.org/2012/02/mystery-zebras-stripes-finally-solved>

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Gábor HORVÁTH, György KRISKA, Péter MALIK, Bruce ROBERTSON (2009) Polarized light pollution: a new kind of ecological photopollution. *Frontiers in Ecology and the Environment* 7: 317-325

Reviewed in:

Science - 7 January 2009 - Phil Berardelli: When a building is like a pond

<http://sciencenow.sciencemag.org/cgi/content/full/2009/107/2>

Science Podcast - Transcript 9 January 2009

[http://podcasts.aaas.org/science\\_podcast/SciencePodcast\\_090109.mp3](http://podcasts.aaas.org/science_podcast/SciencePodcast_090109.mp3)

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Kriska, G.; Csabai, Z.; Boda, P.; Malik P.; Horváth, G. (2006) Why do red and dark-coloured cars lure aquatic insects? The attraction of water insects to car paintwork explained by reflection-polarization signals. *Proceedings of the Royal Society B* 273: 1667-1671

Reviewed in:

Science - volume 313, number 5783, issue 7, page 25 (July 2006) Random Samples: Great moments in entomology.