LIFE PERDIX

REDISCOVER BEAUTY IN RARITY

Realizzato con il contributo dello strumento finanziario LIFE dell'Unione Europea

Final Event Life PERDIX

28-29.11.2024

ECOMUSEO IMPIANTO IDROVORO DI MAROZZO (FE)

Coordinatore beneficiario

ISPRA Istituto Superiore per la Protezione e la Ricerca Ambientale

Sistema Nazionale per la Protezione dell'Ambiente

Beneficiari associati

CARABINIERI

Federazione Italiana della Caccia

Fédération Nationale des Chasseurs

LEGAMBIENTE

Parco Delta del Po Emilia-Romagna

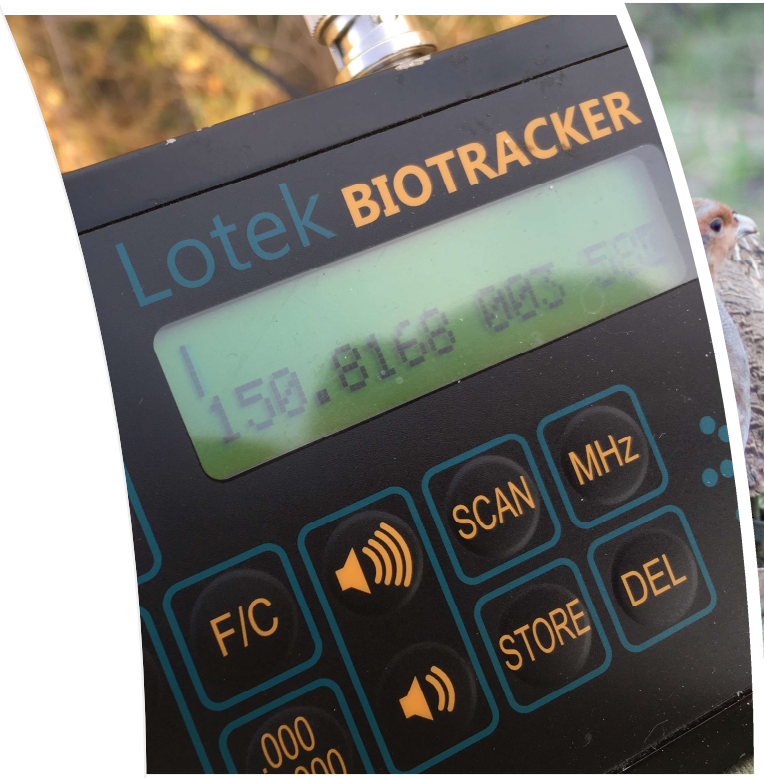
Cofinanziatore

LIFE PERDIX

REDISCOVER BEAUTY IN RARITY

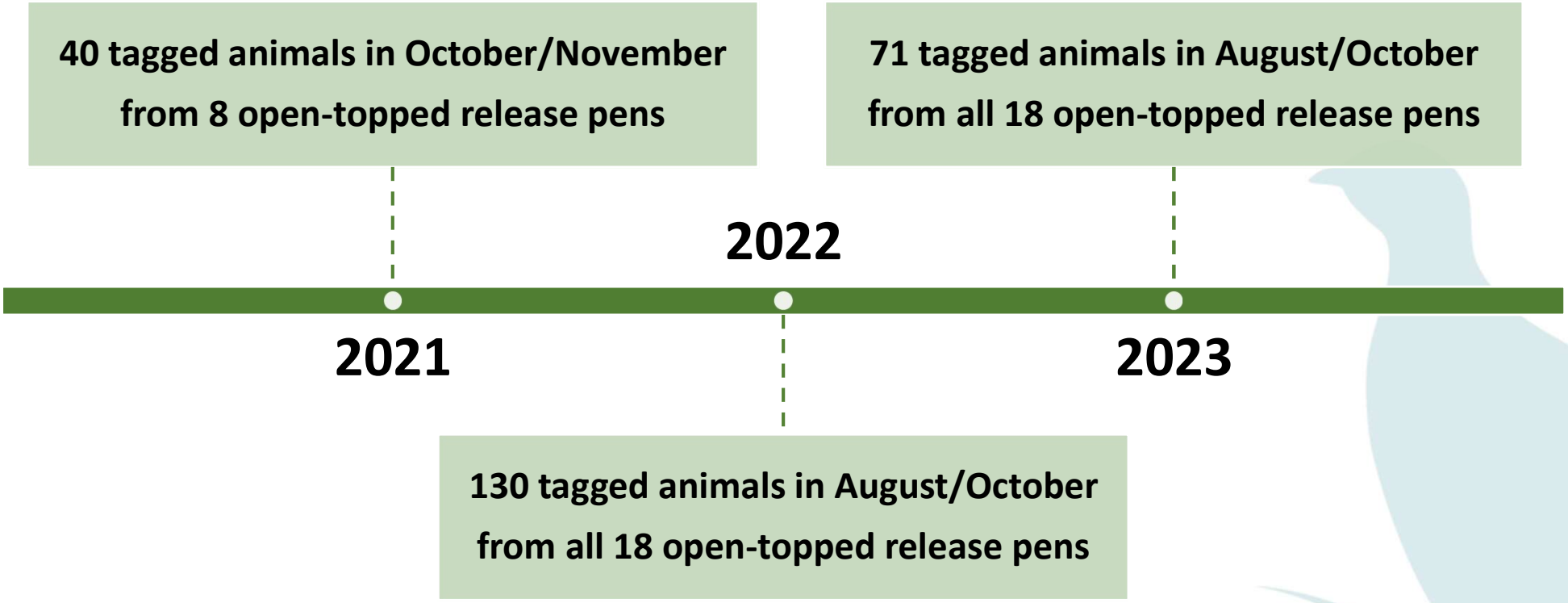
RADIO TELEMETRY MONITORING

Stefania Volani (ISPRA)

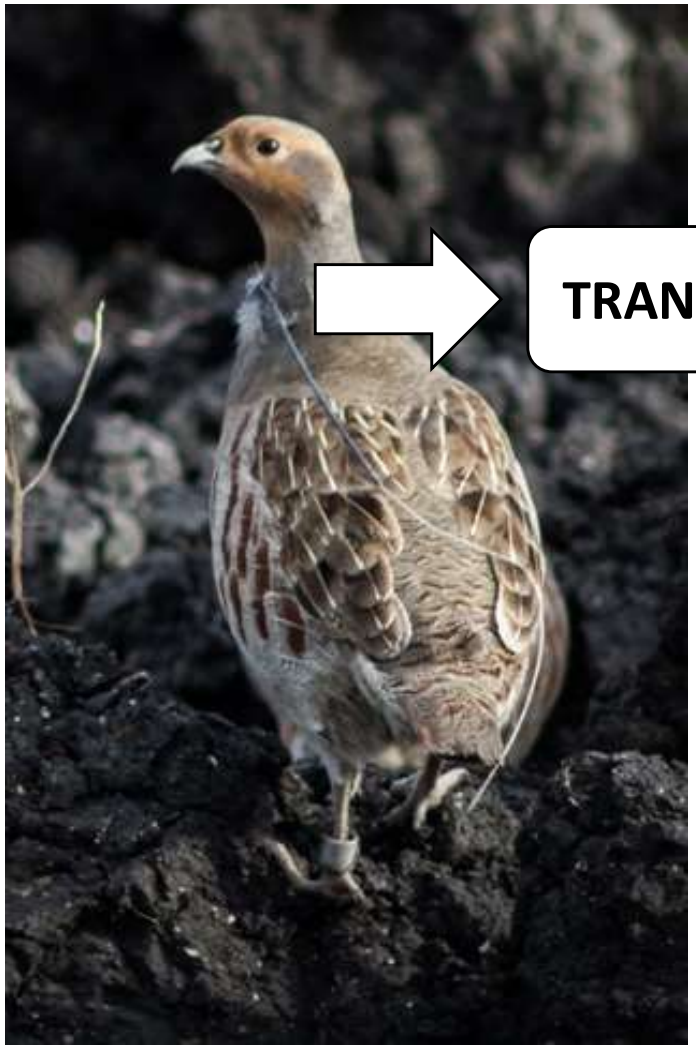


Realizzato con il contributo dello strumento finanziario LIFE dell'Unione Europea

TAGGED ANIMALS IN THE PROJECT

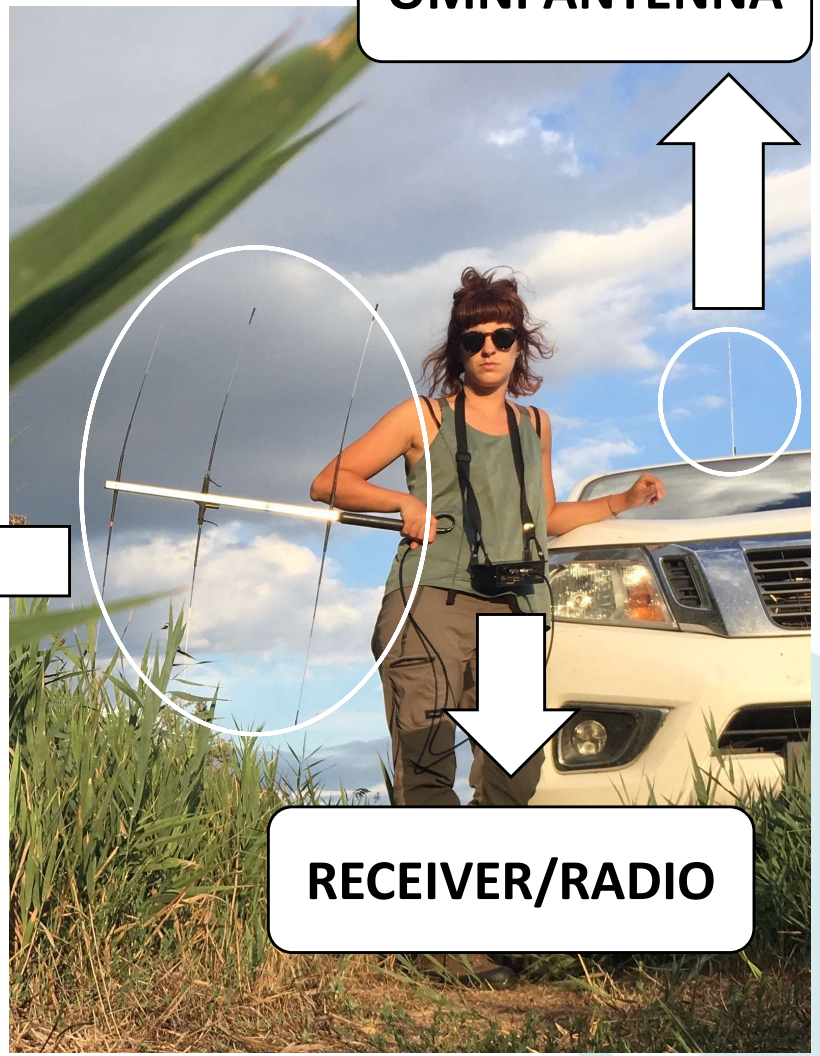


RADIO TELEMETRY ESSENTIALS



TRANSMITTER/TAG

YAGI ANTENNA



OMNI ANTENNA

RECEIVER/RADIO

TAGGING PROCEDURE

Capture → Collection of biometric data → Mark/Tagging

MATERIALS AND METHODS

VHF tags: frequency range between 149.000 and 151.000 Mhz

Radio telemetry techniques:

