



LIFE Project Number
< **LIFE14 NAT/IT/000209** >

Progress Report
Covering the project activities from 30/05/2020 to 31/10/2021

Reporting Date
< **15/11/2021** >

LIFE PROJECT NAME or Acronym
< **LIFE EREMITA** >

Data Project

Project location:	Emilia Romagna, Italy
Project start date:	< 01/01/2016 >
Project end date:	< 31/12//2020 > Extension date: <30/06/2022 >
Total budget:	€ 2,126,987
EU contribution:	€ 1,268,863
(%) of eligible costs:	

Data Beneficiary

Name Beneficiary:	Emilia Romagna Region
Contact person:	< Ms Monica Palazzini >
Postal address:	Viale della Fiera, 8, 42127, Bologna, Italy >
Telephone:	+39 515276080
E-mail:	monica.palazzini@regione.emilia-romagna.it
Project Website:	https://progeu.regione.emilia-romagna.it/it/life-eremita

Section 1 - Overall assessment of the achievements and as to whether the project objectives and work plan are still viable

All A actions have been completed, including action A5. With regard to action A5, on August 13th 2020, a call for expression of interest in the participation to the training course for volunteers was opened; 24 volunteers were trained with a course of 6 workshops with online activities theoretical and on field activities. The workshops were held on the 18th, 19th, 26th, 27th September 2020, and October 18th 2020. To promote the activities a flyer of the course was published on the project website; a private Facebook group was created to favor the dialogue among the volunteers and it is still open up to date for the further coordination of the project activities

(<https://www.facebook.com/search/top?q=volontari%20life%20eremita%202020>). All the slides and the materials produced within the course have been published on the website (<https://progeu.regione.emilia-romagna.it/it/life-eremita/temi/convegni-workshop/convegni-workshop-e-seminari-2020>).

On October 25th 2020 at PNFC (locality Bagno di Romagna) and on September 18th 2021 at MEOC (locality Salsomaggiore Terme – PR) two “Festa dell’Eremita” events were organised.

Action C1 – the interventions were implemented from March 2018 until December 2020 according to the schedule in the table below.

Beneficiary	Starting date	End date
PNFC	December 2018	April 2019
PNATE	December 2018	March 2019
MEC	March 2018	June 2018
MEOC	March 2018	June 2018
MEOR	January 2020	June 2020
MAR	October 2019	December 2020

The interventions in favor of *O. eremita* were n. 941, divided in: PNFC 158; PNATE 135; MEC 119; MEOC 105; MEOR 186; MAR 238.

The interventions in favor of *R. alpina* were n. 893, divided in: PNFC 352; PNATE 231; MEC 100; MEOR 210.

Action C2 – the interventions were implemented only in the MAR area, in favor of *C. mercuriale castellani*; additional interventions are currently being carried out in both Natura 2000 sites (IT4070001 and IT4090002).

Natura 2000 site	Intervention area	Interventions implemented
IT4070001 “Vena del Gesso Romagnola”	Rio Basino	Cut of the vegetation to favor the sun lighting of the shores. Activities for the creation of open field adequate habitat of the species.
	Rio delle Zolfatare	
	Rio Cavinale	
	Rio Gambellaro	
	Rio Stella	
Rio del Diavolo		
IT4090002 “Torriana, Montebello, Fiume Marecchia”	Rio 1 di Pietracuta	
	Rio 2 di Pietracuta	
	Rio 3 di Pietracuta	

Action C3 – the 150 WMBs were installed in accordance with the table below:

AB	No. WMB	Natura 2000 site
PNATE	n. 27	IT4030002, IT4030003, IT4030005
PNFC	n.35	IT4080003, IT4080002
MAR	n. 27	IT4070011, IT4050004, IT4070016, IT4090001
MEOR	n. 23	IT4050001, IT4050002, IT4050003, IT4050016, IT4050020
MEC	n. 25	IT4040001, IT4040002, IT4040003, IT4040004
MEOC	n. 13	IT4020001, IT4020003, IT4020026

All the WMBs were constantly monitored to assess their functionality and small maintenance interventions were implemented.

