

# Protecting Biodiversity in Sicily-Malta Natura 2000 Sites through Seed Banks and Population Reinforcements

#### SIMASEED







# Argotti Botanic Gardens & Resource Centre University of Malta

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**Director of Argotti Botanic Garden & Resource Centre** 

Members of the European BG consortium; Members of BG Conservation International,

Fellow of the Royal Society of Biology

Mr Christian Borg, Mr Marco Iannaccone





- The Argotti Botanic Gardens were set up as in 1855 SiMaSepd Under the university of Malta but enjoys a history going as far back as 1740.
- Its main focus is on collections of Mediterranean-type plants.
- It offers support for various types of research efforts mostly related to plant conservation, phytochemical extraction and bioactivity testing.
- The Department of Biology offers first and postgraduate degree courses, and carries out research in the biological sciences.
- There are seven full-time members of academic staff, as well as other visiting and part-time members.
- The department of biology forms part of the faculty of science which in September 2015 celebrated its 100 years.



#### **Team**



- Lecturers in plant diversity, physiology and ecology at the department of biology.
- Technical staff at the Argotti Botanic Gardens & Resource Centre.
- Gardening Staff
- Graduate student demonstrators who assist with field work and lab practicals.
- Occassional lecturers who give input in specific areas and thesis supervision.
- Volunteers with a range of backgrounds.



#### **Expertise – Teaching & Research**



- Extraction of natural products and bioactivity testing.
- Plant Propagation by conventional and micropropagation
- Conservation of endangered species and rehabilitation of degraded environments.
- Phytoremediation.
- Herbarium practice & Short-term Seed storage maintenance.
- Microalgal & Fungal Isolation and Culture
- Public lectures, guiding of botanical walks (adults) and organised tours (school children) to popularise awareness of plant diversity.



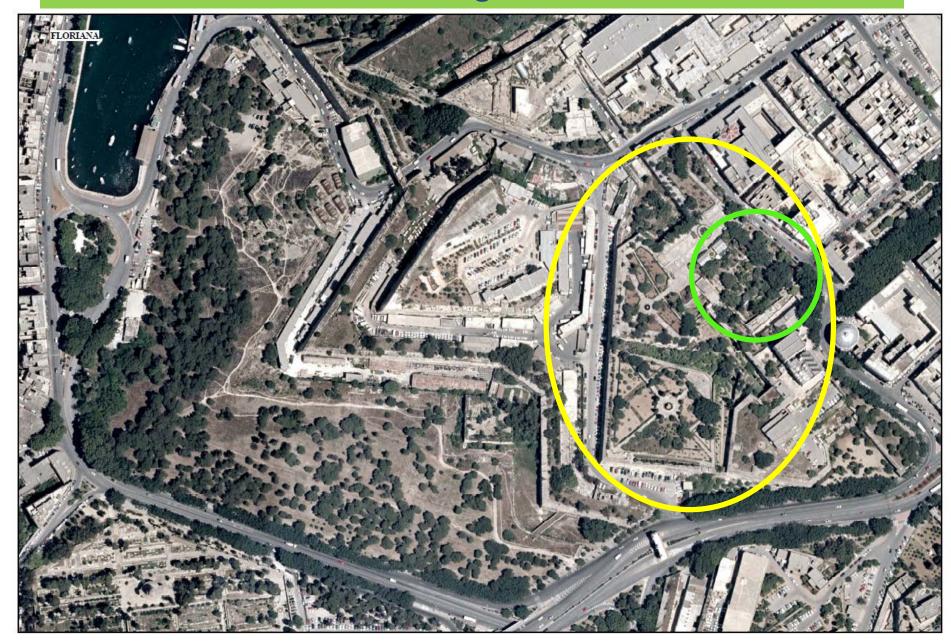
#### **Target Students**



BSc Biology (Single Hons.) – 3 year course BSc Biology and Chemistry (Double Hons.) – 4 year course Masters by research (FT or PT) Masters by taught course (FT or PT) Ph.D by research (FT or PT)



