POLLINATORS GUARDIANS: THE BEE FRIENDS PROJECT

EAZA CONSERVATION FORUM
4-7 June 2024, Ostrava Zoo

THE BEE FRIENDS PROJECT: Background info

THE BEE FRIENDS PROJECT is in the BEE ZOOM research line of Fondazione ZOOM, the Research Organization of the biopark Zoom Torino.

BEE ZOOM focuses on bees and wild pollinators conservation.

WHY WE CHOOSE THIS THEME?

1. The park is in an high anthropized area, in the middle of agricultural fields

THE BEE FRIENDS PROJECT: Background info

2. Urban and peri-urban areas often lack suitable habitats for wild pollinators, but **well-planned spaces, can serve as refuges**.

Zoos, typically situated in urban or peri-urban areas, **POSSESS THE POTENTIAL TO ACT AS POLLINATOR REFUGES AND ENGAGE IN HABITAT MANAGEMENT.**

Zoos can contribute significantly to pollinator conservation, through education and outreach. Zoos can also convert their green areas, in areas pollinator friendly

PROJECT GOALS

HABITAT RESTORATION

Restore 15.000 mq of degraded land into habitats for pollinators

Actions:

a. Reintroduce native plants and remove invasive species

b. Create a public garden for pollinators

RESEARCH AND POLLINATORS POPULATION SUPPORT

Increase local pollinators populations

Actions:

a. Census of main taxa of wild pollinators and provide floral resources and create nesting sites.

b. Reduce mowing of meadows in the zoo and surrounding area of the research

COMMUNITY ENGAGEMENT AND EDUCATION

Educate 650.000 community members about pollinator conservation

Actions: organize educational events at the zoo, in neighbour municipalities and schools, distribute materials and create partnership with local organizations.

PROJECT GOALS

The Bee friends project contribute to different theme/targets at International scale

- European Biodiversity Strategy for 2030
- The New Deal for Pollinators
- SDGs

Within our Zoo community

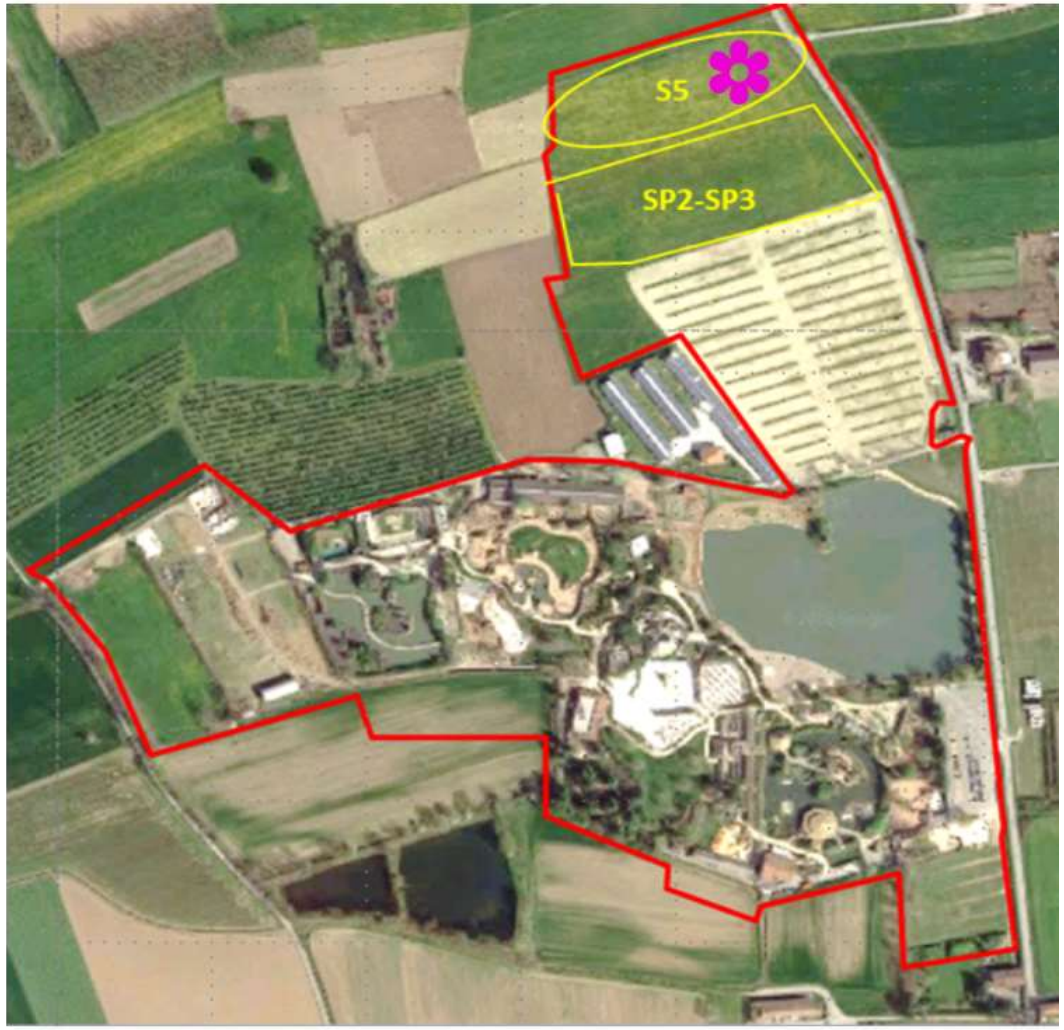
- European Species Conservation
- The role of zoos and aquariums in the Global Biodiversity Framework
- Zoos as permanent pollinators transect site

