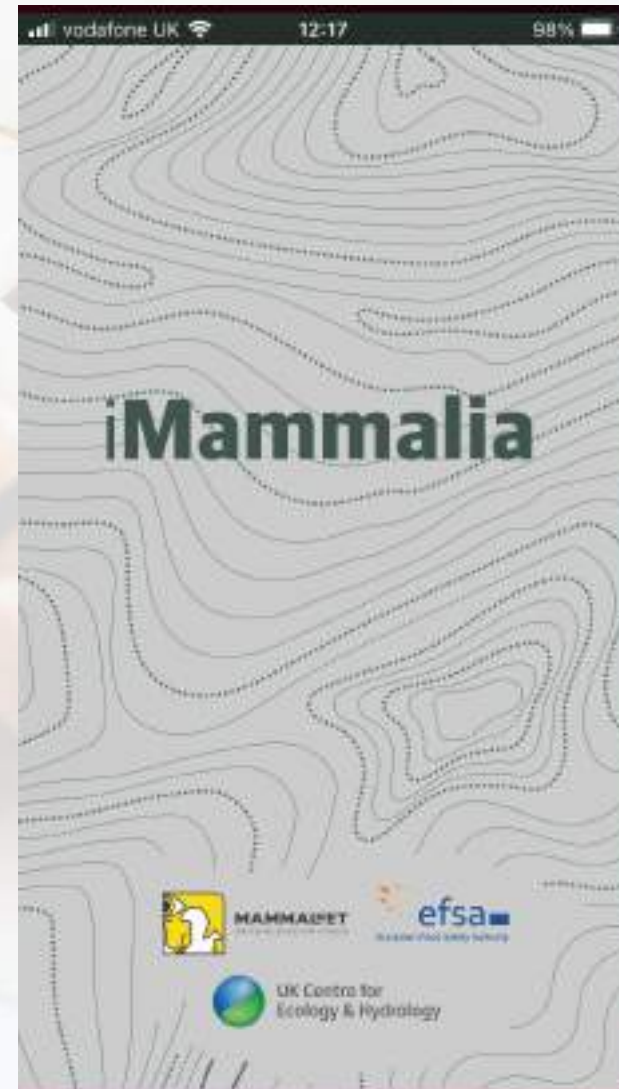


iMammalia: Citizen science at the service of wildlife disease surveillance

**Graham C Smith
(APHA, UK)**

**& ENETWILD
consortium**

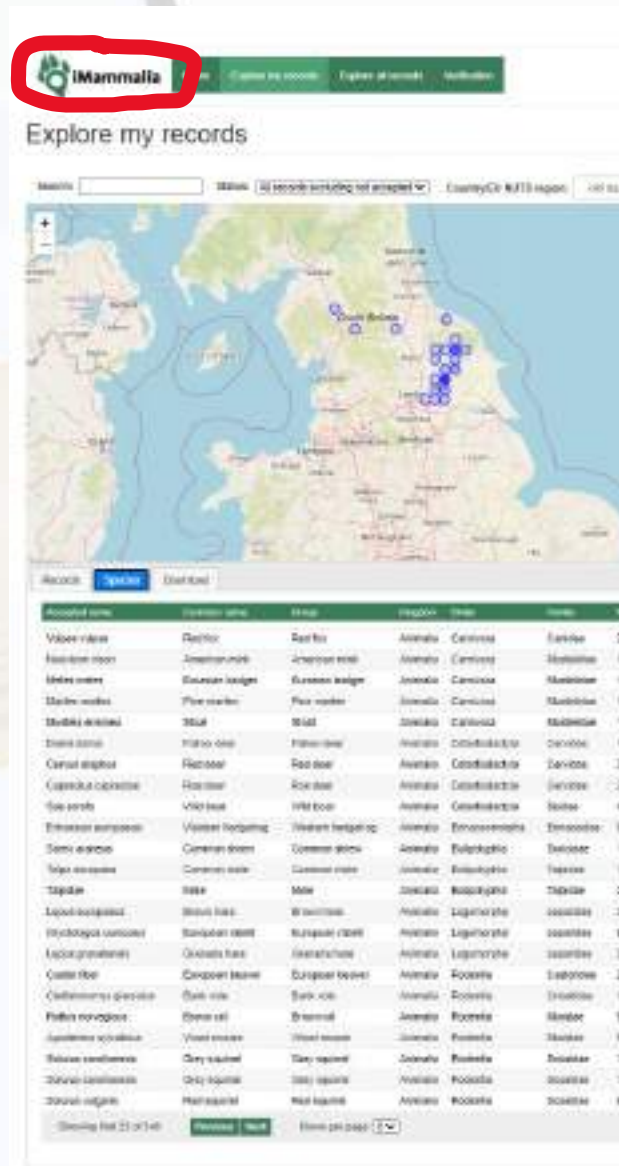


IMAMMALIA

- What is it?
- How do I use it?
- How are records checked?
- How does it help?