#### **Location of Argotti Gardens**

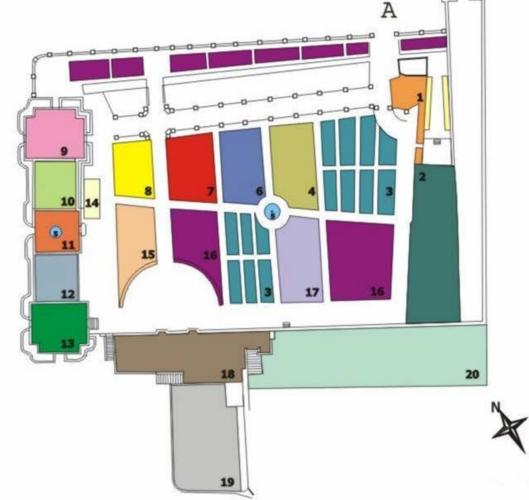


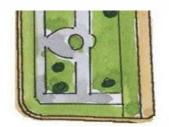
#### Key

#### A. Visitor Entrance

#### Legend

- 1. Nymphaeum
- 2. Herbarium/Roof Cactus Garden
- 3. Family Beds
- 4. Labiate Garden
- 5. Lily Ponds
- 6. Japanese Garden
- 7. Fragrance and Herbs Garden
- 8. Medicinal Plants Garden
- 9. Opuntia and Grusonii Display
- 10. Indoor Plants Greenhouse
- 11. South African Plants
- 12. Cactus Greenhouse
- 13. Cacti, Agaves and Euphorbias
- 14. Nursery Greenhouse
- 15. Cactus Display
- 16. Flowering Plants Display
- 17. Dragon Tree and Conifers
- 18. Proposed Visitors' Centre
- 19. Citrus Garden
- 20. Mediterranean Garden



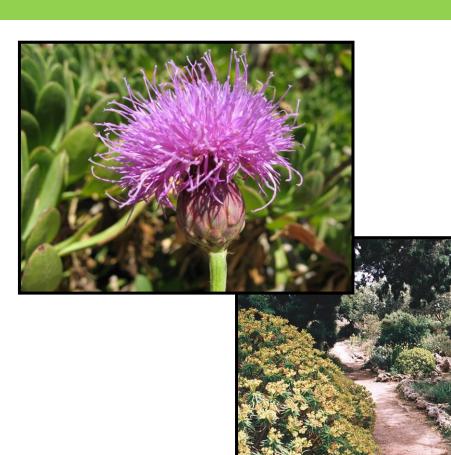


Argotti Gardens University of Malta Section

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### **Argotti Gardens Highlights**