- **Homing** used to gather information on habitat and pair formation or brigade composition
- **Triangulation** used when animals cannot be easily reached by detecting the direction of the signal from at least 3 points

Data collection: 3 fixes per week in the first month - 1 fix per week from the second month onwards

MATERIALS AND METHODS

DATE

PEN N°

HOUR

WEATHER

ID ANIMAL

ID HOMING

LOCATION

ID REF. SYSTEM

GPS COORDINATES

	B	C	D	E	G	H	I	J	K	L	M	N	O	P	Q	R
	N. RECINTO CATTURA	ORA	METEO	ID STARNA	ID HOMING	LOCALITA'	AVVISTATO	HOMING	GPS	A DI RIFER	FUSO	X	Y	FERMO	IN MOVIMENTO	SOLO
	18	15:16	7 A A	ST156M	ST156Mh14	dentro recinto 18	0	1	ISPRA 66st	UTM	32T	732778	4955859	1	0	0
1482	01/12/2022 13	10:47	6 A A	ST147M	ST147Mh14	S recinto 13	1	0	ISPRA 66st	UTM	33T	268162	4942857	1	0	0
	12	11:23	7 D A	ST148F	ST148Fh16	dentro recinto 12	0	1	ISPRA 66st	UTM	33T	266717	4943751	1	0	0
	8	15:23	7 A A	ST58M	ST58Mh17	SE recinto 8	1	0	ISPRA 66st	UTM	32T	733324	4952179	1	0	0
	2	14:27	3 A A	ST127M	ST127Mh18	S recinto 2	0	1	ISPRA 66st	UTM	32T	735073	4951236	1	0	0
	7	14:44	4 A A	ST56M	ST56Mh19	S recinto 2	0	1	ISPRA 66st	UTM	32T	734824	4952047	1	0	0
1487	05/12/2022 11	15:48	3 A A	ST128M	ST128Mh20	dentro recinto 11	1	1	ISPRA 66st	UTM	33T	263550	4946262	0	1	0
	11	15:51	3 A A	ST172M	ST172Mh12	dentro recinto 11	0	1	ISPRA 66st	UTM	33T	263505	4946253	0	1	0
	18	8:18	1 A A	ST168M	ST168Mh14	dentro recinto 18	0	1	ISPRA 66st	UTM	32T	732777	4955883	1	0	0
	18	8:27	1 A A	ST156M	ST156Mh15	SE recinto 18	0	1	ISPRA 66st	UTM	32T	732899	4955795	0	1	0
	8	9:15	1 A A	ST58M	ST58Mh18	S recinto 8 lungo strada Alberelli	0	1	ISPRA 66st	UTM	32T	733290	4951829	1	0	0
1492	06/12/2022 9	15:36	8 A A	ST151F	ST151Fh17	dentro recinto 9	0	1	ISPRA 66st	UTM	33T	269944	4948546	1	0	0
		16:03	8 A A	ST96F	ST96Fdead	N recinto 13	0	1	ISPRA 66st	UTM	33T	267706	4943864	0	0	0
		16:23	8 A A	ST147M	ST147Mh15	S recinto 13	0	1	ISPRA 66st	UTM	33T	268165	4942862	1	0	0
		16:42	8 A A	ST148F	ST148Fh17	fuori recinto 12	0	1	ISPRA 66st	UTM	33T	266734	4943790	1	0	0
		10:35	8 A A	ST162F	ST162Fh09	NE recinto 15	0	1	ISPRA 66st	UTM	33T	264245	4953969	1	0	0
1497	07/12/2022 5	14:09	7 A A	ST157F	ST157Fh15	fuori recinto 6	0	1	ISPRA 66st	UTM	33T	263105	4952688	1	0	0
		14:13	7 A A	ST69F	ST69Fh22	fuori recinto 6	0	1	ISPRA 66st	UTM	33T	263194	4952682	1	0	0
		14:45	6 A A	ST86F	ST86Fdead	SW recinto 5	0	1	ISPRA 66st	UTM	33T	262718	4952412	0	0	0
		16:23	0 A A	ST58M	ST58Mh19	ıto 8 un po' prima del bivio lungo strada Al	1	0	Chiara	UTM	32T	733308	4951618	1	0	0
		9:50	8 D P	ST172M	ST172Mh13	dentro recinto 11	1	0	Chiara	UTM	33T	263560	4946268	0	1	0
1502	13/12/2022 11	10:00	8 D P	ST128M	ST128Mh21	dentro recinto 11	1	0	Chiara	UTM	33T	263553	4946265	0	1	0
		10:43	8 D P	ST62F	ST62Fh28	fuori recinto 5 a N	0	1	Chiara	UTM	33T	263087	4952633	1	0	0
		10:52	8 D P	ST157F	ST157Fh16	dentro recinto 6	0	1	Chiara	UTM	33T	263165	4952722	1	0	0

	COPPIA	GRUPPO	N. INDIVIDUI GRUPPO	REAZIONE ALL'HOMING	DISTANZA DI FUGA(m)	MACROHABITAT	ALTRE SPECIE	OPERATORE	NOTE	INSERIMEN
1481	0	1	20	fuga	5	nella voliera		GD		GD
1482	0	1	20	nessuna		bordo strada vicino edificio		GD		GD
1483	0	1	20	nessuna		nel recinto		GD		GD
1484	0	1	10	fuga	8	cespuglieto, tra frutteto e strada asfaltata		GD		GD
1485	0	1	10	fuga	8	frangivento bordo strada	0	SV		SV
1486	0	1	8	fuga	6	rdo campo arato tra fascia erbacea medio alta, bordo frangiven	0	SV	non lontano da mangiatoia verde	SV
		1	5	fuga	6	in voliera tra vegetazione	0	SV	si è allontanata di pedina	SV
		1	50	fuga	30	tra vegetazione del recinto	0	SV	si è allontanata di pedina	SV
		1	50	fuga	10	su erba bassa in voliera	0	SV		SV
		1	20	fuga	30	cespuglieto, frangivento, tamerici e cespugli	0	SV	si è allontanata di pedina	SV
1491	0	1	22	fuga	7	cespuglieto, frangivento	0	SV		SV
		1	14	fuga	8	in voliera tra vegetazione	albanella 1	SV	si è allontanata di pedina	SV
		0	0	nessuna	-	incolto, su erba bassa	0	SV	rte ignote, collare con beccate, se non è m	SV
		1	19	nessuna	-	cespuglieto bordo strada	0	SV	vicino a mangiatoia verde	SV
		1	35	fuga	20	bordo recinto su terra	0	SV		SV

