

June 2012 – Long version

## Thomas Abeli

### Personal information

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Place and date of birth: Voghera, 17 April 1983  
Permanent  
address: Via Gandini 9, 27058 Voghera (PV), Italy  
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### Education

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**PHD:** 2007 – 2010. Applied Ecology and Geobotany, Faculty of Natural Science, University of Pavia, Italy.

- Thesis title: **Survival of small isolated plant populations: an integrated approach to evaluate population viability for future conservation actions.** Supervisors: Associate Professor, Graziano Rossi, Dott. Gilberto Parolo (University of Pavia); Prof. Diethart Matthies (Phillips University, Marburg, Germany).

#### Research topics

Ecology and biology of peripheral populations, endemics and rare species: study of the fluctuating asymmetry and conservation status of *Aquilegia thalictrifolia*; ecology, genetics, monitoring program and reintroduction plan of the endemic quillwort *Isoetes malinverniana* in the Po Plain; ecology, genetics and population reinforcement of *Leucojum aestivum*; survival of peripheral isolated plant populations; distribution of rare orchid species.

Climate change: long-term monitoring and response of peripheral plant populations to extreme climatic events; long-term monitoring of the snow cover and effects of climate change on peripheral plant populations.

Plant-insect interaction: pollination biology of the deceptive orchid *Calypso bulbosa*; pollination biology of *Leucojum aestivum*; reproductive biology of *Callianthemum kernerianum*.

Red Listing: applicability of the IUCN Categories and Criteria to peripheral isolated plant populations

Other: research on the effect of heterogeneous grazing on Alpine species-rich *Nardus* pastures H-6230.

**MASTER DEGREE:** 2005 – 2007. Faculty of Natural Science, University of Pavia, Italy. **110/110 with honours.**

- Thesis title: **Applicazione delle categorie di minaccia IUCN a livello biogeografico: le piante con popolazioni al limite di areale in Appennino settentrionale.** Supervisor: Associate Professor, Graziano Rossi, Dott. Gilberto Parolo.

(Title translation: Applying IUCN threat categories at the biogeographic level: peripheral plant populations from Northern Apennines as a case study).

**BACHELOR DEGREE:** 2002 – 2005. Faculty of Natural Science, University of Pavia, Italy. **110/110 with honours.**

- Thesis title: Cartografia floristica della zona del Monte Lesima nell'Appennino pavese (Lombardia). Supervisor: Associate Professor, Graziano Rossi, Dott. Gilberto Parolo.

(Title translation: Flora of the Mount Lesima, Northern Apennines, Lombardy).

**HIGH SCHOOL:** ITAS Gallini Agricultural College 1998-2002. **Agriculturist diploma. 93/100.**

## Language

Language	Reading	Writing	Speaking	Comprehension
Italian: First Language				
English	Good	Good	Good	Good
French	Basic	Basic	Basic	Basic

2011: **IELTS Test 6,5/9 before traveling to Australia from July 2011 to January 2012**

2007: **Ireland, English course held by DLTC school, Dun Laoghaire (Dublin).** September.

## Computer skills:

Good knowledge of the computer packages Office, Acrobat, Adobe PhotoShop, Digital Photo Professional; **GIS** softwares (Arcview 3.2, Qgis, elements of OziExplorer) to create maps and thematic maps, digitalization, definition of species range, DEM, geographic parameter measurements, habitat mapping, etc.); **differential GPSs** and their softwares. **Statistical analysis** with SPSS, Minitab and Origin61, basic knowledge of Canoco and R. Good internet skills (Internet Explorer, FireFox).

## Grants

2010: Awarded by The Finnish Government (CIMO) for a three months research activity in Finland.

2007-2010: PhD grant at the University of Pavia

## Professional experiences

August 2011 – June 2012: sabbatical

2011: “**Conservazione in ed ex situ della Flora autoctona**”: analisi popolazionistica di specie relitte o marginali, al fine di un loro rafforzamento in Lombardia ed Emilia Romagna” Contract with the University of Pavia. January – March. Tasks: data analysis of long-term data set of plant reproductive efforts and writing of a

scientific article. Results: data analysis completed, one article submitted, a second one waiting for submission to a scientific journal.