#### **Inner Argotti – Botanical Collections**













### **Argotti Gardens Highlights**









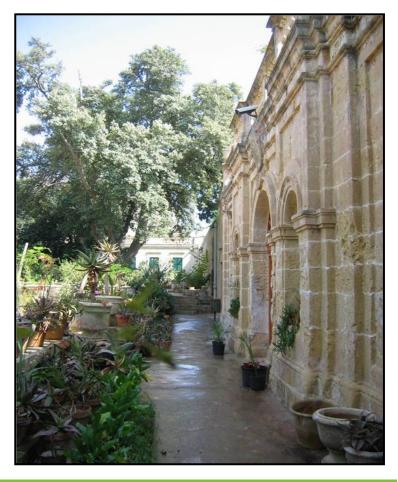


# Villa de Argotte Museum & Visitor's Centre











# **Greenhouses** for Propagation











### **Nursery Facilities**







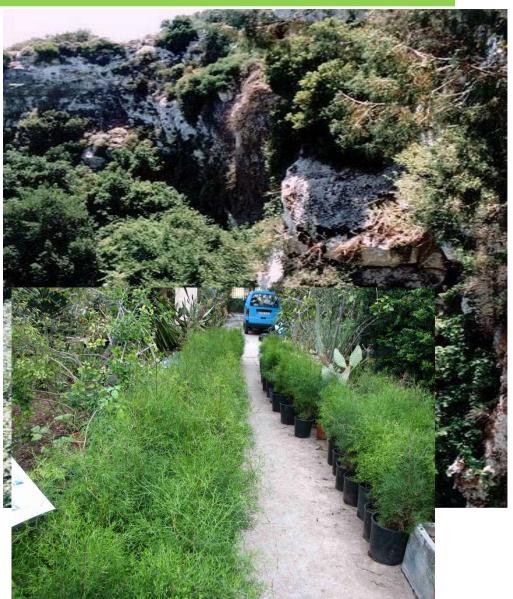




## **National Tree and Arar Nursery**







# Herbarium c. 10,000 specimens







#### **Seed Bank**













## **Phytochemistry Lab**















## Micro-propagation, micro-algal culture, fungal culture











## **Fieldwork**













#### **Funded Projects Undertaken**



PROJECT	DATE	FUNDING	ALLOCATION
SEMCLIMED	9/1/2006	Interreg IIIB	EUR 110,000
NEPTUME	5/1/2011	R & I	EUR 84,000
GARDMED	2011-2013	Interreg Italia Malta	EUR 250,000
HORTES I	6/1/2012	SOLID Funds - European Refugee Fund	EUR 84,000
SuWaNu	7/1/2013	FP7 - CSA	EUR 96,000
HORTES II	7/1/2013	SOLID Funds - European Refugee Fund	EUR 90,000
HEI PLADI	9/1/2015	ERASMUS+ Strategic Partnerships	EUR 56,000
SIMASEED	20/02/2018	Interreg V A Italia Malta	EUR 479,000
		TOTAL	EUR 1,249,000



#### SiMaSeed Project Aim & Objectives

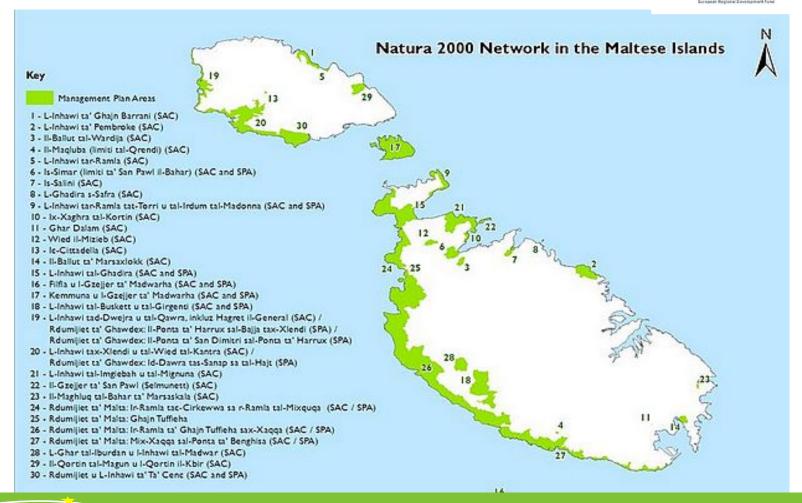


- Protecting Biodiversity in Sicily Malta Natural 2000 sites through Seed Banks and Population Reinforcement.
- Create and/or enhance existing seed banks.
- Identify and prioritize target Maltese and Sicilian plant species.
- Plan/pilot implement seed conservation measures.
- Test feasibility of nursery production of seedlings for restoration in priority habitats.
- Capacity building with different stakeholders.
- Strengthen local administration capacity to integrate biodiversity conservation.



#### Natura 2000 Sites in Malta









#### **Important Flora of The Maltese Garrigue**



#### Flora of the Maltese Islands









#### Grazzi

## Vi Ringrazio

**Thank You** 