Action C4 - the breeding activity of *O. eremita* continues regularly and, after the summer introductions, the following individuals are available at the breeding facilities: No. 22 eggs,

No. 32 L1, No. 43 L2 and No. 86 L3 are available at PNFC's; No. 30 L3 at PNATE's; No. 71 L3 at MAR's.

For *G. bilineatus*, in the summer of 2020, the pandemic emergency of Covid-19 severely hindered the ongoing collaboration activities of sampling and restocking at European level, thus leading to a more nuanced investigation of the species' presence in Italy. The monitoring of the Reserve of Pian di Spagna – SAC-SPA IT2040042 in Lombardy, site of historically known presence of *G. bilineatus* (unconfirmed for over 20 years), not only confirmed the presence of the species but it also allowed for the collection of founders (43) to be used for the repopulation of a small lake in the North-eastern Apennines in Emilia-Romagna.

This surprising result has been coupled with another outstanding outcome stemming from the collaboration with the research group of Dr. Uldis Valainis - Director of the Institute of Life Sciences and Technology at Daugavpils University, that during the month of August 2021 sampled several individuals of *G. bilineatus* from 10 different localities, natural reserves and parks in Latvia. Thanks to the planning of an effective transportation method, 89 specimens have been successfully shipped to Italy, allowing for their reintroduction in two additional lakes in the North-western Apennines.

Action C5 – for *C. mercuriale*, 238 adults were translocated in 3 sessions in 2020; the individuals were taken from Rio 1 and 2 of Pietracuta (IT4090001) and released in the site IT4070011: Rio delle Solfatare, Rio Cavinale, Rio Stella, Rio del Diavolo and Rio Basino. During May 2021, 62 adults were translocated in a single session. The individuals were taken from Rio 1 and 2 of Pietracuta (IT4090002) and released in the site IT4070011: Rio Basino. For *G. bilineatus*, the 43 individuals (23 M and 20 F) sampled in Pian di Spagna (IT2040042) were immitted in lake La Martina at MEOR in August 2021 and the 89 (55 M and 34 F) individuals from Latvia were released in Capanna Bianconi and Lago Sfondato at PNATE.

For *O. eremita*, data regarding the reintroduction are summarized in the table below:

	Beneficiary	Adult individuals	L3 larvae
2020	PNFC	48	130
	PNATE	74	353
	MEC	60	250
	MEOC	51	166
	MAR	110	406
	MEOR	58	240
	<i>tot</i>	401	1545
2021	PNATE	0	27
	PNFC	70	127
	MAR	0	56
	MEOR	37	107
	<i>tot</i>	107	317
TOT		508	1862

Action C6 – with reference to CINEA note n. 2/MM/D (2021) 4130325 of 3rd June 2021 a WebGis has been created (<https://servizimokatest.regione.emilia-romagna.it/mokaApp/applicazioni/LifeEremita>). Through this tool it is possible to view all the data related to the monitoring activities and to the implemented interventions inserted in the online database.

Action C7 - no workshops were held during the reporting period; training sessions, including online, are planned for winter - spring 2021-2022.

Action C8 – the working group is operating for the identification of the measures that will be approved by Emilia-Romagna Region. The working plan envisages the following schedule:

Deadline	Activity
30.11.2021	Drafting of the Specific Conservation Measures proposal for the 4 target species
31.12.2021	Regional Council approves the Specific Conservation Measures proposal
28.02.2022	Permanence of the Regional Council Decision on the website for the collection of possible observations

31.05.2022	The Region provides answers to the observations and approves the definitive Specific Conservation Measures
------------	--

Action D1 – the monitoring activity for the assessment of the efficacy of the ex-situ breeding is still ongoing as action C4 is not yet concluded; no specific criticalities were encountered as testified by the data on the releases of action C5 (508 adults and 1862 L3 larvae released between 2020 and 2021). The relative deliverable (Activity Report) will be drafted at the end of the project and transmitted with the Final Report.