STILL or MOVING

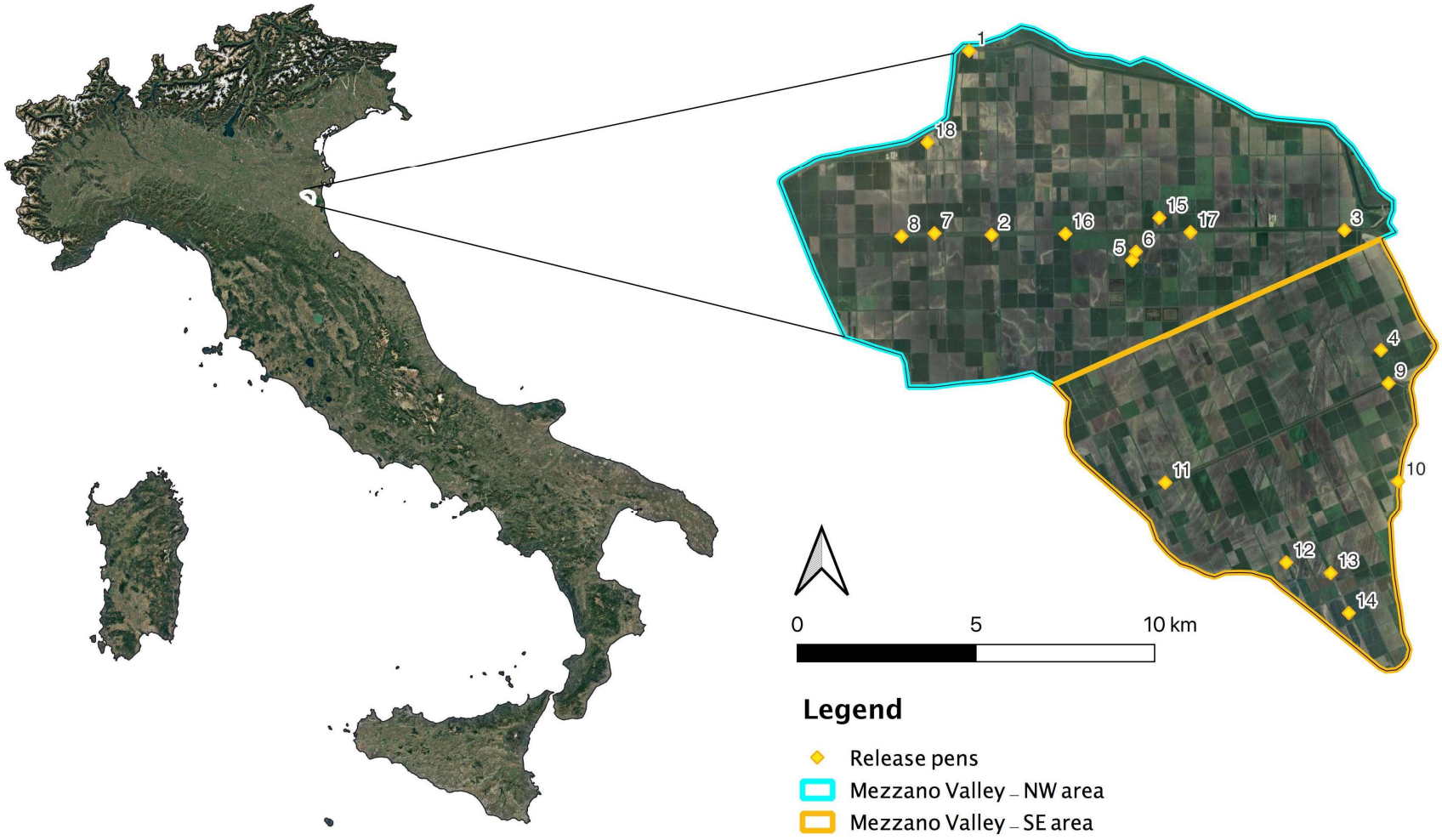
ALONE/PAIR/GROUP

REACTION

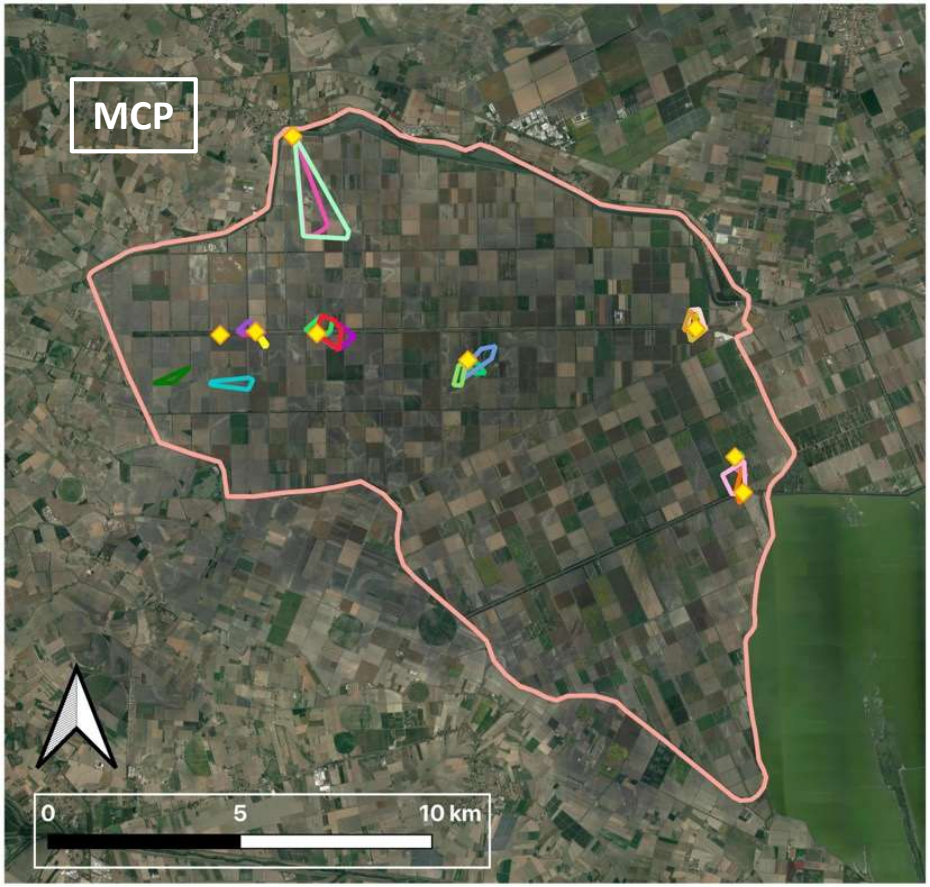
HABITAT

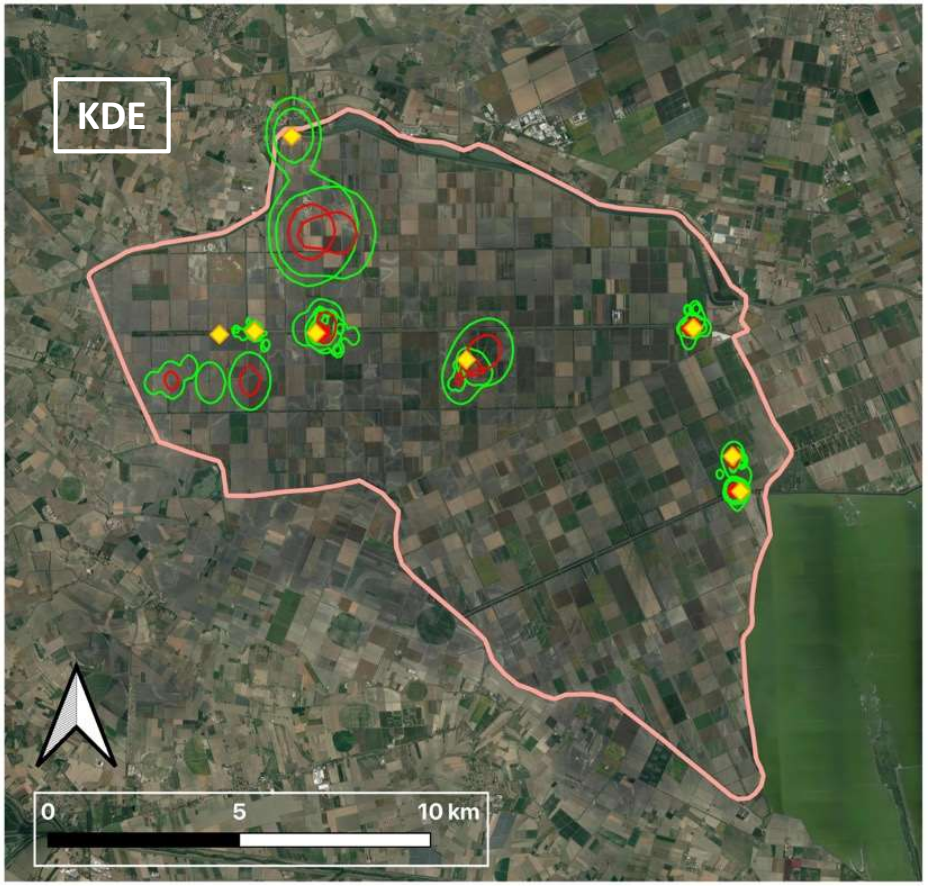
OTHER SPECIES

STUDY AREA – MEZZANO VALLEY



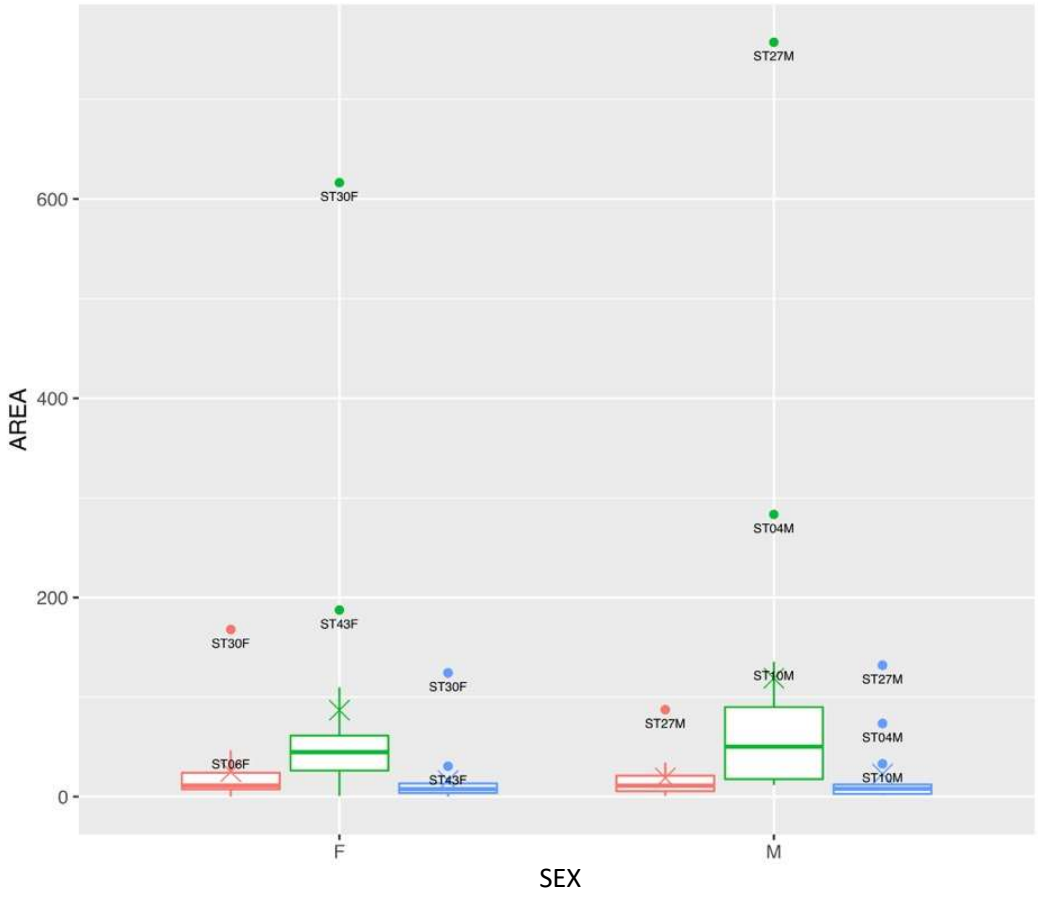
RESULTS 2021-2022





PEN
KDE 95
KDE 50
MEZZANO VALLEY

RESULTS 2021 - 2022



Size of vital areas (area in ha)

Differences between females and males -
No significant differences found

Sample consisting of
16 females and 13 males

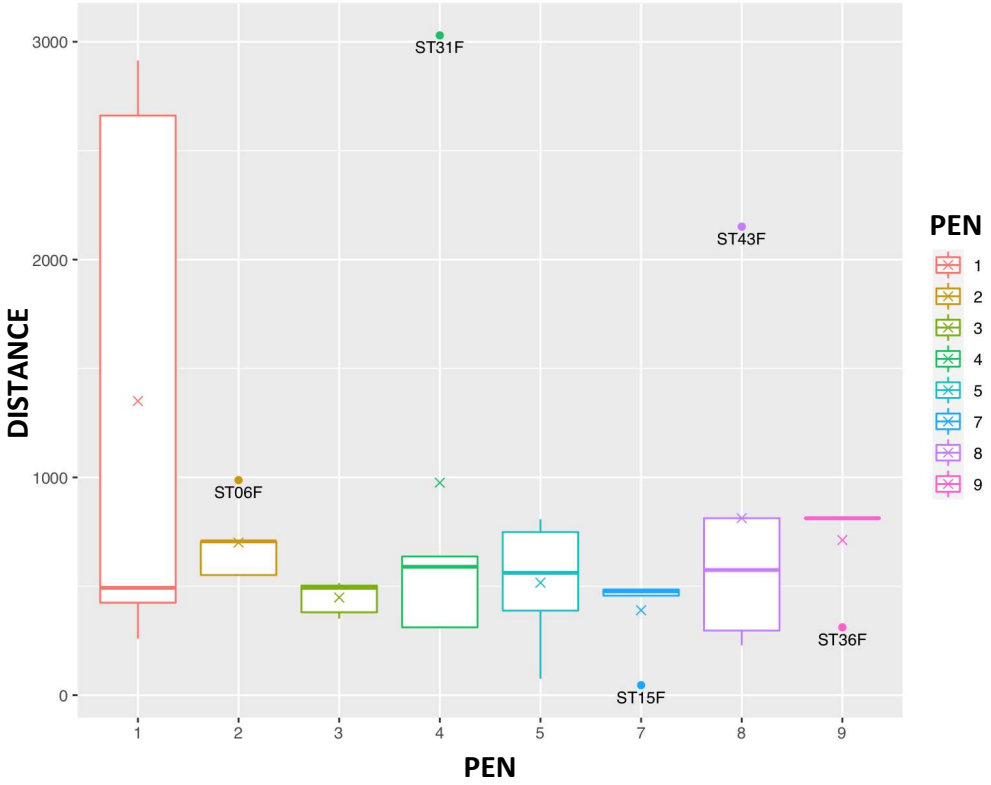
RESULTS 2021 - 2022

ID ANIMAL	SEX	PEN N°	SEASON	AREA MCP (ha)	AREA KDE 95 (ha)	AREA KDE 50 (ha)
ST07M	M	2	INVERNO	34.36	82.83	13.88
			PRIMAVERA	0.997	5.00	1.20
ST08F	F	2	INVERNO	34.36	79.71	13.29
			PRIMAVERA	4.923	17.00	4.05
ST12M	M	8	INVERNO	7.717	14.47	2.07
			PRIMAVERA	1.493	15.27	3.43
ST40F	F	9	INVERNO	33.064	49.09	7.82
			PRIMAVERA	0.265	2.04	0.57

