

# Jurriaan Michiel de Vos

Citizenship: Netherlands

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## Professional appointments:

- Postdoctoral Research Associate, Edwards Lab, Department of Ecology and Evolutionary Biology, Brown University, Providence, Rhode Island, USA. February 2013 - July 2014 funded through Swiss National Science Foundation Fellowship; August 2014 onward funded through National Science Foundation.

## Education:

- Dr. sc. nat. Evolutionary Biology (January 21, 2013; equivalent to Ph.D.). University of Zürich, Switzerland. Thesis supervision Prof. Dr. Elena Conti, Institute of Systematic Botany. Title: "Flowers, Sex, and Diversity: Reproductive-Ecological and Macro-Evolutionary Aspects of Floral Variation in the Primrose Family, Primulaceae". Awarded with distinction.
- 'Doctoraal Biologie' (January 17, 2008; equivalent to Master of Science, Biology). Wageningen University, Netherlands. Theses supervision Prof. Dr. James E Richardson, Prof. Dr. Marc SM Sosef, Dr. Frans J Breteler, Research Chair Biosystematics. Awarded with distinction.
- 'Propedeuse Biologie' (2003; equivalent to basic study period Bachelor of Science, Biology), Wageningen University, Netherlands.

## Peer-reviewed publications:

### Published:

1. Haller BC, De Vos JM, Keller B, Henry A, Conti E, *in press*. Pollinator-driven diversification in heterostylous plants: an individual-based model. *PLoS ONE*. IF: 3.53. doi: 10.1371/journal.pone.0106512
2. De Vos JM, Joppa LN, Gittleman JL, Stevens PR, Pimm SL, *in press*. Estimating the "normal background rate" of species extinction. *Conservation Biology*. IF: 4.32. doi: 10.1111/cobi.12380.
3. De Vos JM, Hughes CE, Schneeweiss GM, Moore BR, Conti E, 2014. Heterostyly accelerates diversification via reduced extinction in Darwin's primroses. *Proceedings of the Royal Society B: Biological Sciences* 281: 20140075. IF: 5.683. doi: 10.1098/rspb.2014.0075
4. De Vos JM, Wüest RO, Conti E, 2014. Small and ugly? Phylogenetic analyses of the "selfing syndrome" reveal complex evolutionary fates of monomorphic primrose flowers. *Evolution* 68: 1042–1057. IF: 4.864. doi: 10.1111/evo.12331.
5. Abrahamczyk S, De Vos JM, Gottleuber P, Sedivy C, Kessler M, 2013. Climate and geologic history shaped the humped latitudinal phylogenetic diversity pattern of orchid bees (Hymenoptera: Apidae: Euglossini) in western Amazonia. *Ecography* 37: 1-9. IF: 5.124. doi: 10.1111/j.1600-0587.2013.00417.x
6. Koenen EJM\*, De Vos JM\*, Atchinson GW, Simon MF, De Souza ER, De Quieroz LP, Schrire BD, Hughes CE, 2013. Exploring the tempo of species diversification in Legumes. *South African Journal of Botany* 89: 19-30. IF: 1.409. doi: 10.1016/j.sajb.2013.07.005 (\* equal contribution)
7. Schirromeister BE, De Vos JM, Antonelli A, Bagheri HC, 2013. Evolution of multicellularity coincided with increased diversification of cyanobacteria and the Great Oxidation Event. *Proceedings of the National Academy of Sciences of the United States of America* 110(5): 1791-1796. IF: 9.737. doi: 10.1073/pnas.1209927110.
8. Keller B, De Vos JM, Conti E, 2012. Decrease of sexual organ reciprocity between heterostylous primrose species, with possible functional and evolutionary implications. *Annals of Botany* 110(6): 1233-1244. IF: 3.449. doi: 10.1093/aob/mcs199.

9. Schmidt-Lebuhn AN, De Vos JM, Keller B, Conti E, 2012. Phylogenetic analyses of *Primula* section *Primula* reveal rampant non-monophyly among morphologically distinct species. *Molecular Phylogenetics & Evolution* 65(1): 23-34. IF: 4.066. doi: 10.1016/j.ympev.2012.05.015.
10. De Vos JM, Keller B, Isham ST, Kelso S, Conti E, 2012. Reproductive implications of herkogamy in homostylous primroses: variation during anthesis and reproductive assurance in alpine environments. *Functional Ecology* 26(4): 854- 865. IF: 4.861. doi: 10.1111/j.1365-2435.2012.02016.x.
11. De Vos JM, Breteler FJ, 2009. A revision of the African genera *Paropsiopsis* and *Smeathmannia* (Passifloraceae-Paropsieae), including a new species of *Paropsiopsis* from Cameroon. *Edinburgh Journal of Botany* 66(1): 27-49. doi: 10.1017/S0960428609005174.