- 2010: **IUCN European Red List Project** for the assessment of plant species listed in the Habitat Directive and the Berne Convention, occurring in Italy. Consultant and representative of the Italian Botanical Society for the IUCN Red Listing Initiative “European Red List”. Tasks: to provide information about Italian threatened plants to be included in the European Red List; to attend workshops and meeting and to assess species conservation status. Results: waiting for Red List publication. Head of the project: Melanie Biltz (IUCN, Cambridge) [melanie.bilz@iucn.org](mailto:melanie.bilz@iucn.org). She can also be contacted as reference. <http://www.iucnredlist.org/initiatives/europe>.
- 2009-2010: **International project ACE\_SAP** on *Aquilegia thalictrifolia*. With Museo Tridentino di Scienze Naturali, UC Davis. A1-wp3 - Taxonomic delimitation and conservation biology of three endemic plant taxa. <http://acesap.fem-environment.eu/activity-1-biological-conservation/>. Tasks: research activity on the ecology and reproductive Biology of the endemic plant species *A. thalictrifolia*, field survey, research planning, research development and data analysis. Results: all the research phases have been completed. Waiting for article
- 2009: **Field guide during the ENSCONET 5th Annual General Meeting and ENSCONET Seed Collecting Workshop**, Trento, Italy, 30/6-4/07. Task: accompanying meeting attendants in the field explaining landscape characteristics, Flora and Fauna. Results: attendants were all satisfied. Dr. Costantino Bonomi, [bonomi@mtsn.tn.it](mailto:bonomi@mtsn.tn.it), Museo Tridentino di Scienze Naturali can be contacted as reference.
- 2008: **Field assistant for GLORIA Project** (The Global Observation Research Initiative in Alpine Environments), resurvey 2008, Northern Apennines Summits (Mt. Casarola and Mt. Alpe di Mommio – Reggio Emilia, Italy), July. Tasks: monitor changes in the summit flora in the N-Apennines, recognize plant species, work in a large team of people. Results: the monitoring program has been correctly completed.
- 2006: **Field assistant** for the inventory and monitoring of the Flora of Val Viola, Central Alps, Italy, 17-28<sup>th</sup> July, 21-23<sup>th</sup> August.
- 2006: **Field assistant** for the inventory and monitoring of the partridge in the Sardinia Island, Sardinia, Italy. 9-19<sup>th</sup> April.

## International activities

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- 2011: **Australia, Melbourne:** International Botanical Congress IBC2011. **New South Wales:** Jobs not connected to a research activity.
- 2010: **Finland,** Oulanka National Park. **Pollination biology of *Calypso bulbosa*** with **Prof. Juha Tuomi**, University of Oulu. May-August.
- 2010: **France,** Research Centre “Tour du Valat”. **Delegate of the Italian Botanical Society to the IUCN meeting** for the assessment of the aquatic plants of the Mediterranean region; international workshop. 19-22 January. <http://www.iucnredlist.org/initiatives/mediterranean> and <http://www.iucnredlist.org/initiatives/mediterranean/acknowledgements>. Co-ordinator **Melanie Biltz** (IUCN, Cambridge)
- 2009: **Germany,** Phillips-Universitat Marburg. **Data analysis** with **Prof. Diethart Matthies**. January.
- 2008: **France,** Mercantour National Park. **GLORIA Project, resurvey 2008**, French Alps Summits 23-26<sup>th</sup> June. Co-ordinator: **Dr. Harald Pauli** (University of Vienna).
- 2008: **Sweden, visit at the Artdatabanken (Prof. Ulf Gardenfors)**, Uppsala. 27-29th May.
- 2007: **Ireland, ENSCONET Project**, visit at the Dublin Seed Bank (**prof. Steve Waldren**), Trinity College, Dublin. September.

## Publications

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Efimov P., Jäkäläniemi A., Bogdanov A., **Abeli T.**, Wannas L., Tuomi J., 2012. Self-pollination in *Calypso bulbosa* J. Eur. Orch. 44 (2): 501 – 516.

**Abeli T.**, Parolo, G., Dell'Orto V., 2012. Orchidee spontanee dell'Appennino pavese. Guida al riconoscimento, carte di distribuzione e itinerari di scoperta. (*Guide to the wild orchids of the Appennino Pavese. Guide to the identification, distribution maps and discovery tracks*). Nuova Tipografia Popolare, Pavia.

**Abeli T.**, Barni, E., Siniscalco, C., Amosso, C., Rossi, G., 2012. A cost-effective model for quick site evaluation for the reintroduction of a threatened quillwort. Aquatic Conservation: Marine and Freshwater Ecosystems 22: 66-73.

**Abeli T.**, Rossi, G., Gentili, R., Mondoni, A., Cristofanelli, P., 2012. Response of alpine plant flower production to temperature and snow cover fluctuation at the species range boundary. Plant Ecology 213: 1-13.

**Abeli T.**, Rossi, G., Gentili, R., Gandini, M., Mondoni, A., Cristofanelli, P., 2012. Effect of the extreme summer heat waves on isolated populations of two orophitic plants in the north Apennines (Italy). Nordic Journal of Botany 30: 109-115.

Parolo, G., **Abeli T.**, Gusmeroli, F., Rossi, G., 2011. Effect of heterogeneous grazing in Alpine species-rich *Nardus* pastures on plant diversity, trophic traits and forage value. Grass and Forage Science 66: 541-550.