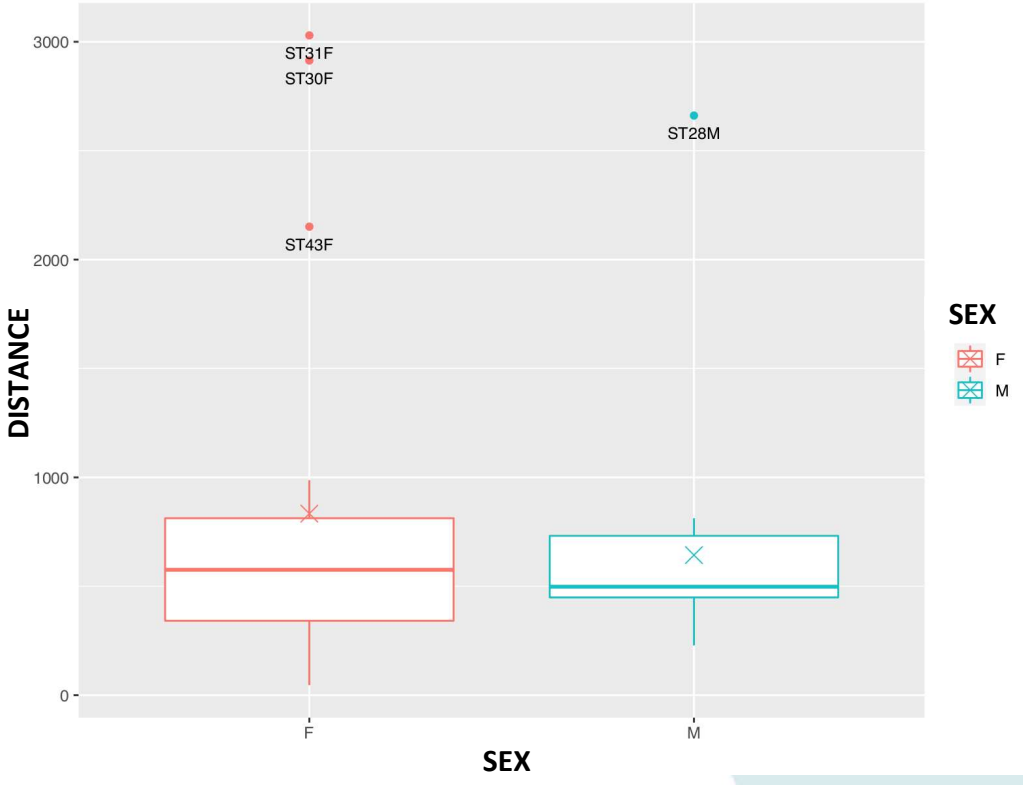
The seasonal comparison of the vital areas was carried out taking into account only animals with a sufficient number of fixes (at least 5) for both the winter and spring periods

Winter data refer to the period November 2021 - February 2022
Spring data refer to the period March 2022 - June 2022

RESULTS 2021 - 2022

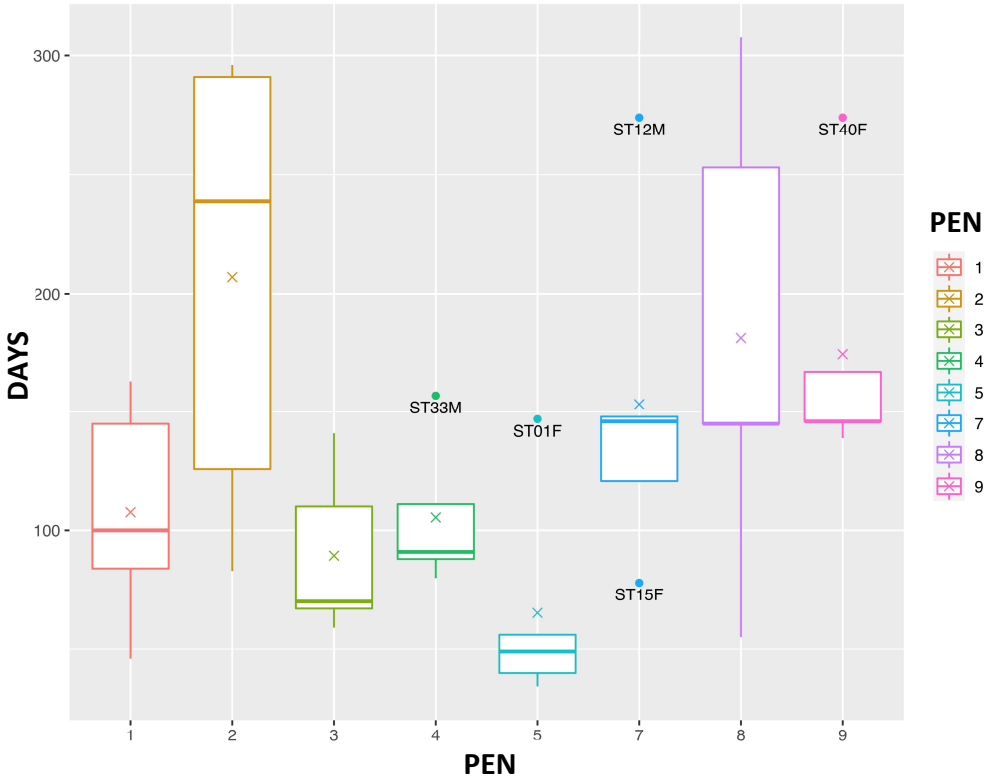


Distance (in metres) achieved by grey partridges equipped with a radio-collar in relation to the catch pen

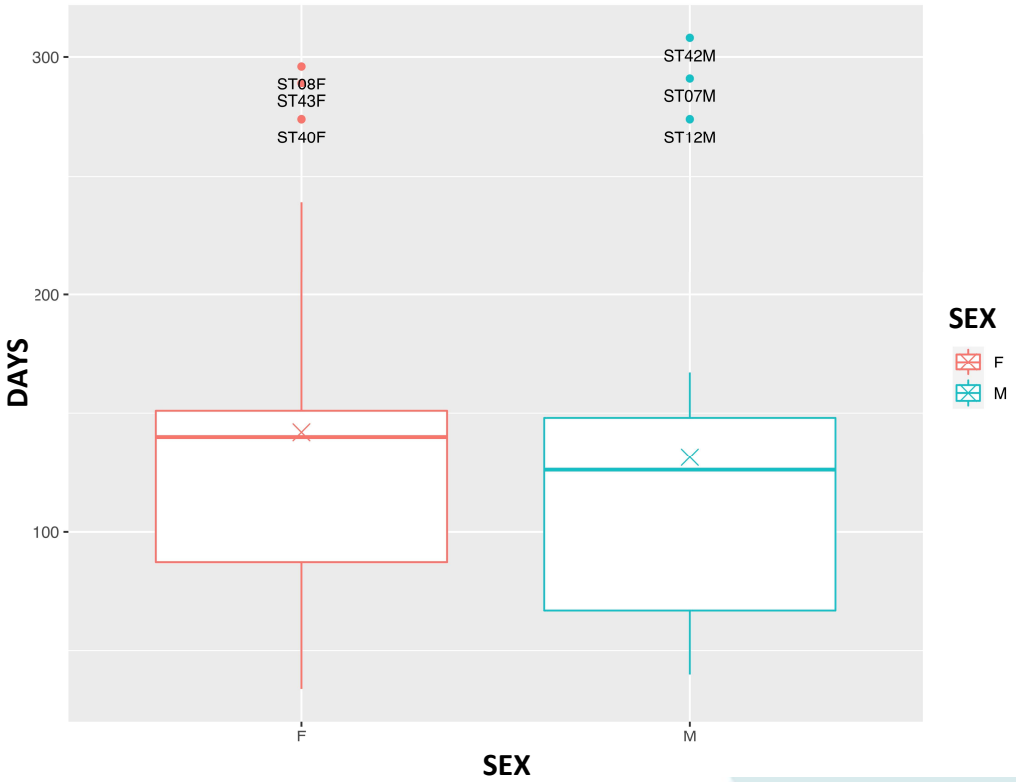


Distance (in metres) achieved by grey partridges equipped with a radio-collar with respect to sex

RESULTS 2021 - 2022

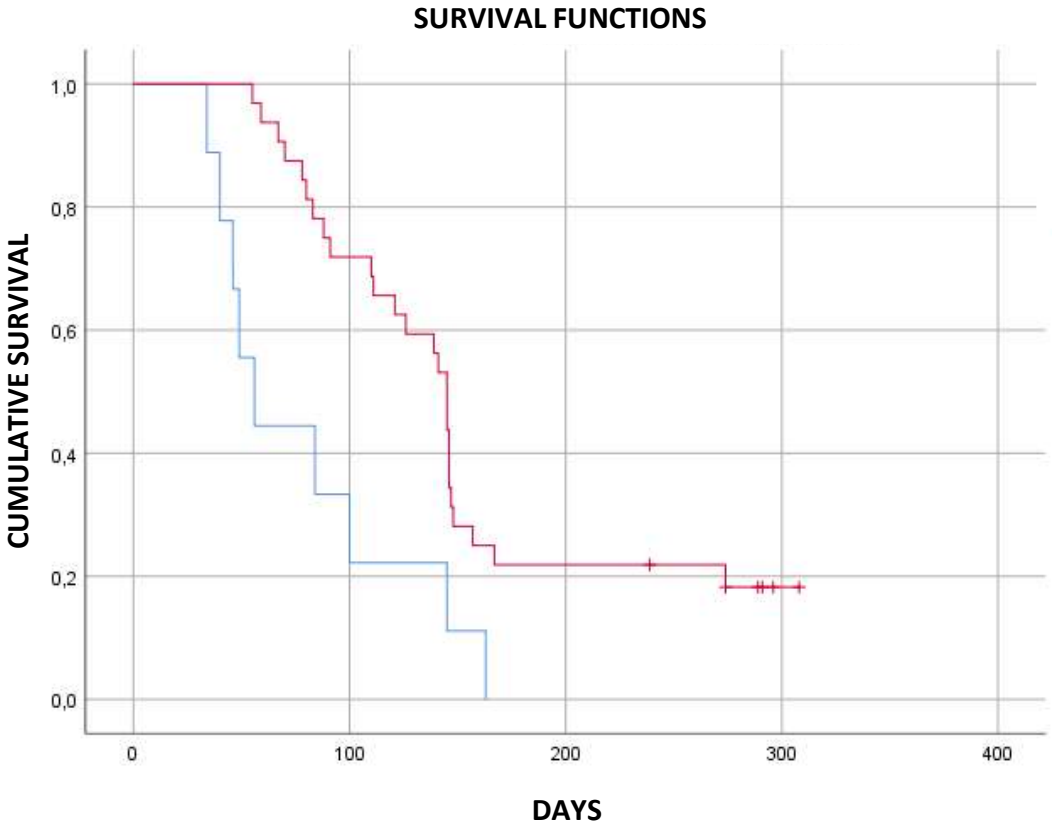


Survival (in days) achieved by grey partridges equipped with a radio-collar in relation to the catch pen



