2nd Mediterranean Plant Conservation Week
"Conservation of Mediterranean Plant Diversity: Complementary Approaches and New Perspectives"

LIFEorchids (LIFE17NAT/IT/000586): a 5-years project for the conservation of orchids and their habitats

ni[2], L. Cornara[3], P. Giordani[3], A. Girani[4], D. Zocco[5], L. Cristaldi[5], P. Palazzolo[5], S. C

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Improving the conservation status of critically endangered orchid communities in selected habitats in Northwestern Italy

Italy: Piedmont - Liguria - Lombardy
Czech Republic: Praha

Start date: **01/09/2018**
End date: **31/08/2023**

Coordinating beneficiary: **University of Turin**
Associated beneficiaries:
- CREA
- University of Genoa
- Park of Portofino
- Park of Po and Orba
- Legambiente Lombardy Onlus
- Czech Union for Nature Conservation

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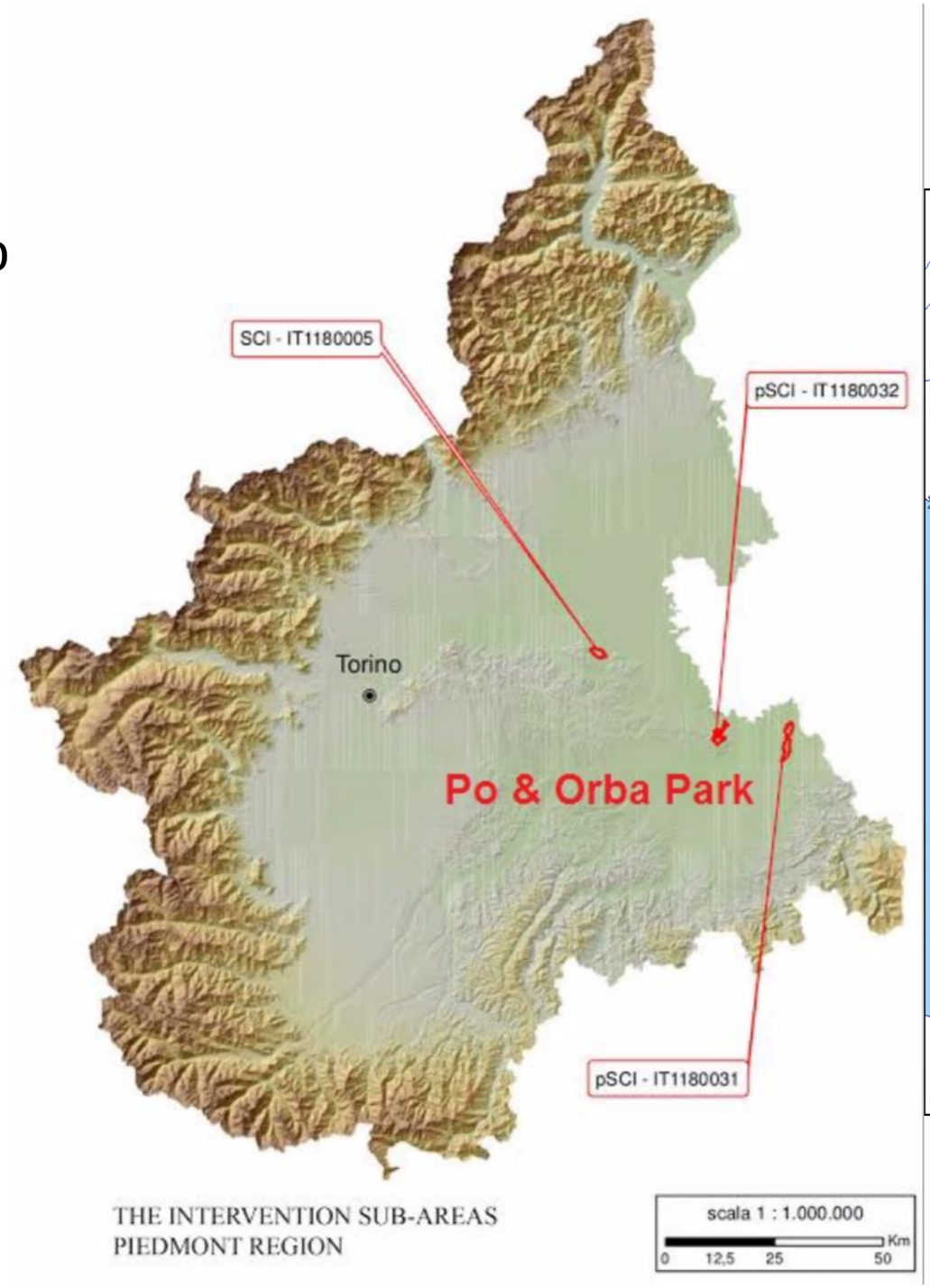
SCI Bric Montariolo
SCI Ghiaia Grande
SCI Basso Scrivia



