

CURRICULUM VITAE OF CATARINA RYDIN

PERSONAL INFORMATION

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ACADEMIC DEGREES

2010 Docent (associate professor), Stockholm University
2005 Doctor of Philosophy, Stockholm University
2003 Licentiate degree, Stockholm University
1999 Master's degree, Stockholm University

PEDAGOGICAL EDUCATION

2012 Supervision and leadership, Stockholm University (1 credit)
2007 Pedagogy for University teachers II, Stockholm University (4.5 credits)
2003 Pedagogy for University teachers, Stockholm University (3 credits)

INTERNATIONAL POSTDOC

2008 – 2009 Postdoctoral fellow at the University of Zürich (with Prof. Peter K. Endress)

ACADEMIC POSITIONS

Current – Associate professor, Stockholm University (tenure)
2010 – 2011 Assistant professor, Uppsala University
2010 Postdoc repatriation, Stockholm University
2008 – 2009 Postdoctoral fellow, University of Zürich (with Prof. Peter K. Endress)
2006 – 2007 Postdoc at the Bergius Botanic Garden (with Prof. Birgitta Bremer)
2005 – 2006 Postdoc at the Swedish Museum of Natural History (with Prof. Else Marie Friis)
2000 – 2005 PhD student, Stockholm University (supervisor Prof. Else Marie Friis)
1999 – 2000 Research assistant, the Swedish Museum of Natural History
1994 – 1999 Undergraduate studies, Stockholm University

CURRENT MEMBERS OF THE RESEARCH GROUP

Catarina Rydin – project leader; Aelys Humphreys – postdoc; Kristina Bolinder, Chen Hou – PhD students; Clara Eliasson, Lena Ivarsson, Eva Larsén, Olle Thureborn – master students.

RESEARCH GRANTS

2013 – Magnus Bergvalls Stiftelse (40 000 SEK)
2012 – Carl Tryggers Stiftelse (300 000 SEK)
2011 – The Botanical Society of America and the American Association of Plant Taxonomists (1 500 USD)
2011 – Internationalization grant from Stockholm University (555 000 SEK)
2011 – Start-up grant from Stockholm University (two PhD students and one postdoc)
2010 – Magnus Bergvalls Stiftelse (40 000 SEK)
2010 – Project grant from the Swedish Research Council (1 500 000 SEK)
2010 – Start-up grant from Uppsala University (50 000 SEK and a PhD student)
2009 – Synthesys grant (c. 50 000 SEK)

- 2009 – Postdoc repatriation grant from the Swedish Research Council (702 000 SEK)
- 2006 – Postdoc grant from the Swedish Research Council (957 400 SEK)
- 1999 – 2010 Smaller research and travel grants from: The Swedish Research Council, SJ Enanders donationsfond, PF Wahlbergs minnesfond, HE Johanssons minnesfond, Deep Time Research Coordination Group (USA), Green Plant Phylogeny Research Coordination Group (USA) (corresponding to a total sum of about 210 000 SEK)

APPOINTMENTS AND ADMINISTRATION

- Member of the evaluation board of the Swedish Research Council (2012-)
- Member of the institution board of the department (2012-)
- Member of the examination committees of PhD defenses: Anna Petri, Göteborg University (2012), Agneta Julia Borg, Stockholm University (2012); Tobias Kånneby, Stockholm University (2011); George Tschan, Stockholm University (2011); Stephan Nylander, Göteborg University (2010)

SYMPOSIUM ADMINISTRATION

- Principal administrator of symposium held at the conference *Botany 2012*, Ohio (2012)
- Co-administrator of symposium held at *The 8th European Palaeobotany Conference*, Budapest (2010)
- Co-administrator of symposium held in honor of Professor Else Marie Friis at the Natural History Museum, Stockholm (2006)

MEMBER OF EDITORIAL BOARDS

Associate editor of *Plant Ecology and Evolution* (since 2011), *Nordic Journal of Botany* (2012), *Plant Systematics and Evolution* (2010-2012)

REVIEWER FOR THE FOLLOWING JOURNALS

Biological Journal of the Linnean Society, *Biology Letters*, *Blumea*, *Cladistics*, *Feddes Repertorium*, *International Journal of Plant Sciences*, *Molecular Phylogenetics and Evolution*, *Nordic Journal of Botany*, *Open Biology Journal*, *Plant Ecology and Evolution*, *Plant Systematics and Evolution*, *Review of Palaeobotany and Palynology*, *Taxon*, *Willdenovia*.