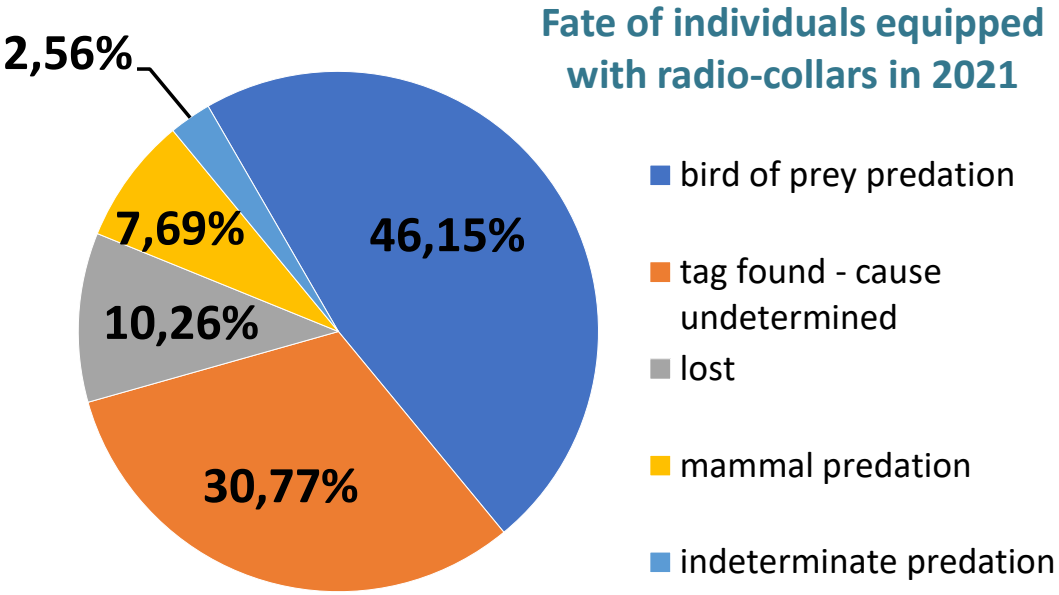
Survival (in days) achieved by grey partridges equipped with a radio-collar with respect to sex

RESULTS 2021 - 2022

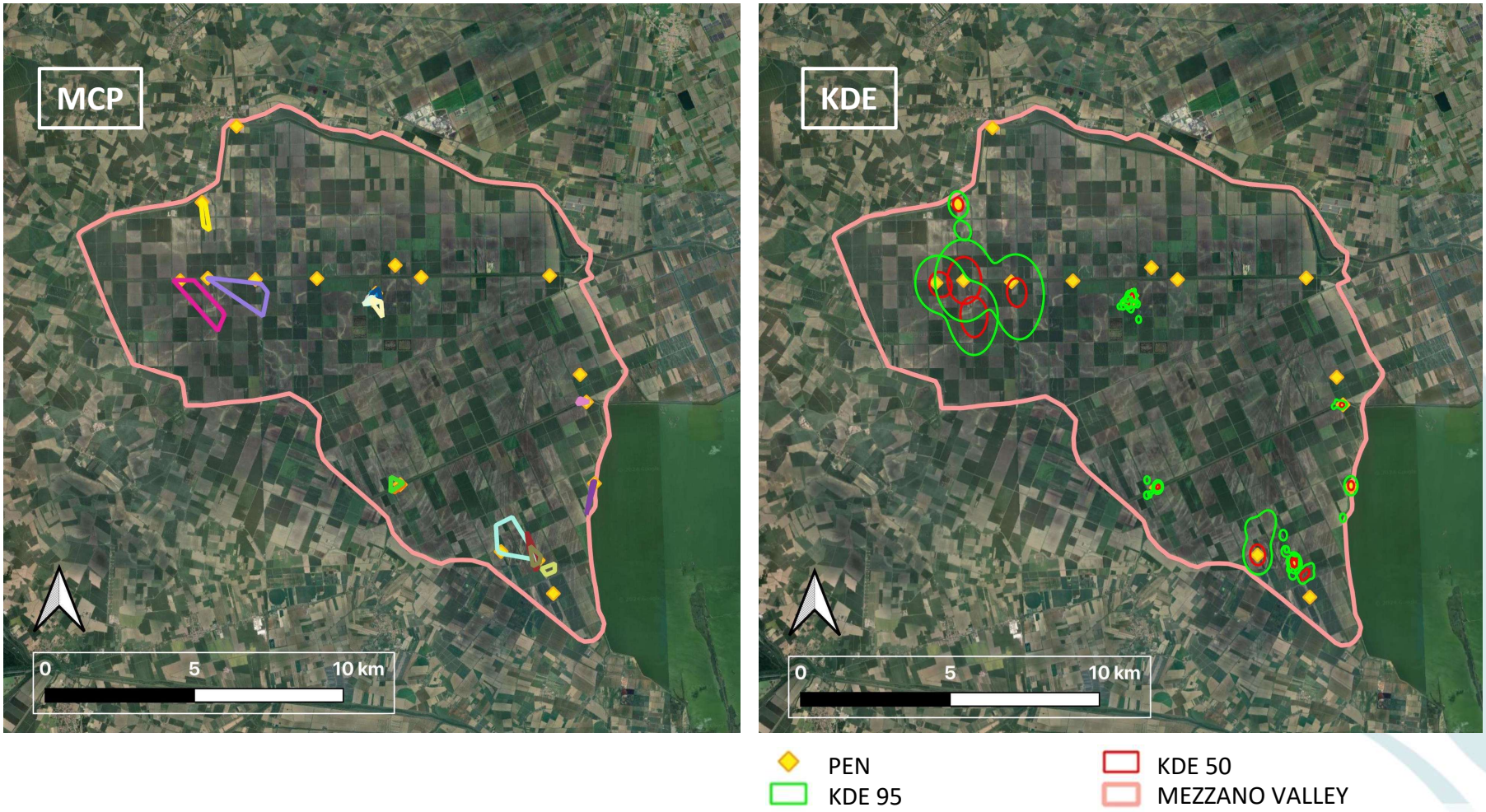


Control sample

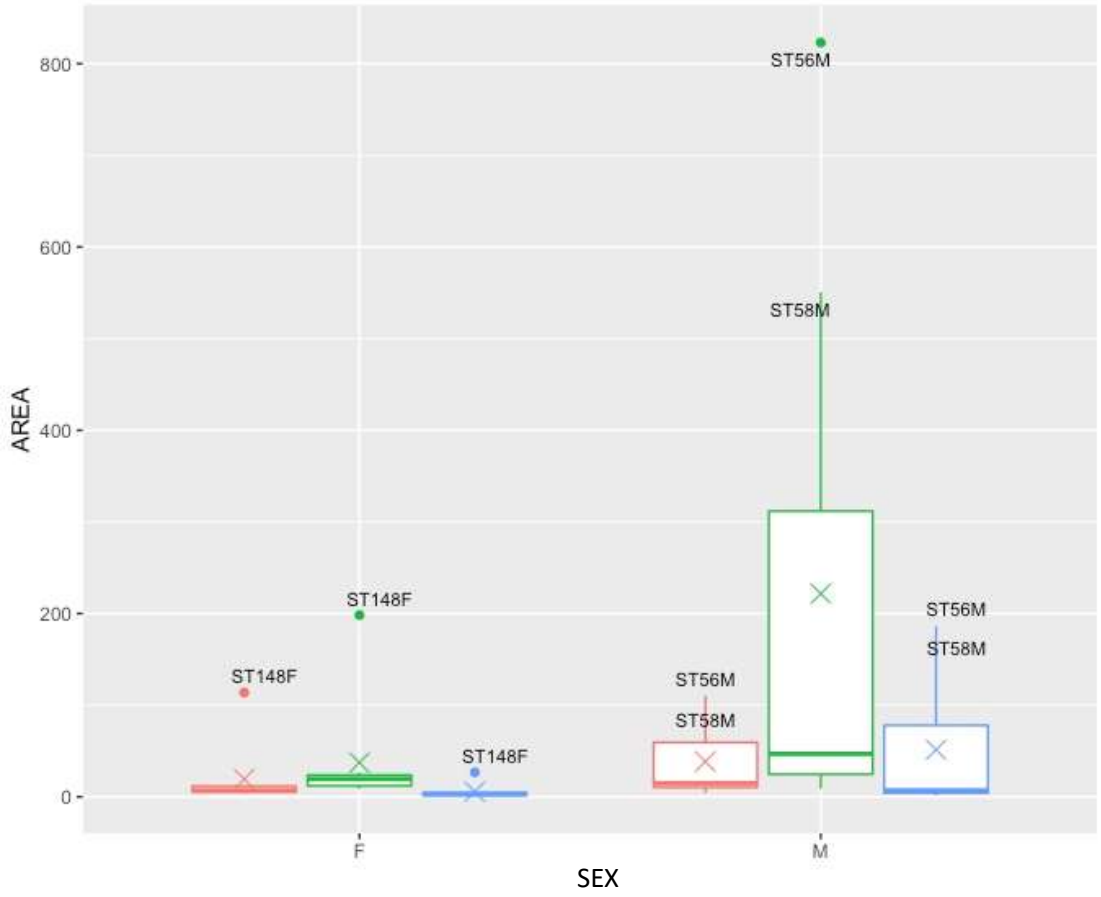
Anti-predatory treatment



RESULTS 2022-2023



RESULTS 2022-2023



Size of vital areas (area in ha)

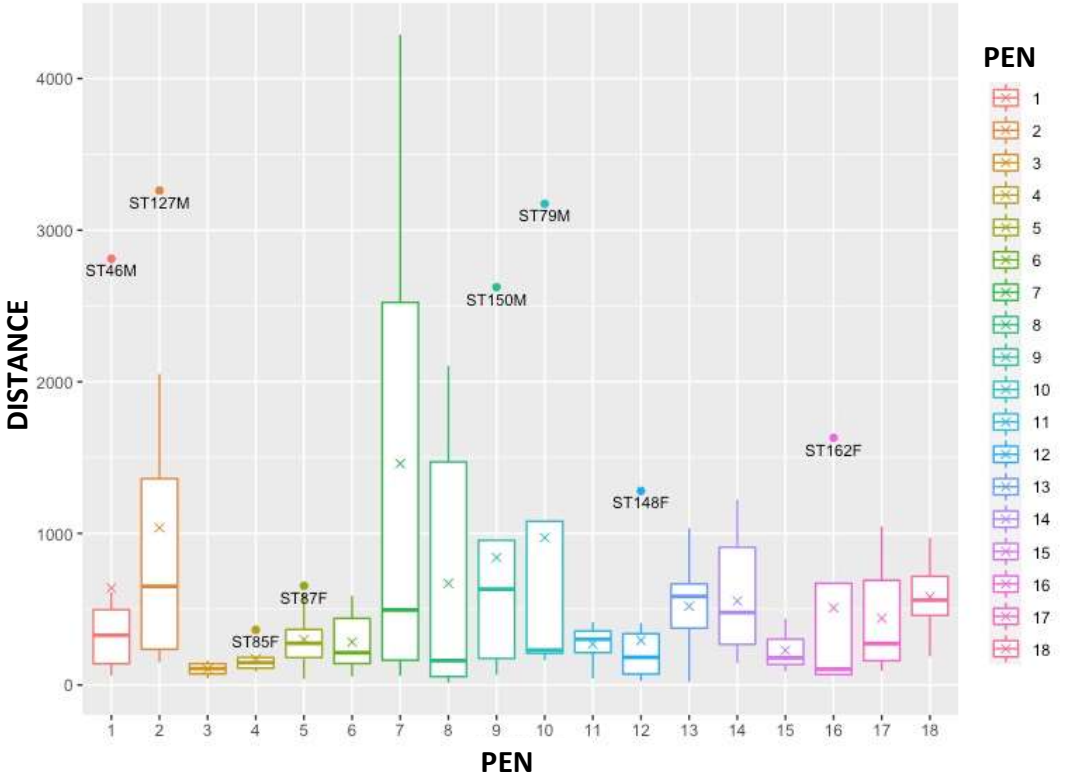
Differences between females and males –

Although there is a difference between the values of males and females in the 95% KDE results, there is insufficient evidence to state that there is a significant difference (p-value > 0.1)

