

## LIFE EREMITA

LIFE14 NAT/IT/000209

*Coordinated actions to preserve residual and isolated populations of forest and freshwater insects in Emilia-Romagna*

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**Emilia-Romagna Region**

**Life MIPP European Workshop**  
**«Monitoring of saproxylic beetles and other insects in the European Union»**  
**Mantova 24<sup>th</sup> – 26<sup>th</sup> May 2017**



# LIFE EREMITA

LIFE14 NAT/IT/000209



*Coordinated actions to preserve residual and isolated populations of forest and freshwater insects in Emilia-Romagna*

**Commencing: 01/01/2016**

**Expected closing date: 31/12/2020 (after 5 years)**

**Coordinating beneficiary: the Emilia-Romagna Region**

**Associated Beneficiaries:**

- 2 National Parks
- 4 Authorities for the management of Parks and Biodiversity

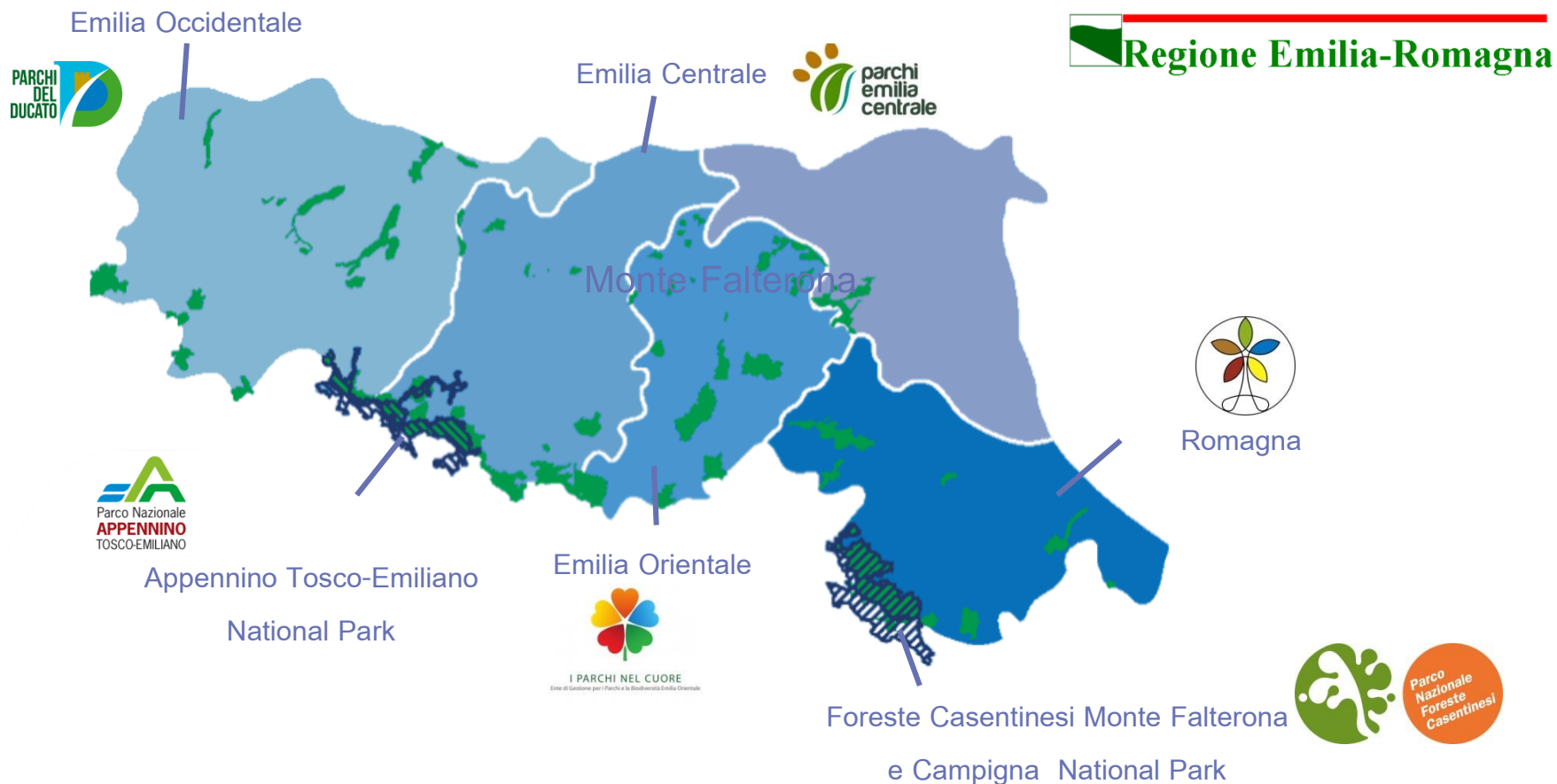
**Budget: 2.126.987 EUR, EU funding: 59.66%**





# PROJECT AREA: Natural Parks and Natura 2000 sites

More than 70 Natura 2000 sites in the project!