INTERNATIONAL COLLABORATION

- Diversification patterns and paleo-palynology in *Ephedra*; with Associate professor Carina Hoorn, University of Amsterdam
- Large scale evolutionary patterns and processes in seed plants, using *Ephedra* as model organisms; with Professor Stefanie M. Ickert-Bond, University of Alaska
- Extant morphology, histology and anatomy of the Gnetales; with Professor Peter K. Endress, University of Zürich
- Cretaceous diversity of seed plants; with Professors Jürg Schönenberger, University of Vienna, and Barbara Mohr, Natural History Museum Berlin

SUPERVISION

- Current – Main supervisor of PhD students Kristina Bolinder and Chen Hou; master students Lena Ivarsson, Eva Larsén, Olle Thureborn; bachelor student Clara Eliasson. Co-supervisor of master student Julia Ferm (Stockholm University)
- 2011 – Main supervisor of PhD student Anders Rydberg and master student Kristina Bolinder (Uppsala University)
- 2004 – Main supervisor of two bachelor students (Stockholm University)

SELECTED TEACHING EXPERIENCE

- PhD level: course leader of the PhD course “Fossils and their role in molecular dating analyses” (2 hp), Uppsala University (2011). Examiner of PhD students’ literature courses, Stockholm University (since 2010).
- Master level: course leader of the master course “Diversity and Evolution of Plants in time and space” (15 hp) Stockholm University (2012-2013), including one week field course in Greece.
- Bachelor level: responsible teacher for the systematic unit of the course “Evolution and Biodiversity” (3 hp) Stockholm University (2009, 2011-2012).
- Basic level: course leader of the evolution unit (3 hp) Stockholm University (2004, 2005, 2007, 2009, 2012) and the botany unit (10 hp) (2009), of the course “Diversity and Phylogeny of Organisms”.
- Basic level: course leader of the course “Botany and Zoology” for future secondary school teachers (5 hp), Stockholm University (2003).

SCIENTIFIC PUBLICATIONS

Citation reports February 5, 2013:

- *Google scholar* (using Publish or Perish, Harzing 2007): 712 citations, h-index=13
- *Web of Science*: 517 citations, h-index=11

- Ickert-Bond SM, Rydin C 2011. Micromorphology of the seed envelope of *Ephedra* L. (Gnetales) and its relevance for the timing of evolutionary events. *Int J Plant Sci* 172(1):36-48.
- Rydin C, Khodabandeh A, Endress PK 2010. The female reproductive unit of *Ephedra* (Gnetales): comparative morphology and evolutionary perspectives. *Bot J Linn Soc* 163:387–430.
- Rydin C, Friis EM 2010. A new Early Cretaceous relative of Gnetales: *Siphonospermum simplex* gen. et sp. nov. from the Yixian Formation of northeast China. *BMC Evol Biol* 10:183.
- Ickert-Bond SM, Rydin C, Renner SS 2009. A fossil-calibrated relaxed clock for *Ephedra* indicates an Oligocene age for the divergence of Asian and New World clades and Miocene dispersal into South America. *J Syst Evol* 47:444–456.
- Rydin C, Korall P 2009. Evolutionary relationships in *Ephedra* (Gnetales) – with implications for seed plant phylogeny. *Int J Plant Sci* 170:1031–1043.
- Rydin C, Razafimandimbison SG, Khodabandeh A, Bremer B 2009. Evolutionary relationships in the Spermaceae alliance (Rubiaceae) using information from six loci: insights into systematic affinities of *Neohymenopogon* and *Mouretia*. *Taxon* 58:793–810.
- Rydin C, Kainulainen K, Razafimandimbison SG, Smedmark JEE, Bremer B 2009. Deep divergences in the coffee family and the systematic position of *Acranthera*. *Plant Syst Evol* 278:101-123.
- Swenson U, Lowry PP, Munzinger J, Rydin C, Bartish IV 2008. Phylogeny and generic limits in the *Niemeyera* complex of New Caledonian Sapotaceae: evidence of multiple origins of the anisomerous flower. *Mol Phylogenet Evol* 49:909-929.
- Rydin C, Razafimandimbison SG, Bremer B 2008. Rare and enigmatic genera (*Dunnia*, *Schizocolea*, *Colletocema*), sisters to species-rich clades: Phylogeny and aspects of conservation biology in the coffee family. *Mol Phylogenet Evol* 48:74–83.