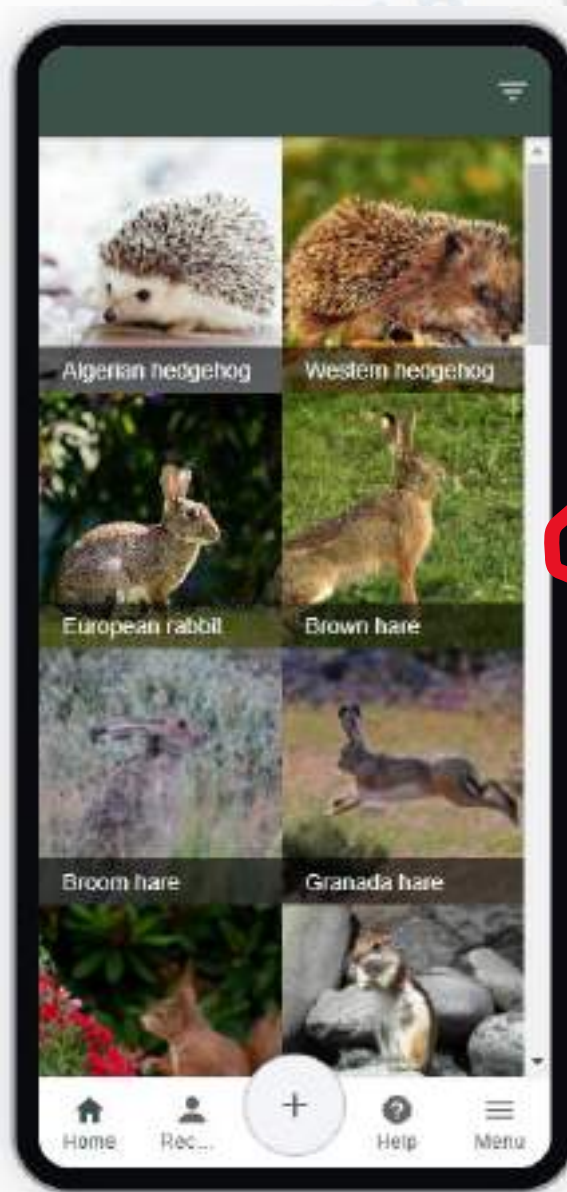


MammalNet Tools

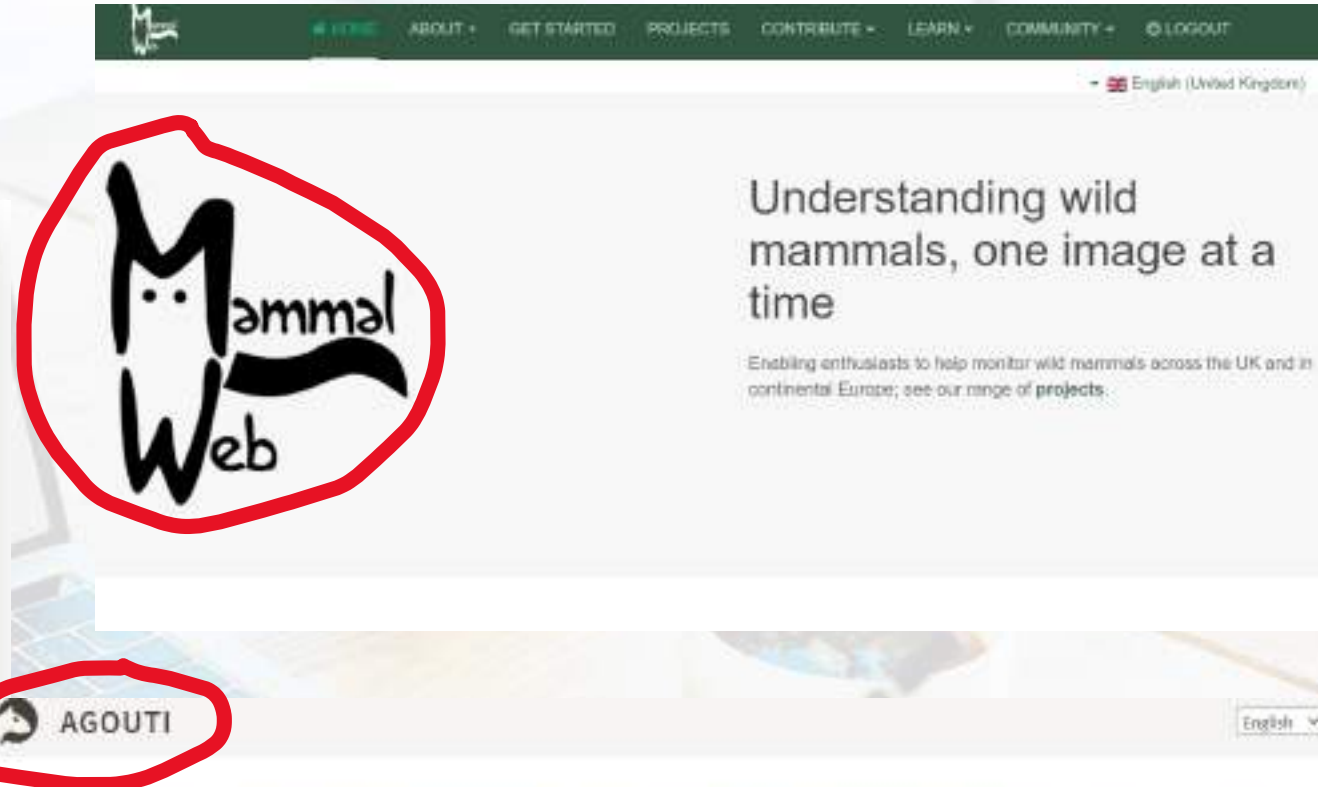


The iMammalia web interface features a green header with the logo and navigation links: Home, Explore my records, Explore all records, and Help. Below the header, the 'Explore my records' section includes a map of Europe with blue location markers and a table of records.

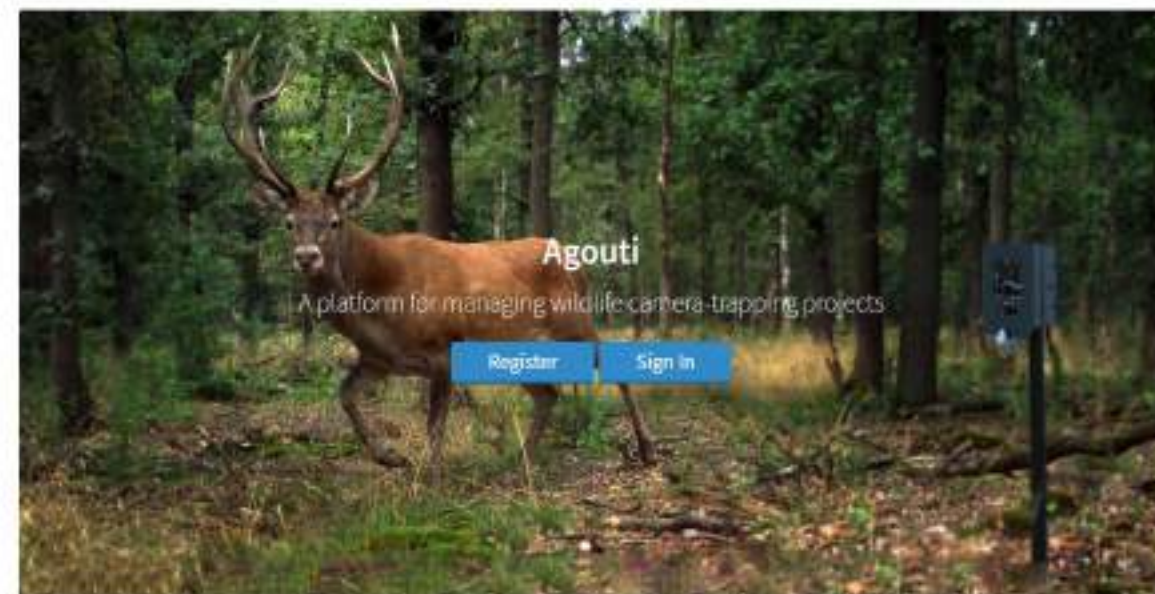
Record ID	Species name	Sex	Region	Year	Count
V000000001	Red fox	Red fox	Alentejo	2010	1
V000000002	European badger	European badger	Alentejo	2010	1
V000000003	European badger	European badger	Alentejo	2010	1
V000000004	European badger	European badger	Alentejo	2010	1
V000000005	European badger	European badger	Alentejo	2010	1
V000000006	European badger	European badger	Alentejo	2010	1
V000000007	European badger	European badger	Alentejo	2010	1
V000000008	European badger	European badger	Alentejo	2010	1
V000000009	European badger	European badger	Alentejo	2010	1
V000000010	European badger	European badger	Alentejo	2010	1



