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Systematic, phylogenetic and pollination studies of Specklinia (Orchidaceae)

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Cover Page

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Curriculum Vitae

About the Author

Adam Philip Karremans was born on the 21st of December 1986 in Leiden, the Netherlands. At the age of four, after living for two years in Colombia, Adam moved with his parents, two graduates from the Anthropology Department of Leiden University, to the small town of Turrialba in Costa Rica. He spent his school years there, living at the Center of Agricultural Research and Education (CATIE) and attending the Jorge Debravo institute. Already by the age of twelve, Adam had started collecting orchids. However, it was more the curiosity of knowing how many and which different species he could find, rather than growing the orchids that really interested him. With 15 years of age, Adam was introduced to Franco Pupulin, who was looking for a very rare orchid known only from CATIE. Shortly after, and with Franco's orchid in hand, Adam arrived at Lankester Botanical Garden (JBL), where he was invited to do voluntary work. At the University of Costa Rica (UCR) in Turrialba, he started a BSc on Agronomy the following year, and during the four years of study he would be a student assistant at Lankester. During that period Adam started doing more serious research on orchids, publishing his first scientific publications. In 2008, he enrolled in the MSc program on Plant Breeding and Genetic Resources at Wageningen University in the Netherlands. His thesis, supervised by Rene Smulders, Freek Bakker and Franco Pupulin was on the phylogenetics of Stelis, a Neotropical genus of orchids. In 2010, Adam returned to Costa Rica to work as a researcher on orchids at JBL, UCR. Two years later he began looking for possibilities of doing a PhD in the Netherlands, and it was Barbara Gravendeel's name as supervisor on a vacancy for a PhD project that inspired him to apply. He had heard her name during his stay at the Herbarium Vadense in Wageningen. Barbara, Franco and Adam proposed a joint project between Naturalis Biodiversity Center, the Hortus botanicus of Leiden University and Lankester Botanical Garden, and studies on Specklinia, another Neotropical genus of orchids were started. Adam stood for the first time in front of the Sylvius building in Leiden in October 2012 where he completed his PhD project in October 2015. Currently, Adam is the head of research at JBL, where he manages four research projects on floristics, phylogenetics and pollination studies on orchids, supervises two MSc and two BSc students, is the Managing Editor of the journal Lankesteriana, and is a lecturer of the orchidology course at the Biology Department of UCR.

Publications

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PE&RC Training and Education Statement

With the training and education activities listed below the PhD candidate has complied with the requirements set by the C.T. de Wit Graduate School for Production Ecology and Resource Conservation (PE&RC) which comprises of a minimum total of 32 ECTS (= 22 weeks of activities)

Review of literature (6 ECTS)

- Taxonomy molecular phylogenetics, reproductive isolation, and niche differentiation of the *Specklinia endotrchys* species complex (Orchidaceae: Pleurothallidinae)

Writing of project proposal (4.5 ECTS)

- Phylogenetics, reproductive biology and niche differentiation of the epiphytic orchid *Specklinia endotrachys* and close relatives in Pleurothallidinae (2012)

Post-graduate courses (9.5 ECTS)

- Current trends in phylogenetics; WUR (2012)
- Scanning Electron Microscopy (SEM) of floral part of *Specklinia* species; Leiden University (2012)
- Workshop VIBRANT tools for DNA taxonomists; Royal Belgian Institute of Natural Sciences, Brussels (2013)

Laboratory training and working visits (10 ECTS)

- Fossil calibration of the phylogeny of Pleurothallidinae; WUR (2015) Eletro-antenography (EAG) experiments with *Drosophila hydei*; UVA (2013)

Invited review of (unpublished) journal manuscripts (13 ECTS)

- Taxon (2012)
- Nordic Journal of Botany (2012)
- Plosone (2012)
- Acta Botanica Mexicana (2012)
- Blumea (2013)
- Blumea (2013)
- Nordic Journal of Botany (2013)
- Phytotaxa (2014)
- Phytotaxa (2014)
- Turkish Journal of Botany (2014)
- Phytotaxa (2015)
- Plant Systematics and Evolution (2015)
- Acta Botanica Galica (2015)
- Brittonia (2015)

Deficiency, refresh, brush-up courses (6 ECTS)

- Advanced biosystematics; Wageningen University and Research Centre (2009)

Competence strengthening / skills courses (0.6 ECTS)

- Scientific integrity; Leiden (2014)
- Effective communication; Leiden (2014)

PE&RC Annual meetings, seminars and the PE&RC weekend (0.7 ECTS)

- 6th Workshop Plant-insect; UVA (2011)
- Mini-symposium collections and spatial analysis-introduction of Naturalis Geoportal; Naturalis (2011)
- PhD Day; PE&RC (2011)

Discussion groups / local seminars / other scientific meetings (4.5 ECTS)

- Character evolution (2013-2015)
- Lankester seminars (2014-2015)

International symposia, workshops and conferences (9.6 ECTS)

- 4th Scientific Conference on Andean Orchids (IISCAO); poster presentation; Guayaquil, Ecuador (2012)
- 31st New Phytologist Symposium. Orchid symbioses: models for evolutionary ecology; poster presentation; Calabria, Italy (2013)
- V Monocots Symposium: Orchid relationships from species to subfamily; oral presentation; The Brox, New York (2013)
- Séptimo Congreso Colombiano de Botánica; oral presentation; Ibague, Colombia (2013)
- NERN Netherlands Annual Ecology Meeting; oral presentation; Lunteren, the Netherlands (2014)
- Primera Exposición Nacional de Orquídeas y Encuentro Académico: Bogotá Humana y florecida en el Jardín Botánico; oral presentation; Bogotá, Colombia (2014)

Lecturing / supervision of practical's / tutorials (8.1 ECTS)

- The most common orchids in Costa Rica; Costa Rican Ministry of Environment (2012)
- Orchidology; UCR (2012)
- Orchid agriculture; UCR (2012)
- Orchidology; UCR (2015)

Supervision of MSc students

- Molecular phylogeny of the Costa Rican species of Masdevallia Ruiz & Pav. (Orchidaceae: Pleurothallidinae)
- Reproductive biology of Costa Rican species of Masdevallia (Orchidaceae) sensu lato

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