Action D2 – the monitoring activities for *C. m. castellanii* were carried out from May to September 2021, and the species was found in 6 streams at Vena del Gesso Romagnola (IT4070001) with a significantly increased population. The monitoring activity at the WMBs for *O. eremita* allowed for the verification of the development from L3 larvae to adults. The activity for *G.bilineatus* will be monitored starting June 2022.

All data of the monitoring activities will be then processed and the relative deliverable will be transmitted with the Final Report.

Action D3 – a set of indicators of the socioeconomic impact was identified and it will be merged with the data stemming from the comparison of the ex-ante/ex-post socioeconomic investigation on the opinion of the stakeholders. The action is regularly progressing according to schedule.

Action D4 – during the summer of 2021 the action regularly progressed for *O. eremita*, *R. alpina*, and *C. m. castellanii*. The monitoring activity was carried out in particular in the sites of the interventions of actions C1 and C2.

Action D5 – in consideration of the lasting Covid-19 emergency, the investigation is being carried out online through the sharing of the questionnaire with schools. The schools have been involved through a letter containing the indications for the filling in of the online questionnaire (<https://forms.gle/DYxBTo62fPJxDhS3A>). Direct interviews will be carried out with specific target groups (local policy makers, park guards and farmers).

Action D6 – a set of indicators was identified and shared among the consortium. The progress of the action, that will lead to an assessment of the project impact on the ecosystem functions, is connected to the collection of data from the monitoring actions D1, D2, D4.

All dissemination actions are ongoing except for E3 and E6 planned at the end of the project.

Action E1/E8: No. 24 press releases were written and published as news on the project website and disseminated also thanks to the Facebook page of the project (<https://progeu.regione.emilia-romagna.it/it/life-eremita/notizie/notizie>). The website is constantly updated, in addition, a new page has been created and added to the Menu> The Project> Citizen Science (<https://progeu.regione.emilia-romagna.it/it/life-eremita/temi/citizen-science/i-rosalia>). While the FB page is constantly updated and is followed by 1624 people. No. 135 post were written, published or re-shared on the facebook page @liferemita.

In June 2021 a citizen-science campaign “i-Rosalia” was set up to raise awareness on the target species *Rosalia alpina*; publicity materials, posters, videos and a specific page on the website were created. A suitable open-source application was identified (collaboration with InNat project) to receive reports from citizen scientists, after creating the image of the campaign it was advertised in all communication channels of the project.

Action E2: Both the technical symposia were organised online, recorded and streamed via social network (facebook) in October and December 2020. They could not be organised in person due to the covid emergency. The first symposium "Orienting forest environments towards ecological maturity through silvicultural interventions" took place on 13 October, 122 spectators attended all the time, while 3434 people were reached with 989 views of the videos overall, on social network. The second symposium "Managing aquatic environments to favour the rare and threatened components of biodiversity" took place on 1 December, 187spectators attended and 2659 people were reached with 523 views of the video overall.

Educational activities for children were organised by MEOR in July and August 2021 at the Poranceto forest museum in Camugnano. No. 12 children were involved. In addition, 8 educational treks for adults and children were organised by MEOR in July, August and September 2021: LIFE Eremita SUMMERFEST.

Action E5: on 11 June, PNFC organized a training day dedicated to excursion guides, operators of the park's information structure. The meeting took place online on a zoom platform. 80 people attended the meeting.

Action E7: In addition to the editions of 2019 of the "PALA EREMITA", 2 editions were carried out by PNFC during 2020: on 27 September in San Piero in Bagno and 11 October in Premilcuore and 5 editions in 2021: on 28 August the activity was held in Bagno di Romagna; on 4 September in Cervia; on 2 October in Bagnacavallo; on 9 October in Casola Valsenio and on 7 November in Tredozio; New marquees were built for the restyling of the PALA EREMITA.

For the final scientific publications (E2), the final seminar (E6), and the whole part concerning gadgets (E6)/ communication at the end of the project, the tender has already been entrusted to ArtiCulture.

Action F1 – the activity of project management regularly resumed and was focused mainly on the *G. bilineatus* issue, allowing for the recovery of founders and the conclusion of actions C4-C5.