- Razafimandimbison SG, Rydin C, and Bremer B 2008. Evolution and trends in the Psychotrieae alliance (Rubiaceae) - A rarely reported evolutionary change of many-seeded carpels from one-seeded carpels. *Mol Phylogenet Evol* 48:207-223.
- Smedmark JEE, Rydin C, Razafimandimbison S, Khan SA, Liede-Schumann S, Bremer B 2008. A phylogeny of Urophylleae (Rubiaceae) based on *rps16* intron data. *Taxon* 57:24-32.
- Rydin C, Wu SQ, Friis EM 2006. *Liaoxia* (Gnetales): ephedroids from the Early Cretaceous Yixian Formation in China. *Plant Syst Evol* 262:239-265.
- Rydin C, Pedersen KR, Crane PR, Friis EM 2006. Former diversity of *Ephedra* (Gnetales): evidence from Early Cretaceous seeds from Portugal and North America. *Ann Bot* 98:123-140.
- Rydin C, Friis EM 2005. Pollen germination in *Welwitschia mirabilis* Hook. f.: differences between the polylicate pollen producing genera of the Gnetales. *Grana* 44:137-141.
- Rydin C, Pedersen KR, Friis EM 2004. On the evolutionary history of *Ephedra*; Cretaceous fossils and extant molecules. *P Natl Acad Sci USA* 101:16571-16576.
- Rydin C, Mohr BAR, Friis EM 2003. *Cratonia cotyledon* gen. et sp. nov.: a unique Cretaceous seedling related to *Welwitschia*. *Biology letters, Roy Soc London* 270:S1:29-32.
- Källersjö M, Rydin C 2003. Seed plant phylogeny - A never-ending story? *Cladistics* 19:155-155.
- Rydin C, Källersjö M 2002. Taxon sampling and seed plant phylogeny. *Cladistics* 18:485-513.
- Rydin C, Källersjö M, Friis EM 2002. Seed plant relationships and the systematic position of Gnetales based on nuclear and chloroplast DNA: conflicting data, rooting problems and the monophyly of conifers. *Int J Plant Sci* 163:197-214.
- Mohr BAR, Rydin C 2002. *Trifurcatia flabellata* gen. et sp. nov.: a putative monocotyledon angiosperm from the Lower Cretaceous Crato Formation (Brazil). *Geovissenschaftliche Reihe* 5:333-342.
- Anderberg AA, Rydin C, Källersjö M 2002. Phylogenetic relationships in the order Ericales S.L.: analyses of molecular data from five genes from the plastid and mitochondria genomes. *Amer J Bot* 89:677-687.
- Rydin C, Wikström N 2002. Phylogeny of *Isoetes* (Lycopsida): resolving basal relationships using *rbcL* sequences. *Taxon* 51:83-89.