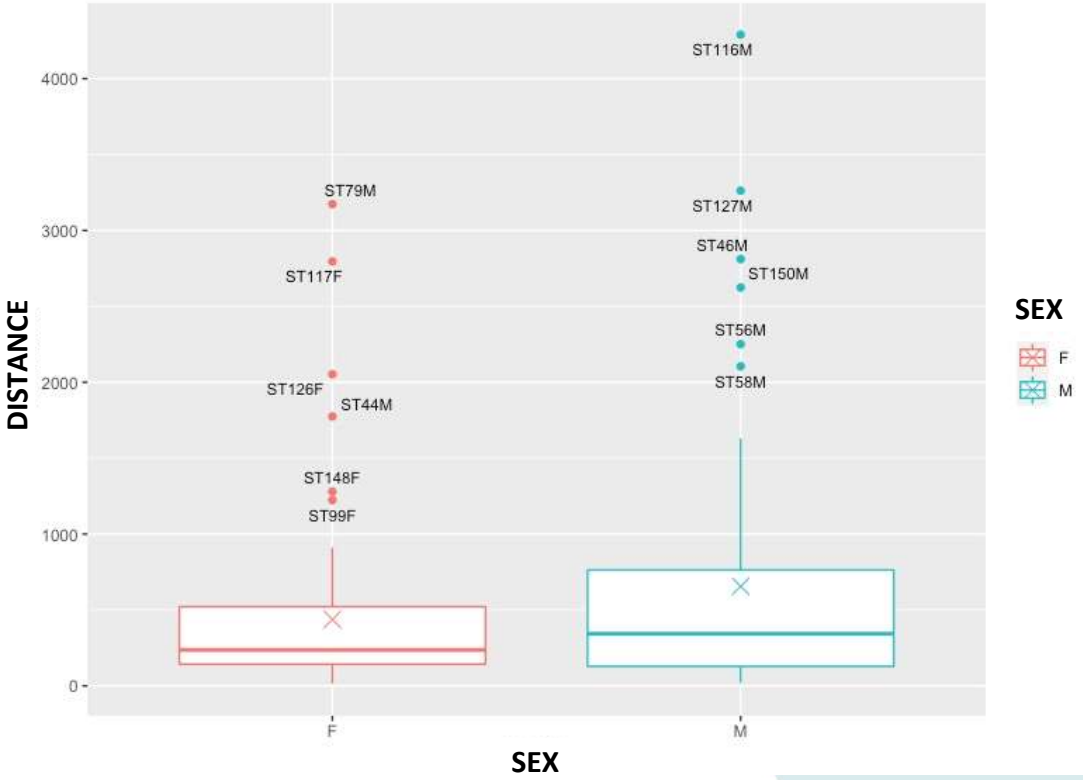
METHOD
- MCP
- KDE_95
- KDE_50

Sample consisting of
9 females and 7 males

RESULTS 2022-2023

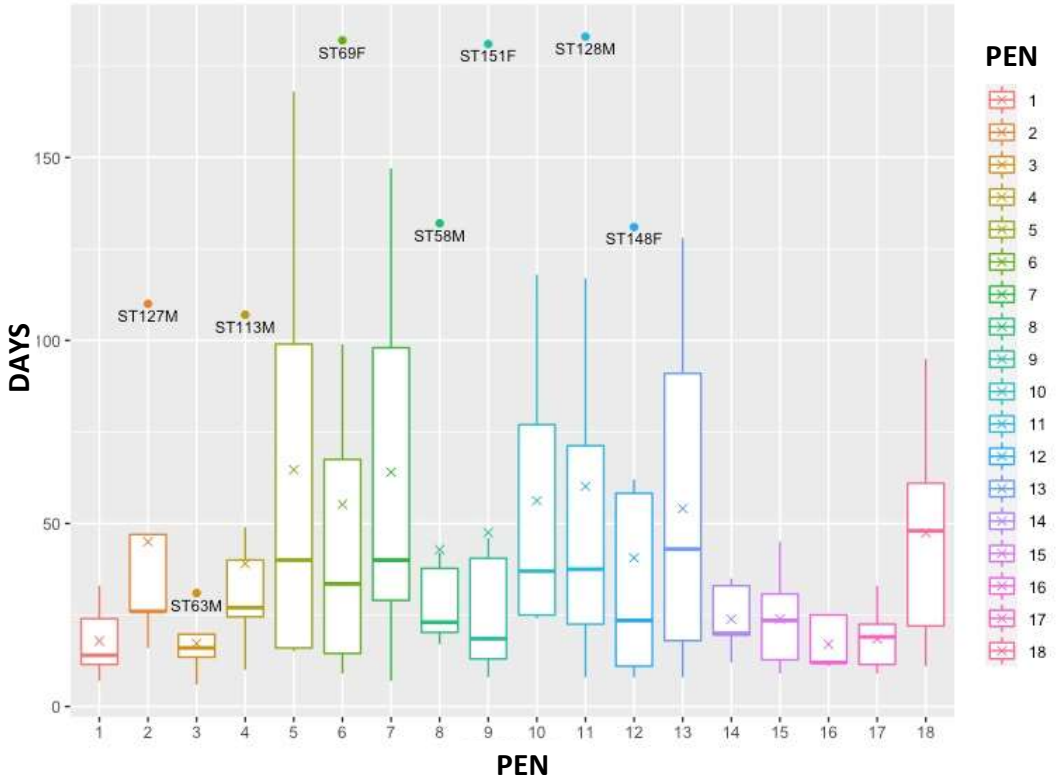


Distance (in metres) achieved by grey partridges equipped with a radio-collar in relation to the catch pen

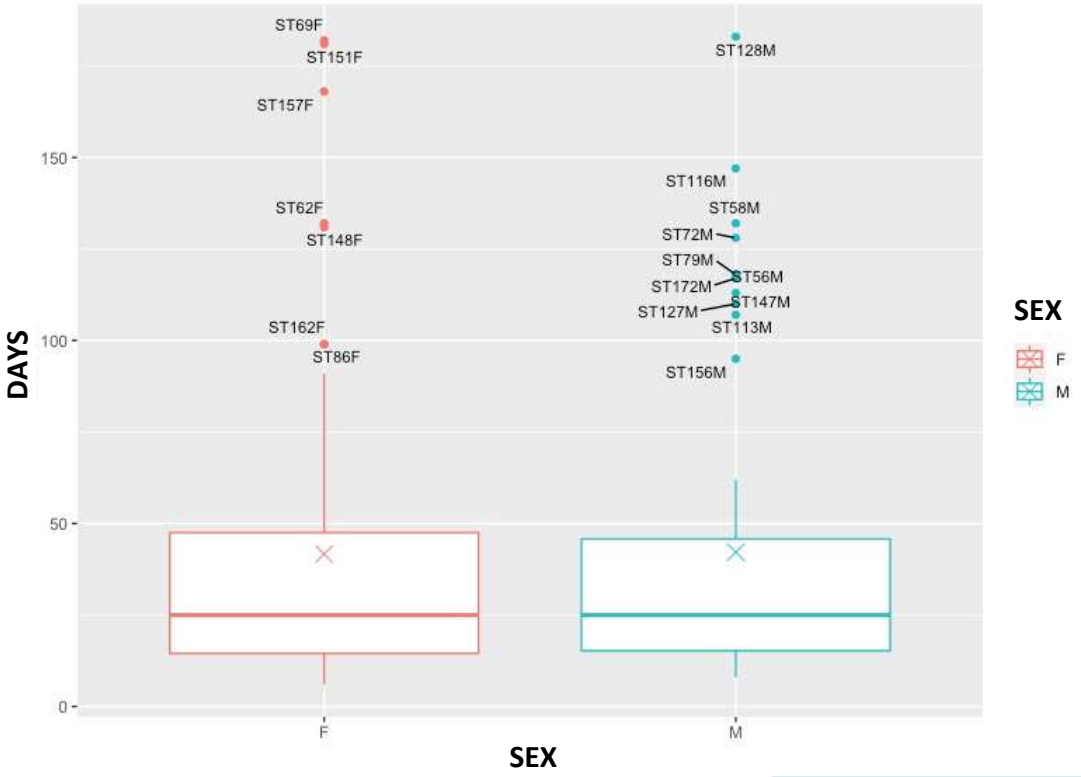


Distance (in metres) achieved by grey partridges equipped with a radio-collar with respect to sex