# PROJECT OBJECTIVES



The aim of the project is to improve the conservation status of the remaining populations of 4 species of insects in the Emilia–Romagna Region :

2 saproxylic, priority species:



\* *Osmoderma eremita*



\* *Rosalia alpina*

•2 aquatic species, non priority



*Graphoderus bilineatus*



*Coenagrion mercuriale castellanii*



# *Osmoderma eremita* \*



**Common name:** Hermit Beetle

**Description:** saproxylic beetle (feeds on decaying wood) 2.4-3.7 cm long, large glossy black-bronze body; active between June and August.

**Distinguishing marks:** the male releases a persistent and *pleasant smell of ripe peaches* to attract females.

**Habitats:** cavities of any species of old broadleaved trees rich in wood mould, in forests, gardens and rows of trees, ranging from the flatlands to the mountains. Larvae feed on dead wood affected by fungal decay.



# *Rosalia alpina* \*



**Common name:** Rosalia Longicorn

**Description:** Longicorn saproxylic beetle, active between June and August, 1.5-3.8 cm long.  
**Coloration:** velvety steely blue-grey with variable black spots.

**Distinguishing marks:** elegant colours and distinctive patterns. Both male and female specimens have extremely long antennae with alternating black and blue bands.

**Habitat:** mountains, beech forests with decaying trees and in sunlit areas.



# *Graphoderus bilineatus*

**Common name:** Dytiscid Water Beetle

**Description:** predator aquatic beetle, active all year round, 1.4-1.6 cm long; broad oval flat body; a broad yellow band between two black bands covers the *pronotum*, the coloration of *elytrae* is marbled yellow and black.

**Distinguishing marks:** the sides of the *elytrae* are lined with a band making the insect appear even broader.

**Habitats:** the Apennines, generally in large ponds or lakes with clear deep waters, rich in riparian vegetation and bogs.





# *Coenagrion mercuriale castellanii*

**Common name:** Italian Southern Damselfly

**Description:** 2.7-3.1 cm long with a wingspan of 2.5-4.0 cm. Thin bright blue body with black markings, flight period April to August.

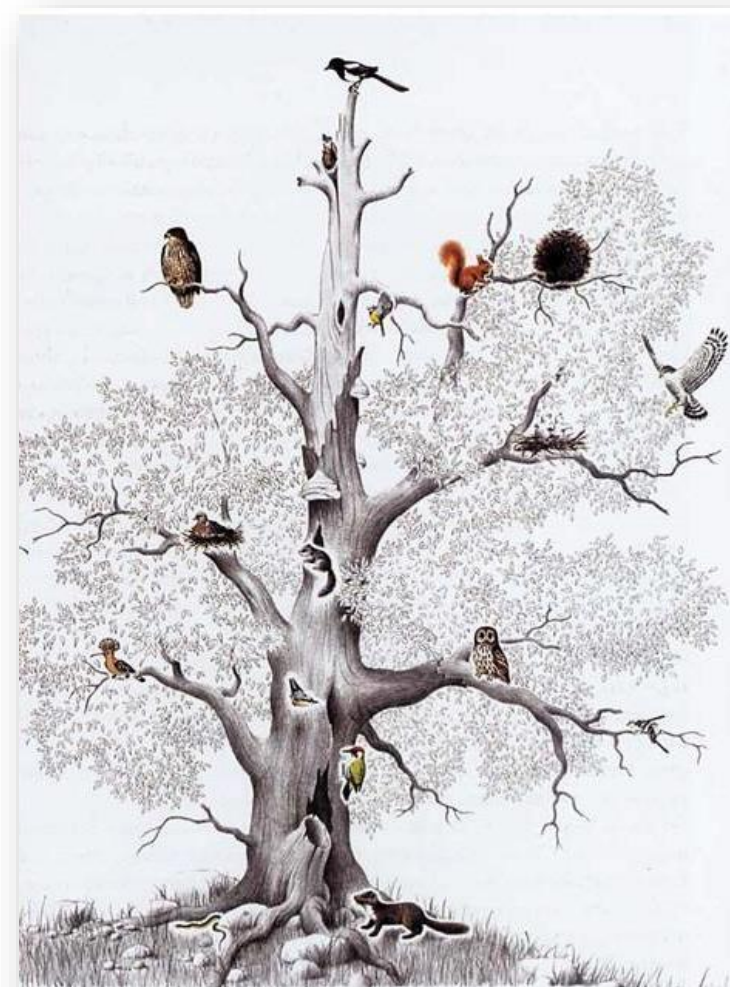
**Distinguishing marks:** a black mark on the second proximal segment of the abdomen similar to the astrological symbol of the planet Mercury (also known as the mercury mark), hence the name *mercurial*.