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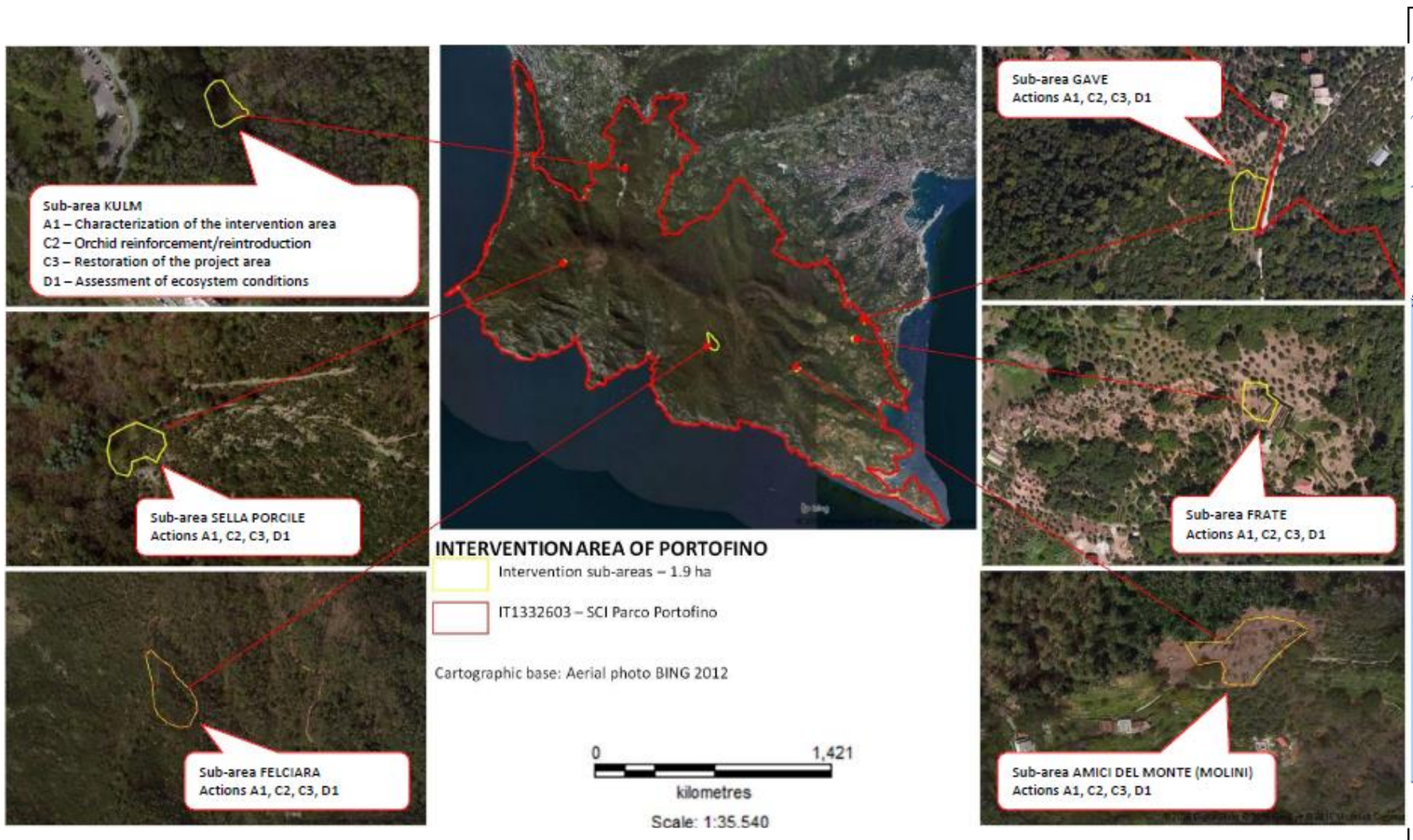