RESULTS 2022-2023

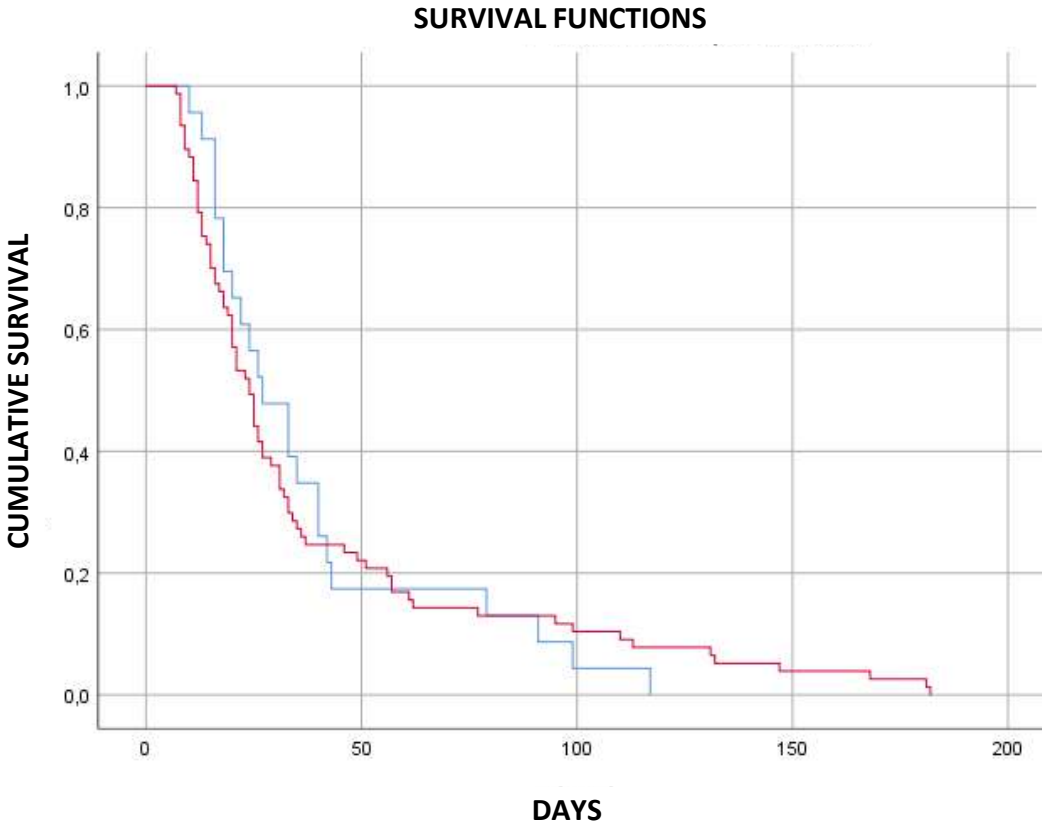


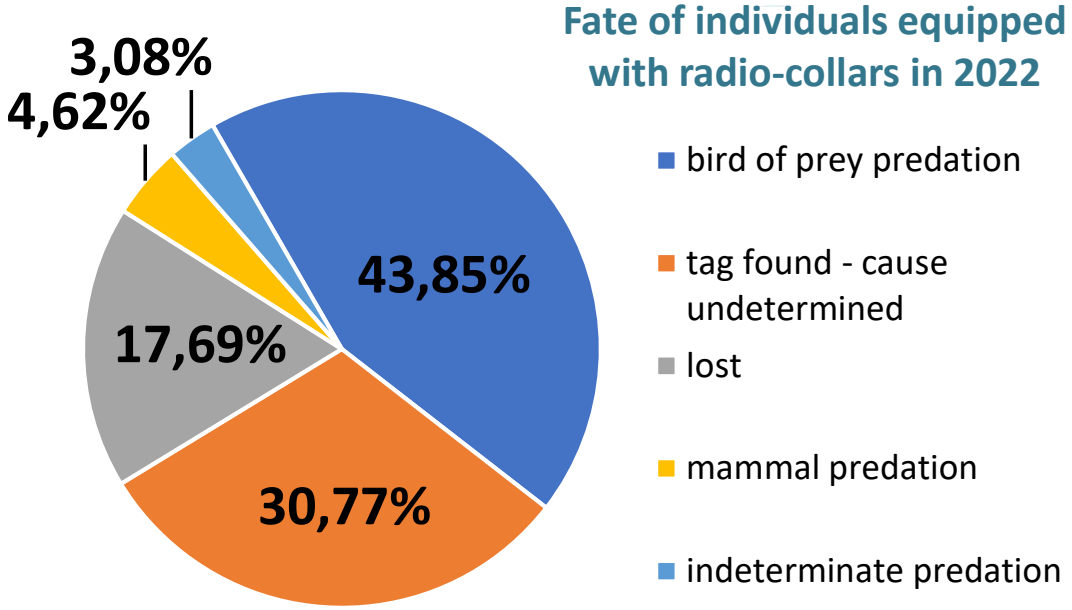
Survival (in days) achieved by grey partridges equipped with a radio-collar in relation to the catch pen



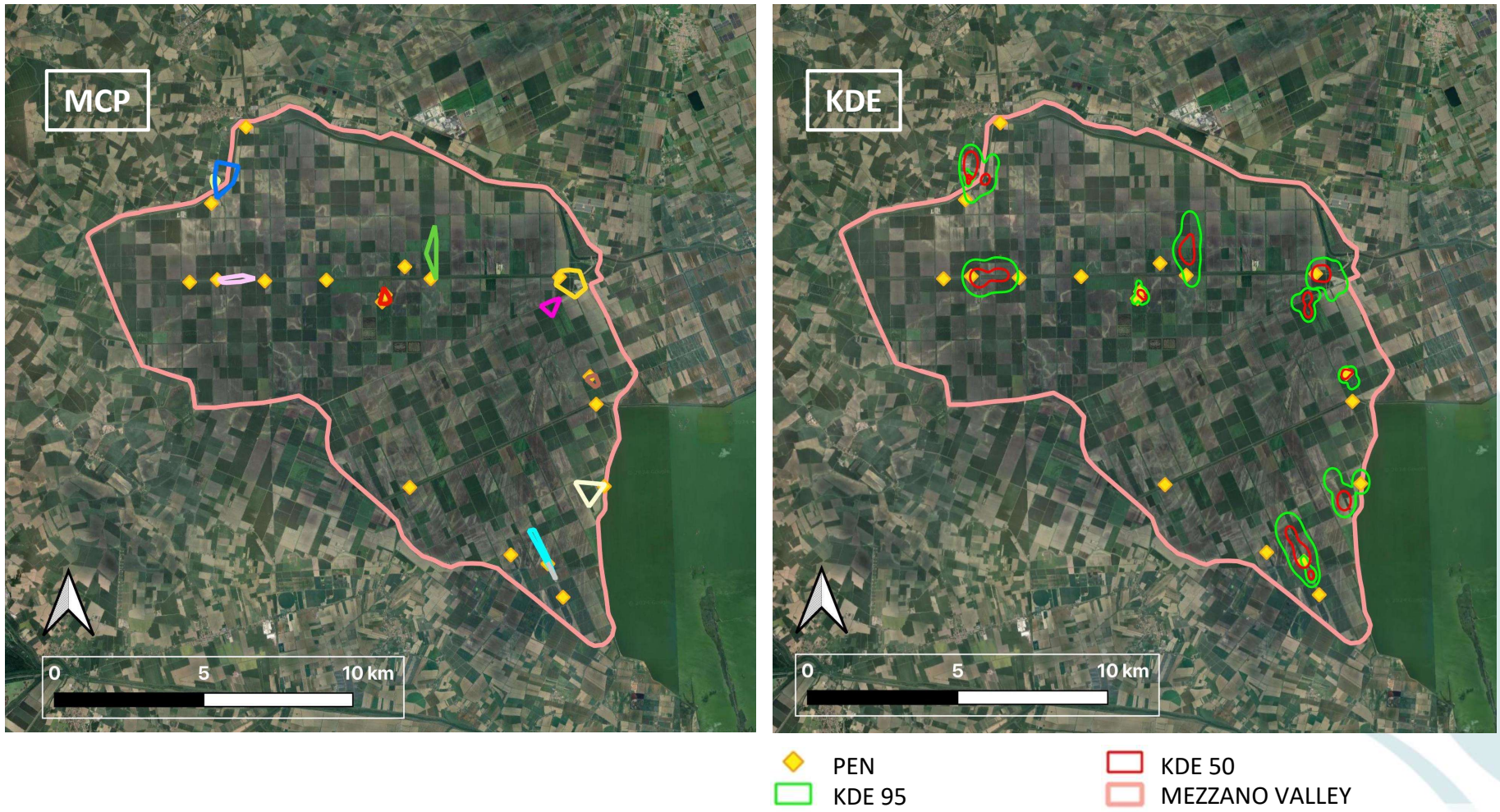
Survival (in days) achieved by grey partridges equipped with a radio-collar with respect to sex

RESULTS 2022 - 2023

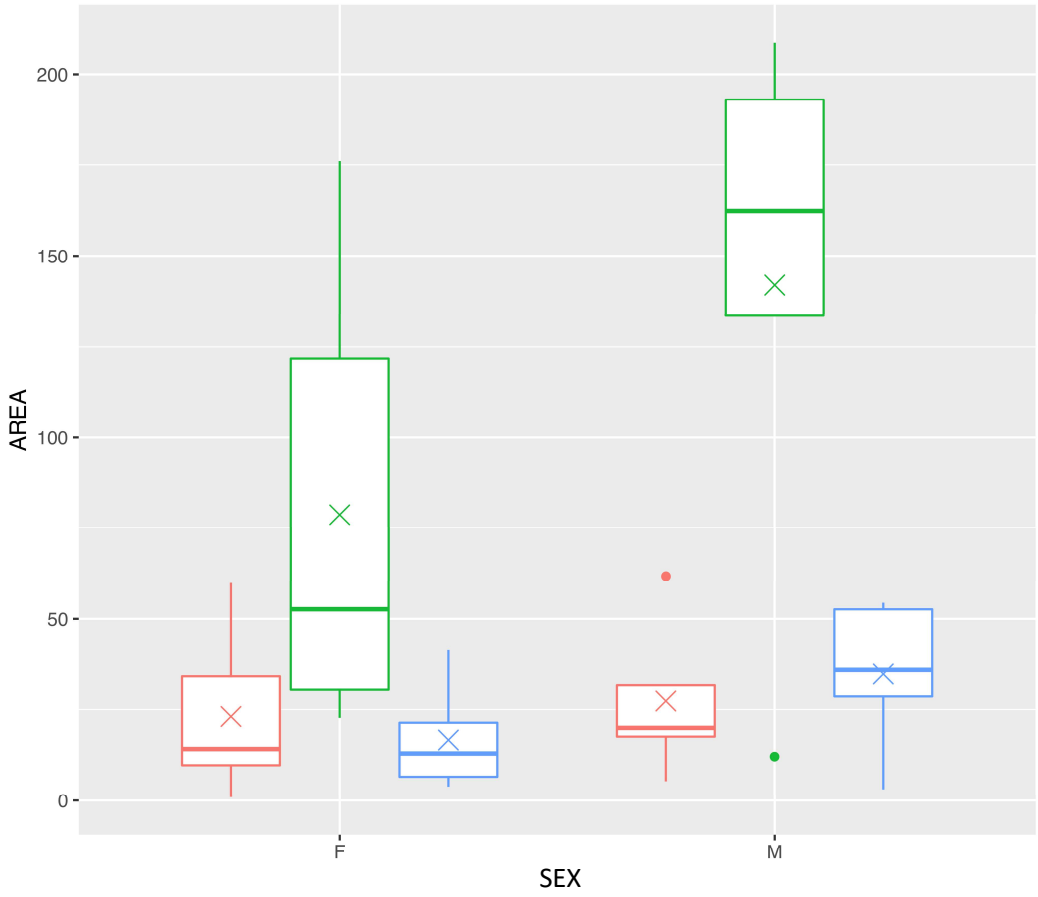




RESULTS 2023-2024



RESULTS 2023 - 2024



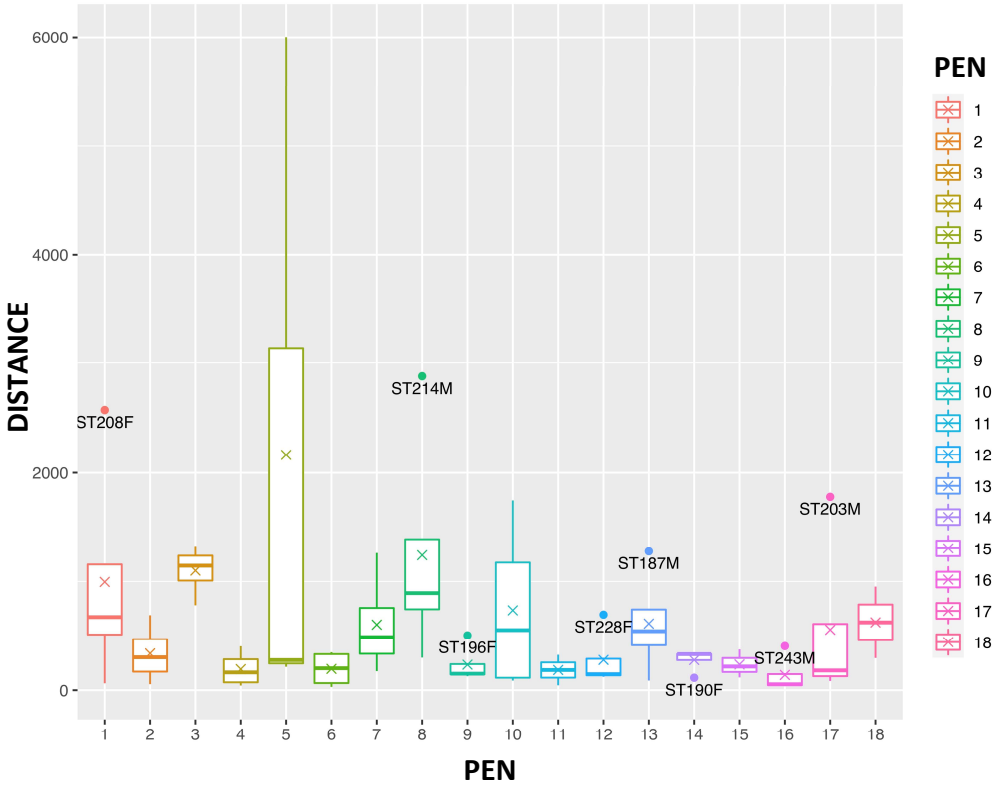
Size of vital areas (area in ha)