**Habitats:** lower Apennines, small sunlit water streams rich in riparian vegetation, such as seeps and streams with perennial moderate water flow.



# THREATS

1. reduction or alteration of the target species habitats (old trees, inland water)
2. extreme isolation of the remaining populations of the four insects
3. local extinction of the remaining populations



# HABITAT – old trees



- ***Osmoderma eremita*** : big old broadleaved trees, cavities rich in rotting wood. Species include: Quercus sp., Castanea sativa, Tilia sp., Salix sp., Fagus sylvatica, Morus sp., as well as wild and cultivated rosacee eg. Pyrus sp. and Malus sp.
- ***Rosalia alpina*** : sunlit areas with an abundance of mature and decaying beech trees at various stages of deterioration.
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# HABITAT - lentic and lotic waters



- ***Graphoderus bilineatus*** :  
Large ponds or small perennial lakes of various types. Including clean and clear water forest peats.
- ***Coenagrion mercuriale*** :  
spawning sites require abundant riparian vegetation: clear water streams surrounded by at least 50 metres of natural grasslands.

## SPECIFIC OBJECTIVES OF THE PROJECT

- Gather more data on the presence/absence, distribution and size of the residual populations of the target species;
- Expand the habitats of the residual populations, create new adequate habitats, and improve the ecological networks;
- Ex-situ reproduction of *Osmoderma eremita* and *Graphoderus bilineatus*;
- Increase existing populations and populate new habitats;

# SPECIFIC OBJECTIVES OF THE PROJECT



- **Develop a management plan and specific measures for conservation;**
- **Develop and disclose solutions aimed at actively involving farmers, operators and users of forest areas in all the RN2000 sites;**
- **Act on the threat factors that have caused these 4 species to become residual; factors resulting from human intervention, such as the destruction or alteration of their habitats resulting in the isolation of the few residual populations;**
- **Improve the conservation status of the target insects by raising awareness of the stakeholders on the importance of these species to our ecosystems.**





# VOLUNTEERING

**The project trains about 30 volunteers to help the staff to :**

- **Monitor species and their habitats**
- **Create new habitats**
- **Work in captive breeding sites**
- **Create awareness among the public (EREMITA tour Action E7)**

# Conservation

- 3 *ex situ* breeding sites for *Osmoderma* and *Graphoderus*: PNFC (Santa Sofia - FC), MAR (Russi - RA) and PNATE (Ligonchio - RE);
- Numerous sites of in situ breeding for *Osmoderma* with installation of wood boxes;
- Transfer of *Coenagrion* to other suitable habitats;
- Release *Osmoderma* e *Graphoderus* specimens into the wild.



# PRELIMINARY RESULTS



Beneficiary	Osmoderma (TREE HABITATS)	Rosalia (TREE HABITATS)	Graphoderus (WETLANDS)	Coenagrion (SMALL BASIN)
PNFC	44	88	4	1
MAR			8	7
MEOR	04	13	52	40
MEC	00	33	18	3
PNATE	06	00	11	0
MEOC	484	00	0	3
<b>FOUND</b>	<b>896</b>	<b>329</b>	<b>93</b>	<b>54</b>
<b>EXPECTED</b>	Min. 800	Min. 800/900	5/8	5/10

**NO**



# PRELIMINARY RESULTS

Beneficiary	S.I.C. investigated	S.I.C. remained to investigate
PNFC	5	0
MAR	7*	2
MEOR	11	1
MEC	10	0
PNATE	7	0
MEOC	6	5
<b>TOTAL</b>	<b>46</b>	<b>8</b>

\* One site included in Delta Po

# PRELIMINARY RESULTS



Beneficiary	Osmoderma (NEW SITES)	Rosalia (NEW SITES)	Graphoderus (SITES)	Coenagrion (NEW SITES)
PNFC	2	5 + 1 confirmed	0	0
MAR	2 + 2 confirmed	0	0	1 + 1 confirmed
MEOR	0	0	0	0
MEC	2*	0	1 confirmed	0
PNATE	0	1 + 1 confirmed	0	0
MEOC	1	0	0	0
<b>TOTAL</b>	<b>9</b>	<b>8</b>	<b>1</b>	<b>2</b>

\* One site at 1500 m a.s.l.

# Wood Mould Boxes and Wood Mould just produced for partners



Beneficiary	Number of WMB produced	Mould produced (liters)
PNFC	35	960*
MAR	27	830*
MEOR	23	450
MEC	25	480
PNATE	27	830*
MEOC	13	290
<b>TOTAL</b>	<b>150</b>	<b>3840</b>

\* Included mould to start with ex situ breeding

# Wood Mould Boxes produced for partners



Working steps

# Mould produced by partners



Working steps



# Thank you for your attention!

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