**Papers on national and international meetings:**

As presenting author:

1. Botany 2014, Boise, Idaho, 2014 (oral). "Evolution of flower number - flower size trade-offs: ecological significance and evolutionary patterns in *Lewisia* and related genera (Montiaceae)"
2. Radiations 2014, Zürich, Switzerland (poster). "Evolution of correlated traits and the diversification of inflorescences in *Lewisia* (Montiaceae, Caryophyllales)"
3. Society for the Study of Evolution, Snowbird, Utah, 2013 (oral). "Phylogenetic analyses of the "selfing syndrome" and the evolutionary fates of self-compatible primrose flowers".
4. Joint congress on Evolution, Ottawa, 2012 (oral). "Evolution of breeding systems and diversification rates in heterostylous and homostylous primroses (Primulaceae)".
5. Joint meeting of the Swiss Zoological Society, the Swiss Botanical Society, and the Swiss Systematics Society, Fribourg, 2012 (oral). "Breeding system evolution and speciation/extinction rates: Did heterostyly spur diversification of primroses (Primulaceae)?"
6. International Botanical Congress, Melbourne, Australia, 2011 (oral). "Breeding system evolution in heterostylous and homostylous *Primula*, with special reference to section *Aleuritia*"
7. Society for the Study of Evolution, Portland, Oregon, 2010 (oral). "Do homostylous species outcross? Variation of anther-stigma separation and mating in *Primula halleri*"
8. Federation of European Biological Systematic Societies, Leiden, Netherlands, 2009 (poster)
9. European Society for Evolutionary Biology, Torino, Italy, 2009 (poster)
10. International Organization for Plant Biosystematists, Vysoké Tatry, Slovakia, 2008 (poster)

As co-author:

1. Botany 2014, Boise, Idaho, 2014 (by A. J. Moore, oral)
2. Botany 2014, Boise, Idaho, 2014 (by E. Edwards, oral)
3. Evolution 2013, Snowbird, Utah, 2013 (by B Haller; oral)
4. International Legume conference, Johannesburg, South Africa, 2012 (keynote, by CE Hughes; oral)
5. Joint congress on Evolution, Ottawa, Canada, 2012 (by B Schirrmeyer; oral)
6. Joint meeting of the Swiss Zoological Society, the Swiss Botanical Society, and the Swiss Systematics Society, Zürich, 2011 (by B Weigelt; poster)
7. European Society for Evolutionary Biology, Tübingen, Germany, 2011 (by BC Haller; oral)
8. European Society for Evolutionary Biology, Tübingen, Germany, 2011 (by B Keller; poster)
9. Society for the Study of Evolution, Portland, Oregon, 2010 (by B Keller; oral)
10. Evolutionary and ecological genomics of adaptation, Fribourg, Switzerland, 2010 (by B Keller; poster)

**Invited lectures & departmental seminars:**

1. Brown University, Providence, USA, Department of Ecology and Evolutionary Biology (hosted by seminar committee), September 2013: departmental seminar.
2. University of Basel, Switzerland, Biogeography Group, Department of Environmental Sciences (hosted by Dr. Simon Loader), October 2012: departmental seminar.
3. University of Calgary, Canada, Plant Biodiversity group, Department of Biological Sciences (hosted by Dr. Jana Vamosi), July 2012: departmental seminar.

4. Swiss Federal Institute for Forest, Snow and Landscape Research WSL, Biodiversity and Conservation Biology (hosted by Dr. Rafael Wüest), March 2011: departmental seminar.
5. University of Basel, Switzerland, Dr. Salzburger lab, December, 2010: lab group seminar.
6. University of California, Berkeley, California, Dr. Huelsenbeck lab (hosted by Dr. Brian R. Moore), February 2009: departmental seminar.
7. University of Amsterdam, Netherlands, Institute for Biodiversity and Ecosystem Dynamics (hosted by Dr. Eric Schranz), November 2008, invited lecture.

### Competitive grants

#### Swiss National Science Foundation:

- Fellowship "Prospective Researchers" scheme (December 2012; CHF 84'000). Project "*Ecological determinants of plant reproductive diversity*" at the lab of Dr. Edwards (Brown University) in collaboration with Dr. Harder (University of Calgary).