The MammalNet mobile app interface displays a grid of mammal images with labels: Algerian hedgehog, Western hedgehog, European rabbit, Brown hare, Broom hare, and Granada hare. The bottom navigation bar includes icons for Home, Records, Add, Help, and Menu.



The Mammal Web logo is a stylized 'M' with 'Mammal Web' text. The AGOUTI logo features a stylized animal head icon and the word 'AGOUTI'.

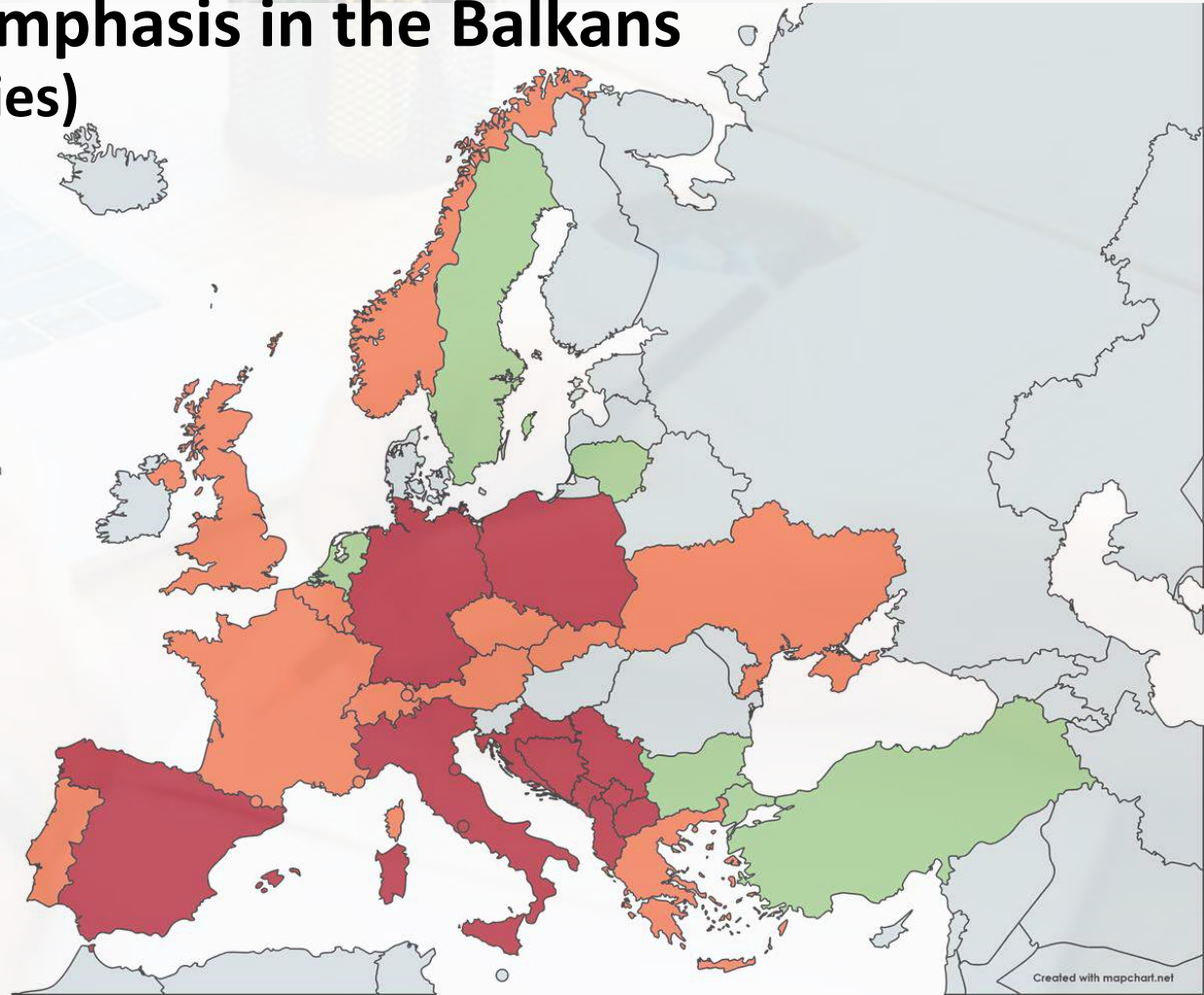