Action F2 – 3 additional Technical Tables (29.06.2020, 02.09.2020, 23.10.2020) and 3 additional Focus Groups (28.05.2020, 02.09.2020, 23.10.2020) were organized in 2020. 4 Technical Tables (28.01.2021, 31.03.2021, 05.07.2021, 07.09.2021), 2 Administrative Tables (28.01.2021, 31.03.2021) and 1 Focus Group (25.03.2021) were held in 2021.

Action F3 – considering the impossibility to organize a study visit due to the pandemic emergency, an online workshop was held on the conservation status of *G. bilineatus* in Europe on September 30th 2021.

The impact of project:

Graphoderus bilineatus: restocking in 3 new Natura 2000 sites where the species was not present: IT4030001; IT4030005; IT4050015. The species was sampled in the new site IT2040042, the second Italian site of presence of the species. *Coenagrion mercuriale*: habitat improvement in the site IT4070011, restocking in the site IT4070011 thanks to the action C5. Quantitative data will be provided with the final report. *Osmoderma eremita*: nr. 941 interventions for habitat creation/improvement; repopulation with 508 adults and 1862 Larvae L3 in the 150 WMB. *Rosalia alpina*: nr.893 interventions for habitat creation/improvement. Quantitative data on the increase in distribution area and abundance of *O. eremita* and *R. alpina* will be available and provided in the final report.

Section 2 - Identified deviations, problems and corrective actions taken in the period

Overall, the actions in favor of *O. eremita*, *R. alpina* and *C. mercuriale* are in line with the schedule. In the period that goes from May 2020 to the date of this report, the main deviations concern the *G. bilineatus* restocking plan and delays in the implementation of the training and communication activities due to the pandemic emergency. Below are the problems encountered and the corrective actions implemented according to the groups of actions scheme.

Action C4 – *Graphoderus bilineatus*,

During the summer of 2020, the contacts initiated with Sweden (Tommy Karlsson) and Latvia (Martins Kalnins) did not lead to the hoped-for outcomes. Activities in Sweden were stalled by the necessary authorization timing, that subsequently affected the overall collaboration. In Latvia, in the Summer 2020, monitoring campaigns were carried by the working group of Martins Kalnins, leading to the collection of a few individuals (no. 6), not sufficient for the repopulation in Italy. In the 2021 a new working group was organized and directed by Prof. Valainnis. Simultaneously, 43 individuals of *G. bilineatus* were collected

in the second site of presence in Italy - the Natural Reserve of Pian di Spagna, where the species was found during the summer of 2020. The action was positively concluded with the recovery of a total of 132 founders (89 from Latvia + 43 from Pian di Spagna) that were used for the reintroduction in 3 lakes: 2 at PNATE and 1 at MEOR.

Action C7- the Covid -19 limitations of the 2020-2021 winter season did not allow the organisation of further workshops. In the spring-summer period, entomologists were busy with monitoring activities, so the workshops were postponed to the winter 2021-2022 period.

Action A5, E2 and E7 – delays in training and communication activities

Due to the Covid-19 restrictions, some of the communication activities, such as the Pala Eremita (E7) and the symposiums (Action E2) were either delayed or redesigned by preferring the online modality. The training activity foreseen with Action A5 was delayed due to the Covid-19 limitations; to recover for the delay the theoretical classes were held online as described in the previous section. The final event “Festa dell’Eremita” was held on September 18th 2021, concluding the action.

Action E2 was partially postponed due to delays in the carrying out of C actions and in particular of the activities in favor of *G. bilineatus*, that led to the decision of postponing the publication of the issue for the “Storie Naturali” magazine (deliverable of the action) in order to wait for the overall picture/results of the C actions.

In this reporting period the following deliverables have been achieved: 4th catalogue of the volunteering (Action A5); Minutes of the training courses second phase (Action A5); Technical Report with maps (Action C1), Technical Report with maps (Action C2); Technical Report with maps (Action C3); Minutes of the Technical and Administrative Table meetings for the 5th year (Action F1); Minutes of the thematic workshops of the second year of activation (Action E5).