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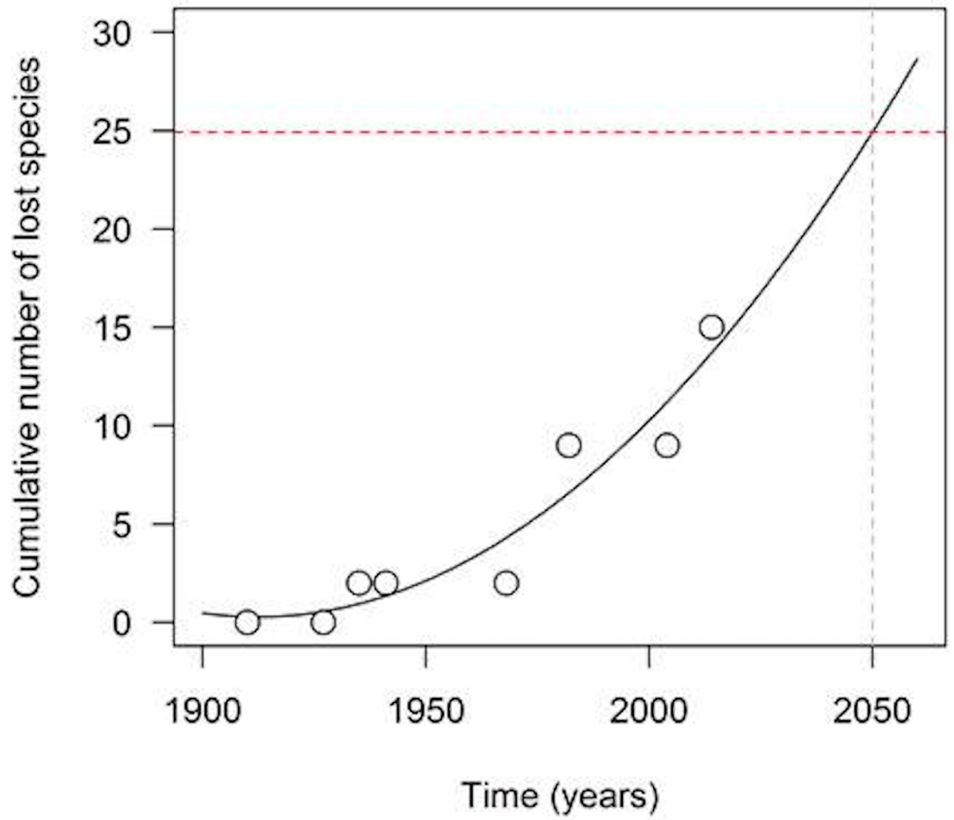
Why is it necessary?

Extrinsic rarity

Threatening processes:

Habitat loss | Degradation | Grazing pressures | Wild boars diggings | Fire

- **Wild boars and other wild animals**
- **Habitat loss and degradation**
- **Harvesting**
- **Pollinator loss**



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Specific aims are:

- To *expand the surface area* of the target habitat by selective shrub-clearing, tree cutting, elimination of invasive alien species
- To *draw up ad hoc propagation protocols* for nine endangered orchid species
- To undertake *orchid reinforcement* and *reintroduction* in both Parks
- To establish within both Parks "*orchid micro-reserves*" (OMRs)
- To provide enduring *protection of orchid communities* in the project areas
- To *transfer the project solutions* in other European regions (Czech Republic)
- To *increase community awareness* and public engagement on the importance of the target habitats, SCIs and local orchid species

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A. Preparatory actions, elaboration of management plans and/or of action plans

- A1 Characterization of the intervention areas
- A2 Technical planning of the site-specific interventions

B. Purchase/lease of land

- B1 Purchase of lands in the SCI “Bric Montariolo” (IT1180032) and SCI "Basso Scrivia" (IT1180031) to be permanently assigned to habitat 6210*

C. Conservation actions

- C1 "In vitro" propagation of orchid plants
- C2 Orchid reinforcement/reintroduction in the project areas
- C3 Restoration of the project areas
- C4 Implementation of the land stewardship strategy

D. Monitoring of the impact of the project actions

D1 Assessment of ecosystem conditions

D2 Monitoring the impact of the project actions

D3 Assessment of the socio-economic impact of the project actions

E. Public awareness and dissemination of results

E1 Networking with managers of other orchid habitat sites and transfer to the Czech Republic