The Agouti website banner shows a large stag in a forest. The text reads: 'Agouti A platform for managing wildlife camera-trapping projects'. Below the text are 'Register' and 'Sign in' buttons.

Progress: iMammalia

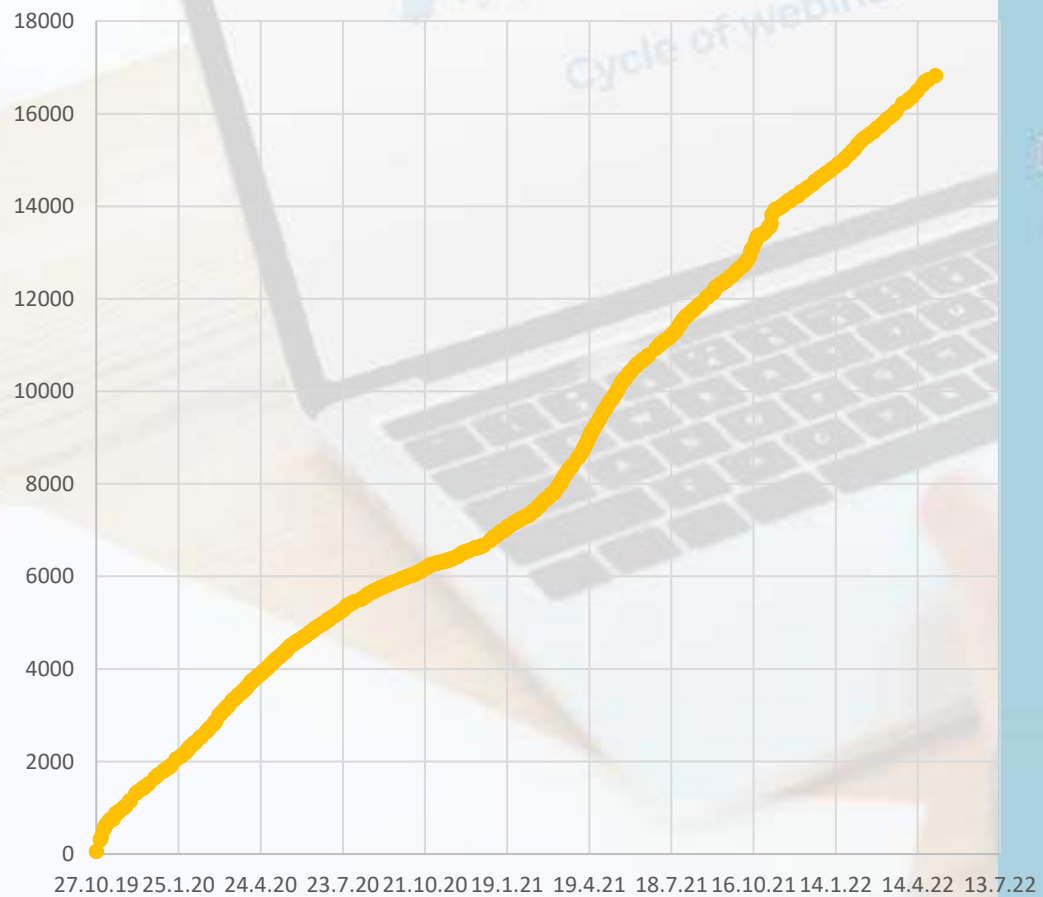
- Launched in October 2019. Can record ANY mammal anywhere.
- Currently in 17 languages, with an emphasis in the Balkans (No official publicity in the orange countries)
- Over 16,800 records in 33 European countries of 90 different species
- More translators needed