STAKEHOLDERS

- European monitoring network **Butterfly Monitoring Scheme** (eBMS).
- Turin University - Department of Life Sciences and Systems Biology
- **Fondazione Compagnia di San Paolo** as a partner in territorial actions for the protection of ecosystems and the regeneration of green areas involving citizens
- **Municipalities**: Cumiana- Airasca- Piscina
- **Schools**
- **Zoo visitors**

ROLE OF THE ZOO WITHIN THE PROJECT

- Creation of **a public** **Pollinator Garden**, **revitalizing over 1.5 hectares** of land



Pollinator garden

POLLINATOR GARDEN

POLLINATOR GARDEN OUTDOOR ACTIVITIES

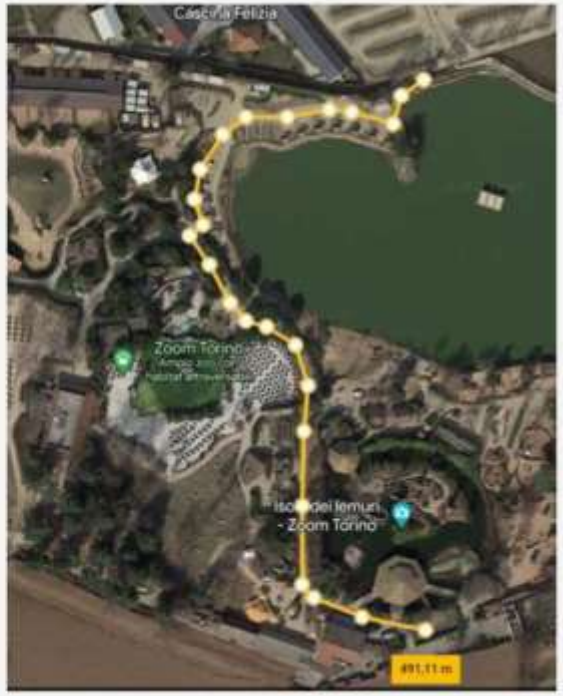
MUNICIPALITIES EVENTS

ROLE OF THE ZOO WITHIN THE PROJECT

RESEARCH: census and monitoring of pollinators

Università degli Studi di Torino

DIPARTIMENTO di SCIENZE DELLA VITA E BIOLOGIA DEI SISTEMI



Lista di specie arboree redatta da:

Simona Bonelli, DBIOS, esperta di Lepidotteri, coordinatrice

Monica Vercelli, ricercatrice indipendente, esperta di Apoidei

Umberto Maritano, ricercatore indipendente, esperto di Sirfidi

La seguente lista seguente deriva dalla considerazione delle specie vegetali fornitrici di nettare e polline per le specie dei principali insetti impollinatori indagati nell'area in cui verrà realizzato il parcheggio dallo stesso gruppo di ricerca.