THESES

- Rydin C 2005. The Gnetales: fossils and phylogenies. *Doctoral thesis*, defended at Stockholm University in May 2005.
- Rydin C 2003. Seed plant phylogeny and the systematic position of Gnetales. *Licentiate thesis*, Stockholm University.
- Rydin C 1999. Phylogeny and biogeography of *Isoetes*. *Master's thesis*, Stockholm University.

CONFERENCE CONTRIBUTIONS AND SEMINAR TALKS (SINCE 2008)

PERSONAL INVITATIONS TO SPEAK

- Rydin C 2011. Biosystematics in a post-molecular perspective – benefits with an integrative perspective to plant evolution. *Keynote speaker* at the ForBio annual meeting, Bergen, Norway. *Invitation from Magnus Popp, Natural History Museum, Oslo.*

- Rydin C 2010. Benefits with an integrative approach to plant evolution – a case study of *Ephedra* (Gnetales). Evolutionary Biology Day. *Invitation from Peter Eklöv, Uppsala University.*
- Rydin C, Ickert-Bond SM 2010. Ephedran evolution: re-radiation in the Cenozoic after a bottleneck effect. *Botany 2010*, Rhode Island, USA. *Invitation from Sarah Mathews, Harvard University.*
- Rydin C 2010. Benefits of an integrative approach to plant evolution – a case study of *Ephedra* (Gnetales). The 8th European Palaeobotany Conference, Budapest, symposium 14. *Invitation from Alexandra Nora Muellner, Senckenberg Research Institute.*
- Rydin C 2010. Diversity and phylogenetic relationships in the Gnetales. The 8th European Palaeobotany Conference, Budapest, symposium 2. *Invitation from Barbara Mohr, Natural History Museum, Berlin.*
- Rydin C, Endress PK 2009. An integrative approach to gnetalean and seed plant evolution. 79. Jahrestagung der Paläontologischen Gesellschaft. Paläontologie: Schlüssel zur Evolution. Bonn, Germany. *Invitation from Carol Gee, University of Bonn.*
- Rydin C, Yang Y, Endress PK 2008. Phylogeny and character evolution in *Ephedra* (Gnetales). 8th International Organisation of Palaeobotany Conference Bonn, Germany. *Invitation from Nathalie Nagalingum, Harvard University.*

INVITED SEMINAR TALKS

- Rydin C 2011. Systematics in a post-molecular perspective – an integrative approach to plant evolution, Stockholm University. *Invitation from PO Karis.*
- Rydin C 2011. Systematics in a post-molecular perspective – an integrative approach to plant evolution, Stockholm University. *Invitation from the Faculty of Science.*
- Rydin C 2010. En översikt över kärlväxternas morfologi och evolution, med glimtar från forskningsfronten. Lecture for admission as associate professor (docent). *Invitation from the associate professor evaluation board of the Faculty of Science, Stockholm University.*
- Rydin C 2010. An integrative approach to gnetalean and seed plant evolution, University of Vienna. *Invitation from Jürg Schönenberger.*
- Rydin C 2010. An integrative approach to gnetalean and seed plant evolution, Uppsala University. *Invitation from the Faculty of Natural Sciences.*
- Rydin C 2010. An integrative approach to gnetalean and seed plant evolution, University of Zürich. *General invitation to all postdocs of the Institute of Systematic Botany.*
- Rydin C 2008. Hur den nya DNA tekniken påverkar systematik på olika taxonomiska nivåer; exempel från fröväxter, University of Göteborg. *Invitation from the Faculty of Natural Sciences.*

OTHER SEMINAR TALKS, CONFERENCE ABSTRACTS, POSTERS AND CONTRIBUTED TALKS

- Rydin C 2013. Integration beyond total evidence – examples from the Gnetales. The *Biosyst. EU 2013* conference, Vienna. Oral presentation by CR.
- Bolinder K, Rydin C 2012. Pollination mechanisms and pollen morphology of *Ephedra* (Gnetales). *Systematikdagarna*, Uppsala. Oral presentation by KB. *Invitation from Petra Korall.*
- Hoorn C, Straathof J, Bosboom R, Abels H, Xu Y, Utescher T, Bolinder K, Rydin C, Dupont-Nivet G 2012. A Late Eocene palynological record of NE Tibet as evidence for xerophytic plant evolution and climatic and tectonic change (Xining Basin, China). The 13th International Palynological Congress and 9th International Organization of Palaeobotany Conference. Tokyo. Oral presentation by CH.