#### G. & A. Claraz-Schenkung Foundation, Zurich:

- Grant towards costs of conference attendance (January 2011; CHF 2'500)
- Grant towards costs of conference attendance and field work (January 2010; CHF 800)
- Grant towards costs of fieldwork (January 2009; CHF 1'000)

#### Alberta Mennega Foundation, Utrecht:

- Grant towards costs of fieldwork (September 2005; ca. CHF 800)

### Awards

- MSc at the University of Wageningen awarded "cum laude" (distinction awarded to ~5% of MSc candidates based on average course scores and quality of thesis).
- Dr.sc.nat. (Ph.D.) at the University of Zürich awarded "mit Auszeichnung" (distinction awarded to <5% of PhD candidates based on scientific excellence; requires nomination after PhD-defense and 2 external recommendations).

### Field experience

- USA: Field collections of *Lewisia* and related species throughout Western USA (3 months, May-August 2014); North-Western USA (3 weeks, July 2013); and South-Western USA (10 days, May 2013).
- Bulgaria: Field collections of alpine primroses (1 week, June 2011).
- Alps: Field collections and extensive field experiments on alpine *Primula* (June-September 2009). Population surveying (*Primula halleri*) throughout Switzerland and Slovenia (June-August 2008). Extensive field collections throughout Switzerland of alpine *Cerastium* (June-August 2007).
- Scotland: Field collections of the Scottish Primrose (10 days, August 2008).
- Cameroon: Plant collecting in primary forest (3 weeks, November-December 2005).

### Teaching

#### University of Zürich:

- Plant-Insect Interactions BIO221 (2010, 2011): development and supervision of 3-week research projects; MSc- and advanced BSc-level, ~16 students, (Swiss) German and English.
- Evolution BIO113 (2009, 2010, 2011): main instructor of lab on floral convergences, teaching assistant in other labs; BSc-level, ~200 students, (Swiss) German.
- Molecular Phylogenetics BIO222 (2008, 2009, 2010): development and supervision of computer labs; MSc- and advanced BSc-level, ~12-16 students, English.
- Evolution and Biodiversity of Plants BIO123 (2011): teaching assistant; BSc-level, ~200 students, (Swiss) German.

#### Wageningen University:

- Flora Course Netherlands (2005, 2006): field excursion leader, teaching assistant during plant determination labs; BSc-level, ~60-70 students, Dutch and English.

### **Student supervision**

#### Brown University

- Supervisor of undergraduate research volunteer (N. Uberoi, orientation on senior thesis; Sept-Dec 2013).

#### University of Zürich

- Daily supervisor of the full time research internship of an advanced BSc-student (B. Weigelt, orientation on MSc; January - February 2011).
- Daily supervisor of a weekly visiting research volunteer (F.-M. Weinhart; November 2010 - February 2011).
- Co-supervisor of fieldwork in the Swiss Alps for honors-thesis of S.T. Isham, The Colorado College, Colorado Springs, Colorado (June-August 2009).

### **Public outreach**

#### University of Zürich

- Coverage in popular press of Schirromeister et al. 2013 (*PNAS*) at <http://www.nu.nl/wetenschap/3003837/meercelligheid-zorgde-mogelijk-zuurstoftoename-aarde.html> (in Dutch).
- Public lecture, Friends of the Botanical Garden, Zürich, Switzerland, May 2011, on precipitation and biodiversity gradients along the West coast of North America (in German).
- Public lecture, Friends of the Botanical Garden, Zürich, Switzerland, April 2010, on reproductive strategies of Alpine plants, esp. *Primula halleri* (in German).
- Volunteer, Lange Nacht der Forschung (Long Night of Science) Public Forum, Zürich, Switzerland, September 2009, with public exhibitions and discussions with laymen on plant evolution (in English and Swiss German).

#### Wageningen University

- Brochure on assessment of environmental impact of recreational huts along shores of the Veluwemeer, Netherlands. Noorduyt L, Van der Windt N, Kos G, De Vos JM (2006). Van impasse naar inpassen. Wetenschapswinkel Wageningen UR, rapport 226, Wageningen, Netherlands. (In Dutch).

### **Languages:**

- Dutch (native)
- English (near-native)
- Swiss German (proficient)
- High German (proficient)
- French (conversational)

### **Other:**

- Invited reviewer for *International Journal of Plant Sciences*; *Mycologia*; *Plant Systematics and Evolution*; *Perspectives in Plant Ecology, Evolution, and Systematics*; *Proceedings of the Royal Society B: Biological Sciences*.