language - no press
language - press launch
language in progress



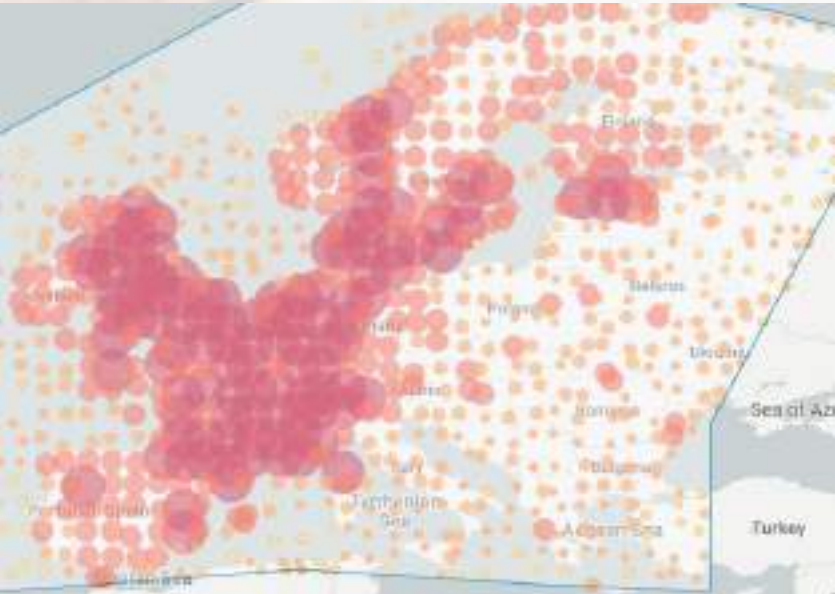
18 records / day

iMammalia Submitted Records

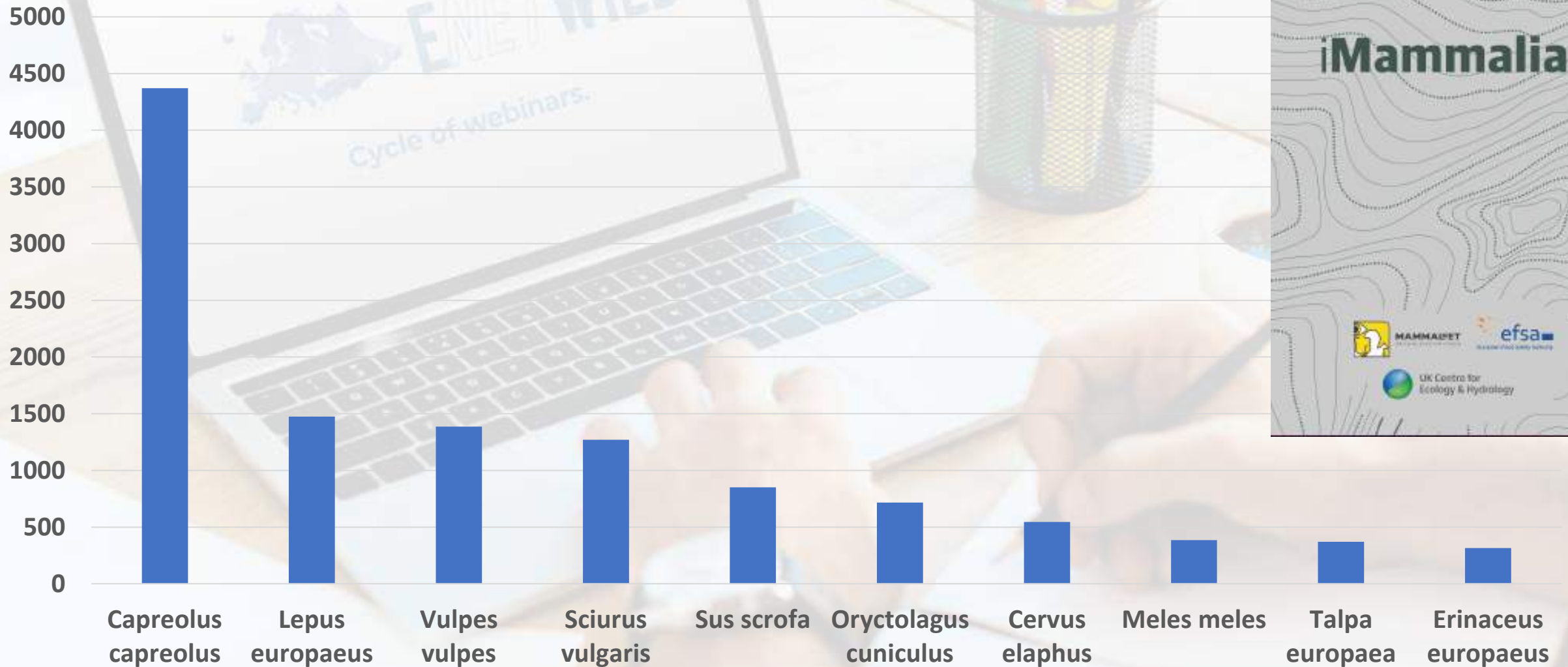


Contribution to GBIF (5,712)

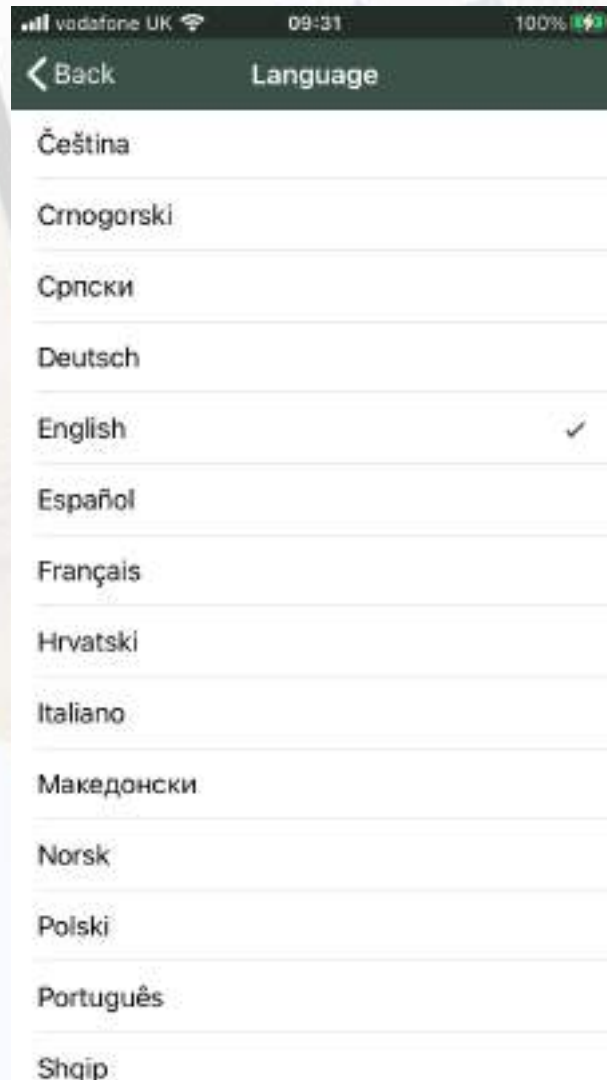
Country	Rate per million people	Rate per 1,000km ²	GBIF records 2019-2022	Proportion iMammalia
Bosnia and Herzegovina	16.1	1.0	154	0.45
Croatia	54.6	4.0	587	1.62
Germany	65.0	15.3	96439	0.07
Italy	3.4	0.7	12848	0.04
Montenegro	373.3	16.2	79	5.18
Poland	59.2	7.2	2211	1.43
Serbia	27.5	3.1	113	7.23
Spain	42.5	4.0	31953	0.08



iMammalia top ten



iMammalia – How do I use it ?



iMammalia – How do I use it ?