E2 Organization of training workshops

E3 Communication targeting the general public

F. Project management

F1 Overall project management

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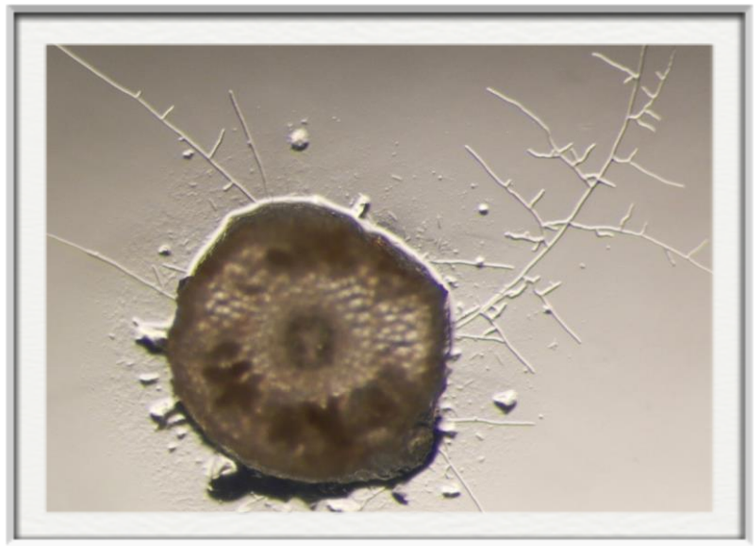
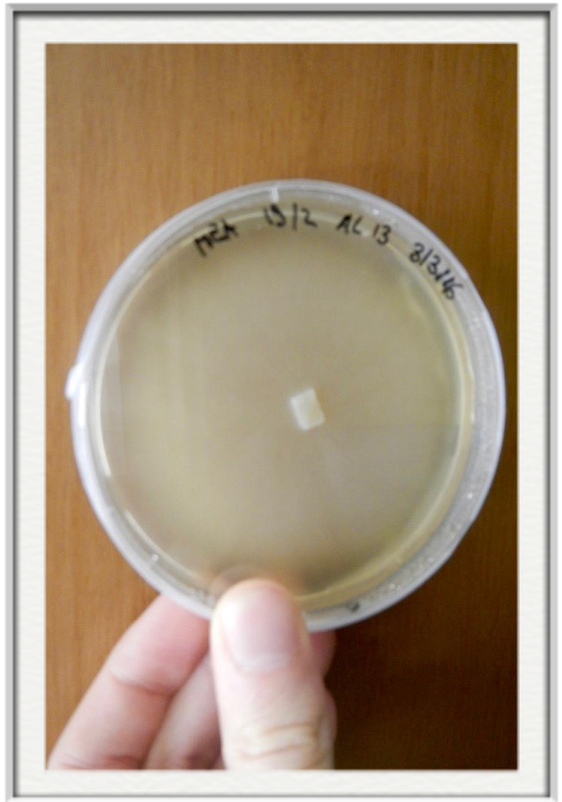
Preliminary actions

- inventory of the localities of the targeted species/habitat, by means of field surveys aimed at locating all known populations of the target species, assessing their size and density and searching for new locations.
- Laboratory studies (physico chemical and biological characterization of potential intervention sites) will be also carried out.
- Based on the information gathered through the inventory and lab work, the exact boundaries of the intervention areas will be determined. Monitoring and management plans will identify the conservation objectives and suitable indicators for each area.





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Storm results, Liguria, November 2018

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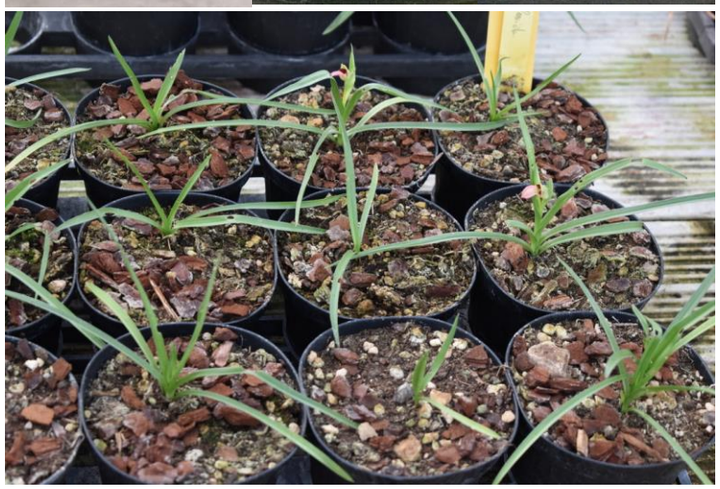
Concrete actions



- habitat restoration
- reinforcement/reintroduction of selected orchid species
- promotion and implementation of the land stewardship approach.