Specie vegetale	Periodo di fioritura	Lepidotteri	Apoidei	Sirfidi	Idoneità ai fini del parcheggio: No significa pianta troppo grande, oppure che la pianta sporca per resina o frutti, ma se inserita con criterio potrebbero essere prese in considerazione	Abbondanza relativa consigliata: da ponderare sulla base del progetto
Prunus cerasifera	marzo	+++	++	+++	media	20
Prunus spinosa	marzo	+++	++	+	si	5
Prunus mahaleb	aprile	+++	++	+	si	5
Prunus avium	aprile	+++	+++	+	no	3
Pyrus communis	aprile/maggio	++	+	++	no	3
Mespilus germanica	maggio	+	++	+	no	2
Cornus mas	marzo	+	++	+	si	1
Cornus sanguinea	maggio	+	+++	+	si	2
Crataegus monogyna/oxycantha	aprile	++	+++	+++	si	20
Viburnum opalus	maggio	+	+	+	si	2
Salix caprea	febbraio	+	+++	+	si	4
Salix alba	febbraio/aprile	+	+++	+	si	4
Ligustrum vulgare	maggio/giugno	+	+++	++	si	5
Euonymus europaeum	maggio	+	+	+	si	4
Tilia cordata	giugno/luglio	+	+++	+	no	6
Acer campestre	maggio	+	++	+	si	6
Hedera helix	settembre	++	+++	++	si	2
Quercus robur/ pubescens	aprile/maggio	-	+	?	no	6
Carpinus betulus	aprile	-	+	?	si	6
Cercis siliquastrum	aprile	-	+++	-	si	2
Sorbus aria	maggio	+	+++	+	si	5
Sorbus aucuparia	maggio	+	+++	+	si	5
Emerus major	marzo/aprile	+	++	-	si	2
Ziziphus jujuba	giugno	-	+	?	si	1
Arbutus unedo	novembre/dicembre	-	+++	?	si	3

ROLE OF THE ZOO WITHIN THE PROJECT

EDUCATION

- BEE AREA: new education area on pollinators in the zoo
- Education activities in schools
- BEE ZOOM QUIZ: schools campaign on the website + educational activities in the zoo (for 30 days-may 2023)

1. School children and their families had to **answer at the on-line quiz on bees**
2. They **received free admission** to ZOOM to participate in educational workshops
3. **They received selected seeds** ideal for pollinators to plant at home.

EDUCATIONAL ACTIVITIES AT SCHOOL

ROLE OF THE ZOO WITHIN THE PROJECT

EDUCATION

Content, information and guidelines

COST(FINANCIAL / STAFF TIME)

- Staff time for 1 year– 25 k
- Brand - visual identity + press and social media comunication for 1 year– 8.7 k
- Panels and printed education materials – 9.6 k
- Plants – 18 k

FUNDING SOURCE (EU Funds, Local/State Government, Donations...)

- Grant Fondazione Compagnia di San Paolo – 50 k
- We tried LIFE with

PROJECT RESULTS

STABLE ZOOM CENSUS AREA

- Pollinators stable transect in the zoo –
  a. **443 individuals of 20 species of wild bees**
  b. **141 individuals of 22 species of hoverflies**
  c. **40 individuals of 9 species di butterflies**

CREATION OF THE FIRST STEP FOR AN ECOLOGICAL CORRIDOR in the surrounding area of the zoo

Setting up and planting the Pollinator Garden – planted **14 tall trees, 34 medium trees, 60 shrubs, 452 herbaceous plants**

- Setting up **3500 mq of flowerbeds** made available by the municipalities themselves

PROJECT RESULTS

INVOLVEMENT OF SCHOOLS AND CITIZEN

- **4 events** to involvement of the municipalities of Cumiana, Piscina and Airasca - **15.000 citizens partecipants**
- **Involvement of 75% of classes in schools – 506 children**
- The campaign in May 2023 through the involvement of schools with **BEE QUIZ**, > **involvement of 300.000 children, 11.000 more visitors in the zoo, 5.000 seeds distibuited**

NEXT STEPS

- Challenge: involve FARMERS and Policy makers
- Crowfunding campaign
- Additionally, **a project on endemic wildlife monitoring is in progress:** this research aims to assess zoos' potential as species refuges and aids in wildlife monitoring.

The results could enhance conservation strategies and optimize zoos' role in biodiversity preservation.

NEXT STEPS for zoos community

- .Erasmus+ application with other zoos

CONCLUSION AND TAKE HOME MESSAGE

THE POLLINATOR GARDIANS-THE BEE FRIENDS PROJECT offers best practices to adopt, forming a network for ecosystem and pollinator health monitoring.

1. **Pollinator conservation**: learn how well-planned spaces can act as refuges, helping to preserve biodiversity.

2. **Practical skills for conservation**: gain hands-on knowledge about habitat management and best practices for creating pollinator-friendly spaces. These skills will empower to actively contribute to conservation efforts in your Institution.

3. **The role of zoos in pollinators conservation**: zoos are stepping up as leaders in conservation through initiatives like THE BEE FRIENDS PROJECT. This project aims to unlock the full potential of zoos in conservation, involving citizens in creating area-based solutions for biodiversity preservation.

https://www.fondazionezoom.it/en/bee-zoom-approfondimento

Thank You!

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