Differences between females and males –

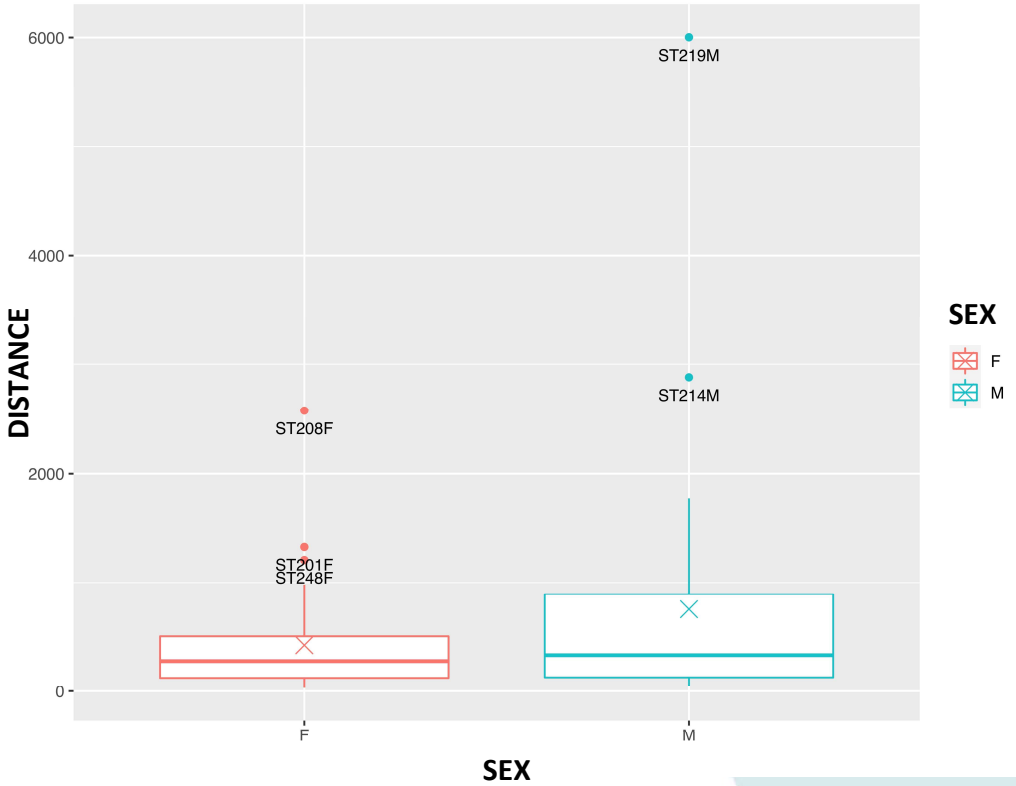
Although there is a difference between the values of males and females in the 95% KDE results, there is insufficient evidence to state that there is a significant difference (p-value > 0.1)

Sample consisting of
6 females and 5 males

RESULTS 2023 - 2024

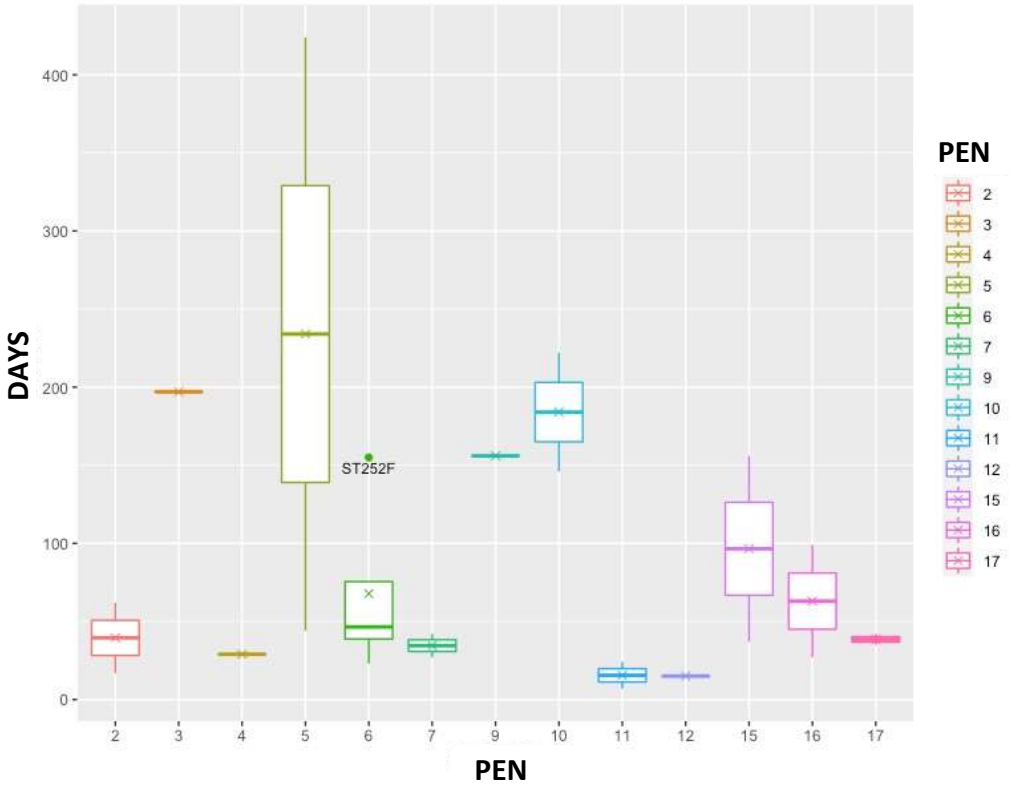


Distance (in metres) achieved by grey partridges equipped with a radio-collar in relation to the catch pen

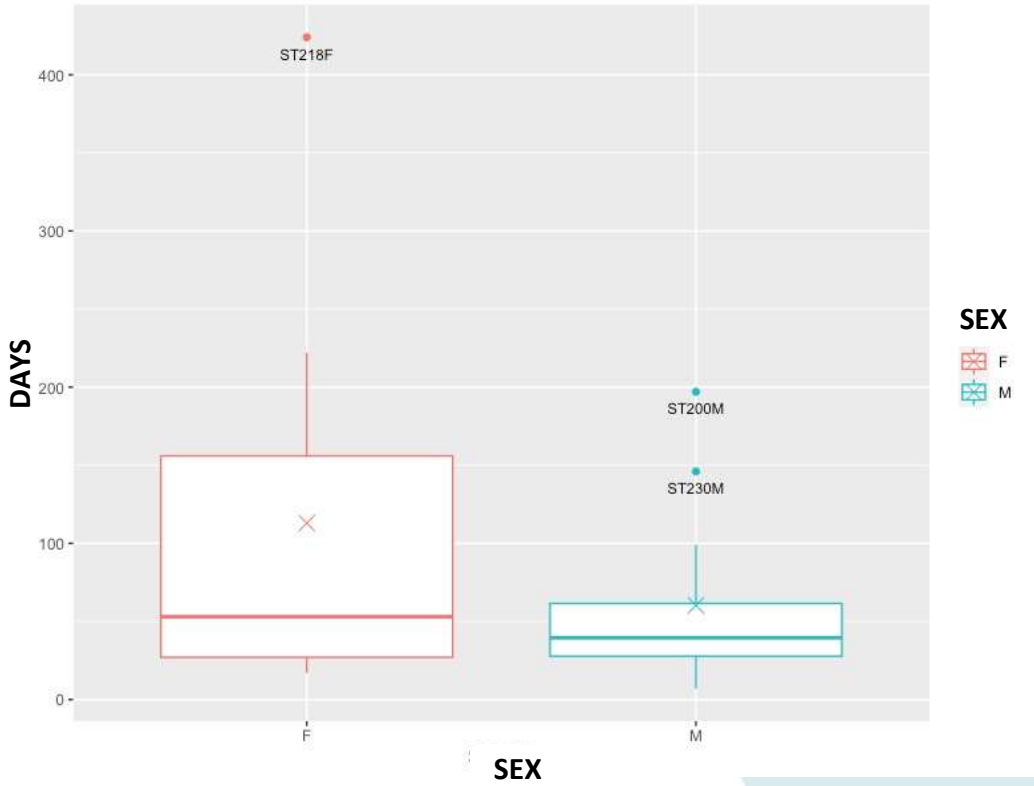


Distance (in metres) achieved by grey partridges equipped with a radio-collar with respect to sex

RESULTS 2023 - 2024



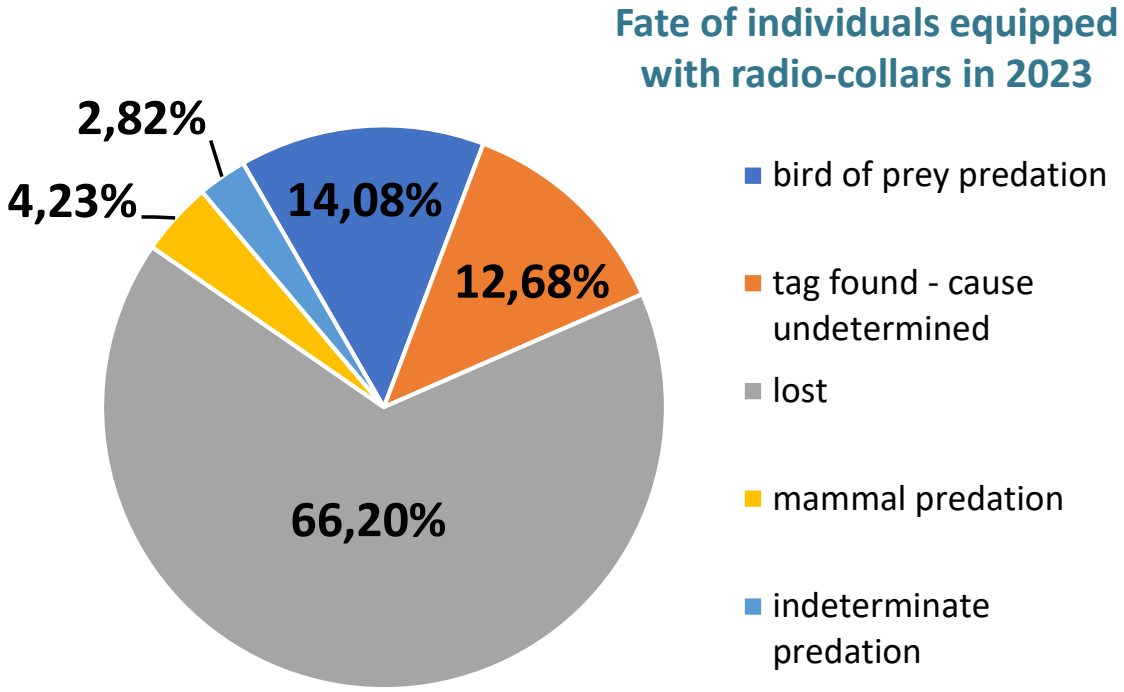
Survival (in days) achieved by grey partridges equipped with a radio-collar in relation to the catch pen



Survival (in days) achieved by grey partridges equipped with a radio-collar with respect to sex

RESULTS 2023 - 2024

The grey partridges released in 2023 all underwent the anti-predatory treatment, so it was not possible to calculate the survival of treated partridges compared to untreated partridges.



LIFE PERDIX

REDISCOVER BEAUTY IN RARITY

THANK YOU FOR YOUR ATTENTION!

Stefania Volani (ISPRA)

Wildlife ecologist

and GIS analyst

stefania.volani@gmail.com