Parolo, G., **Abeli T.**, Rossi, G., Dowgiallo, G., Matthies, D., 2011. Biological Flora of Central Europe: *Leucojum aestivum* L. Perspectives in Plant Ecology, Evolution and Systematics 13: 319-330.

**Abeli T.**, 2011. Survival of small isolated plant populations: an integrated approach to evaluate population viability for future conservation actions. PhD Thesis extended abstract. Scientifica Acta 4: 3-9.

Gentili R., Rossi G., **Abeli T.**, Bedini G., Foggi B., 2011. Assessing extinction risk across borders: integration of a biogeographical approach into regional IUCN assessment? Journal for Nature Conservation 19: 69-71.

**Abeli T.**, Mucciarelli, M., 2010. Notes on the Natural History and reproductive biology of *Isoëtes malinverniana* Cesati et De Notaris. American Fern Journal 100: 235-237.

Rossi, G., **Abeli T.** (eds.), 2010. Schede per una Lista Rossa della Flora vascolare e crittogamica Italiana. Informatore Botanico Italiano 42: 539-613.

Gentili R., **Abeli T.**, Rossi G., Li M., Varotto C., Sgorbati S., 2010. Population structure and genetic diversity of the threatened quillwort *Isoëtes malinverniana* and implication for conservation. Aquatic Botany 93: 147-152.

Mariani M.C., **Abeli T.**, 2010. *Malaxis paludosa*. Informatore Botanico Italiano 42: 616-617.

**Abeli T.**, Gentili R., Rossi G., Bedini G., Foggi B., 2009. Can the IUCN criteria be effectively applied to peripheral isolated plant populations (PIPPs)? Biodiversity and Conservation 18: 3877-3890.

Rossi G., Gentili R., **Abeli T.**, Gargano D., Foggi B., Raimondo F. M., Blasi C., (2008). Flora da conservare. Iniziativa per l'implementazione in Italia delle Categorie e dei Criteri IUCN (2001) per la redazione di nuove Liste Rosse. Informatore Botanico Italiano 40 (1).

**Abeli T.**, Parolo G., Dell'Orto V., 2007. Nuove segnalazioni di orchidee per l'Appennino pavese (Lombardia, Italia). (New orchid records from the Northern Apennines, Lombardy, Italy). Archivio Geobotanico 10 (1-2) (2004): 89-92.

**Abeli T.**, Parolo G., Dell'Orto V., 2006. Segnalazioni interessanti di Orchidee per l'Appennino pavese (Lombardia, Italia) (Interesting orchids from the Pavia Province, Lombardy, Italy) *Archivio Geobotanico* 9(1-2) (2003): 69 – 72.

**Abeli T.**, 2003. Nota preliminare sulle Orchidaceae dell'Appennino pavese (preliminary study on the orchids from the Northern Apennines) *Quaderni del Museo Civico di Scienze Naturali di Voghera*.

## Communications and posters

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- 2011: **T. Abeli**, R. Gentili, G. Rossi, P. Cristofanelli - *Response of peripheral population to extreme climatic events: results from a ten-years monitoring in the N-Apennines (Italy)*. IBC2011, Melbourne, Australia, 23-30 July.
- 2010: **T. Abeli** – *Translocation of Isoëtes malinverniana: a model for site quick evaluation*. Workshops: “Plant reintroduction, concerns and perspectives”, Milano. 26 November 2010.
- 2010: G. Rossi, A. Ferrarini, R. Gentili, M. Gandini, **T. Abeli**, G. Parolo. *A New Methodology for Planning Assisted Migration of Alpine Plants as a Mitigation for Climate Change*. International Conference on Climate Change, University of Queensland, Brisbane, Australia. 8-10 July 2010.
- 2010: G. Parolo, **T. Abeli**, C. Bonomi, G. Rossi. *Using population biology to develop cost-effective translocations of Leucojum aestivum (Amaryllidaceae) in the valley of the river Po (NW Italy)*. 2010 International Congress of Conservation Biology (ICCB), Edmonton, Alberta, Canada 3-7 July 2010.
- 2010: **T. Abeli**, G. Parolo C. Bonomi, L. Cubani, C. Varotto, M. Lega. *Absence of differences in fluctuating asymmetry (FA) between small populations of the narrow endemic Aquilegia thalictrifolia (South-Eastern Alps, Italy)*. Poster presented at: 2010 International Congress of Conservation Biology (ICCB), Edmonton, Alberta, Canada 3-7 July 2010.
- 2009: **T. Abeli**, E. Barni, C. Minuzzo, G. Rossi, R. Gentili, C. Amosso, C. Siniscalco. *Preliminary study for the reintroduction of the endemic quillwort Isoëtes malinverniana Cesati et De Notaris in Italy*. Poster presented at: CPC International Symposium “Evaluating Reintroductions As a Plant Conservation Strategy: Two Decades of Evidence” St. Louis, Missouri, 21-22th October 2009.
- 2009: R. Gentili, G. Rossi, **T. Abeli**, D. Vraccvic, M. Li, C. Varotto, S. Citterio, S. Sgorbati. *Population genetic study on the Po Plain endemic fern Isoëtes malinverniana using I-SSR and AFLP markers*. Poster presented at: 104° Congress of the Italian Botanical Society. Campobasso, 16-19 September 2009.
- 2009: G. Parolo, **T. Abeli**, G. Rossi, D. Matthies. *Population biology of the self-incompatible geophyte Leucojum aestivum (Amaryllidaceae) in the plain of the river Po (N-Italy)*. PopBio2009 Plant Population Biology in a Changing World. Bern, 21-24 May 2009.