- Bolinder K, Hoorn, C, Rydin C 2012. *Ephedra* pollen from the Cretaceous and Palaeogene of Tibet. The 13th International Palynological Congress and 9th International Organization of Palaeobotany Conference, Tokyo. Oral presentation by KB.
- Bolinder K, Rydin C 2012. Cenozoic evolution in *Ephedra*: survival through a shift from biotic to abiotic pollination”. Botany 2012, Ohio. Oral presentation by KB.
- Humphreys A, Rydin C 2012. Diversification of ancient lineages: testing opposing hypotheses of extinction in the seed plant order Gnetales. Botany 2012, Ohio. Oral presentation by AH.
- Hou C, Rydin C, von Aderkas P 2012. Proteomics of the pollination droplets of *Ephedra*: attraction and safe sex. Botany 2012, Ohio. Poster presentation by CH.
- Bolinder K, Rydin C 2012. Pollen and pollination of *Ephedra* (Gnetales). Seminar talk by KB at Stockholm University.
- Bolinder K, Rydin C 2012. Pollen and pollination of *Ephedra* (Gnetales). Invited seminar talk by KB at the Institute for Biodiversity and Ecosystem Dynamics, University van Amsterdam. *Invitation from Prof. Henry Hooghiemstra*.
- Bolinder K, Rydin C 2011. Insect interactions in *Ephedra*. *Insect Science Symposium*, Stockholm University–Cornell University. Poster presentation by KB.
- Bolinder K, Ickert-Bond SM, Rydin C 2011. Pollinationsbiologi hos *Ephedra* (Gnetales). *Systematikdagarna*, Lund. Poster presentation by KB.
- Bolinder K, Ickert-Bond SM, Rydberg A, Rydin C 2011. Ecological pollination studies in *Ephedra foeminea* and *E. distachya* from Greece. *IBC*, Melbourne Australia. Poster presentation by KB.
- Ickert-Bond SM, Rydberg A, Bolinder K, Little S, Loera Carrizales I, Rydin C, von Aderkas, P 2011. Chemical composition of pollination drops in *Ephedra* - safe sex and other oddities. *Botany 2011*, St Louis. Oral presentation by SIB.
- Ickert-Bond SM, Raubeson LA, Rydin C, Peery R, Metzgar JS 2010. Comparative plastid genomics in *Ephedra*: digging deeper. *Botany 2010*, Rhode Island, USA. Oral presentation by SIB.
- Rydin C 2008. *Ephedra* och ephedroider: 120 miljoner år av evolution. *Systematikdagarna*, Uppsala. Oral presentation by CR.

POPULAR SCIENCE

PUBLICATION

- Rydin C 2007. Växtliv på land – 450 miljoner år av evolution. In Åberg, L. (ed.) *Från Linné till DNA*, Swedish Museum of Natural History, Stockholm.

ORAL PRESENTATIONS

- “Meet my country”: oral presentation of the culture, history and natural history of the area now called Sweden, University of Zurich (2008). Invited by Anita Lendel.
- ”Forskardagarna”: oral presentation, Stockholm University (2005).
- Botaniska sällskapet meeting: oral presentation, Stockholm (2004). Invited by Ida Trift.

EXHIBITIONS AND WORKSHOPS

- ”The boundary effect”: workshop about science and media, arranged by the British Council and the Swedish Natural History Museum (2005).
- ”Utbrott på LAVA”, exhibition at Kulturhuset Stockholm (2005).
- ”Geologins dag”, exhibition at the Swedish Natural History Museum (2004-2005).