- habitat management, restricted access to the OMRs and land purchase agreements
- '*in vitro*' asymbiotic and symbiotic propagation and cultivation of orchid plants
- A strong citizens engagement will be activated by designing, negotiating and monitoring different models of voluntary agreements with landowners, land users and farmers.

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- **ACTION C.1**: "*In vitro*" propagation of orchid plants
  - Sub-action C.1.1 - Artificial pollination and seed collection
  - Sub-action C.1.2 - *In vitro* seed germination and greenhouse plant acclimatization

<u>3600 plants (400 plants per orchid species)</u>

Po & Orba

<u>*Himantoglossum adriaticum*</u>
Himantoglossum robertianum
Serapias neglecta
Anacamptis morio

Portofino

<u>*Orchis patens*</u>
Orchis anthropophora
Ophrys apifera
Ophrys holosericea
Ophrys bertolonii

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- **ACTION C.2**: Orchid reinforcement/reintroduction in the project areas
  - Sub-action C.2.1 - Establishment of the OMRs
  - Sub-action C2.2 - Outplanting of orchid seedlings
- **ACTION C.3**: Restoration of the project areas
- **ACTION C.4**: Implementation of the land stewardship strategy
  - Sub-action C.4.1 - Agreements with local private landowners
  - Sub-action C.4.2 - Agreements with local farmers

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Monitoring, Netwotking and Communication

- monitoring of plant fitness and dynamics
- monitoring of progress of the establishment of land stewardship agreements
- monitoring of progress and socioeconomic impact of the project actions.

- Networking with other (LIFE) projects
- active dissemination of the main project approach and results in other European countries
- dissemination and training activities will include production of materials (leaflets, notice boards, website, smartphone apps etc.), events (such as “wild orchid festivals”)
- practical workshops targeting both a general audience and “specialized” stakeholders.

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- **ACTION E.1**: Networking with managers of other orchid habitat sites and transfer to the Czech Republic
  - Sub-action E.1.1 - Networking activities with European stakeholders
  - Sub-action E.1.2 - Transfer of information and experience to the Czech Republic
- **ACTION E.2**: Organization of training workshops
  - Sub-action E.2.1 – "My land is bio-diverse", training courses for citizens
  - Sub-action E.2.2 – Training workshop on orchid propagation
- **ACTION E.3**: Communication targeting the general public
  - Sub-action E.3.1 – Production of the dissemination material
  - Sub-action E.3.2- Organization of participatory local workshops

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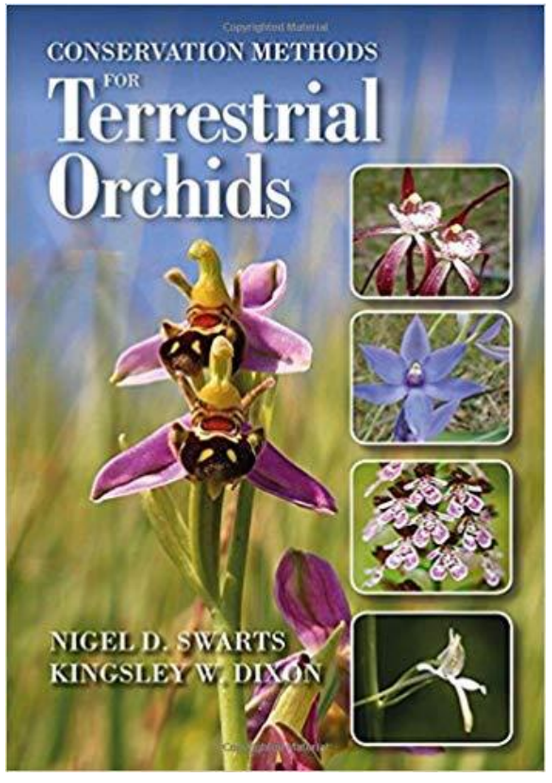
Scientific Advisor

Prof. Kingsley Dixon

- Restoration biologist involved in restoration at the local community to industry and landscape scales
- Foundation Director of Science at Kings Park and Botanic Garden
- Named the 2016 Western Australian Scientist of the Year.

- Creating a biennial global conference series, the International Orchid Conservation Congress
- Co-Chair (2011–2018) the global Orchid Specialist Group of the Species Survival Commission IUCN



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