## Articles submitted and in preparation

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**Abeli, T.**, Jäkäläniemi, A., Wannas, L., Mutikainen, P., Tuomi, J. Relationships between natural fruit set, pollen limitation, fruiting failure, and flowering neighbours in a deceptive orchid. Submitted to: *Botanical Journal of the Linnean Society*.

Efimov P., Jäkäläniemi, A., Bogdanov, A., **Abeli, T.**, Tuomi, J., Self-pollination in *Calypso bulbosa* in Russia and in Finland. Submitted to: Journal Europaischer Orchideen.

## Co-ordination and project management experience

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- 2011: Project leader for a field guide of the native orchids of the Provincia di Pavia. Project funded.
- 2011: Key role in project management “Reintroduction of *Isoetes malinverniana*. Project under evaluation of the funding commission.
- 2010: Executive Committee of the workshop: Plant reintroduction, concerns and perspectives. Milano, 26 November.
- 2009: Executive committee for the ENSCONET 5th Annual General Meeting and ENSCONET Seed Collecting Workshop, Trento, Italy, 30/6-4/07;
- 2008: Executive committee of the Symposium “Countdown 2010: Biodiversity Conservation and Red Lists” – 103<sup>o</sup> Italian Botanical Society Congress, Reggio Calabria, Italy;
- 2007: Advisor for the project “Fiori del Tempo Libero”, Italia Nostra, Milan. (reconstruction and restoration of a wet habitat);
- 2002-2006: Project “Floristic inventory of Lombardy”, Lombardy, Italy;
- 2005: Reorganization of the permanent exhibition of the Museum of Natural History of Voghera;
- 2001 and 2002: Executive committee of the Giornate Micologiche in Alta Valle Staffora (Workshop and training course on fungi) Staffora Valley, Italy.

## Teaching and student support

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NOTE: in Italy teaching is not allowed to PhD students.

- 2011: Qualified for college examinations in Botany and Applied Botany.
- 2010: Master thesis co-supervisor - Amosso C., Toward an Action Plan for the conservation of *Isoëtes malinverniana*.
- 2009: Master thesis co-supervisor - Ciappetta S., Esigenze di germinazione in *Leucojum aestivum* L. (Amaryllidaceae) specie minacciata in Pianura Padana;
- 2008: Lecture: “Population dynamics and evolution”
- 2008: Master thesis co-supervisor - Bogelli G., La via del sale. Dal recupero delle tradizioni alla tutela del territori;
- 2008: Lecture: “IUCN Categories and Criteria, technical and practical aspects of the species assessment”.
- 2007: Master thesis co-supervisor - Vegini E., Valutazione e gestione della diversità floristica in ambito agricolo pianiziale lombardo.
- 2006: Conference: Orchidee dell’Appennino settentrionale “Orchids from Northern Apennines”, Stradella, Italy, 10th November.

## Workshops, courses, conferences and congresses attended

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NOTE: events mentioned in other sections are not reported here

2008: 103° Congress of the Italian Botanical Society, Reggio Calabria, Italy, 17-19th September 2008;  
2008: 1<sup>st</sup> Meeting of Biosystematics, University of Milan (Bicocca), Italy, 5-6th June;  
2008: Workshop “Iniziativa per l’implementazione in Italia dei criteri e categorie IUCN per la compilazione di nuove Liste Rosse” Rome, Italy, 13-15th March;  
2008: Statistical Analyses for Botanists and Ecologists. Course held by Prof. Jan Leps, Siena;  
2008: Statistics. Course held by Prof. Lorenzo Fattorini, Pavia;

## Other skills and information

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Clean Driving License: European category (B), corresponding to the Australian category (C), microscopes and stereoscopes, Metal detector, Pocket PC, motor boat.

Italian license for chemical compound and herbicide management.