vodafone UK 12:22 96%

< Back Record Finish

Species >

Location 53.975, -1.009 >
0-10m

Date 29/4/2022 >

1.2.3 Number >

Method >

Type >

Comment >

No photo has been added

vodafone UK 10:02 80%

< Back Record Finish

Species Red fox >

Location 54.042, -0.948 >
0-10m

Date Today >

1.2.3 Number 1 >

Method Direct observati... >

Type Dropping >

Comment >

No photo has been added

vodafone UK 12:29 95%

< Back Record Finish

Species Stoat >

Location 53.975, -1.009 >
0-10m

Date 29/4/2022 >

1.2.3 Number 1 >

Method Direct observati... >

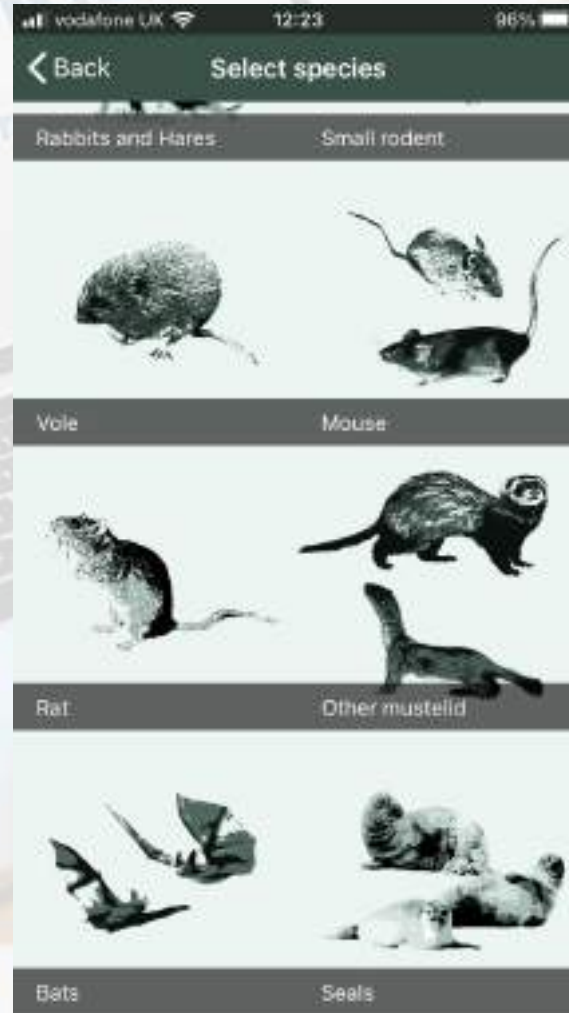
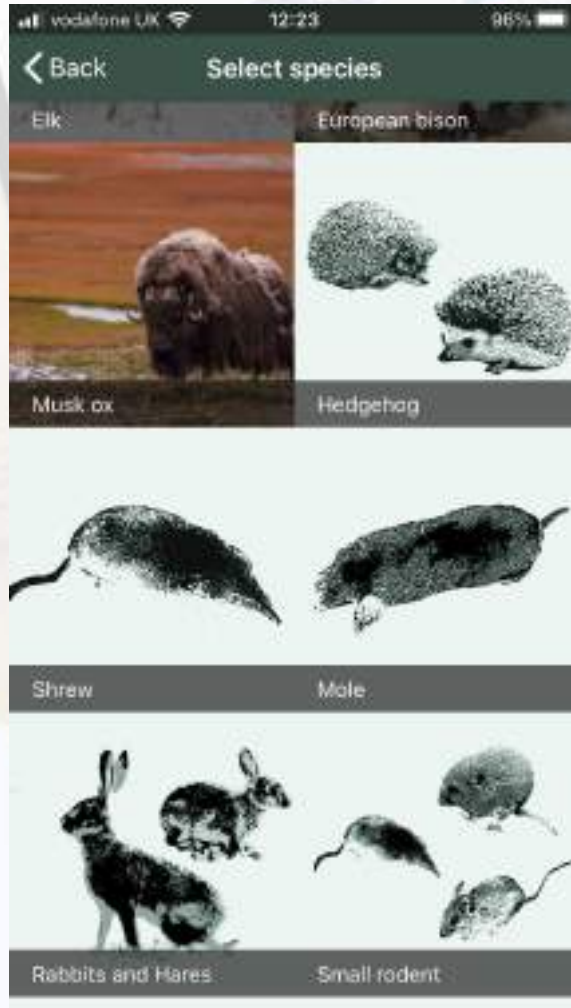
Type Alive >

Comment small brown an... >

*Small brown and white
mustelid with black tip to tail*

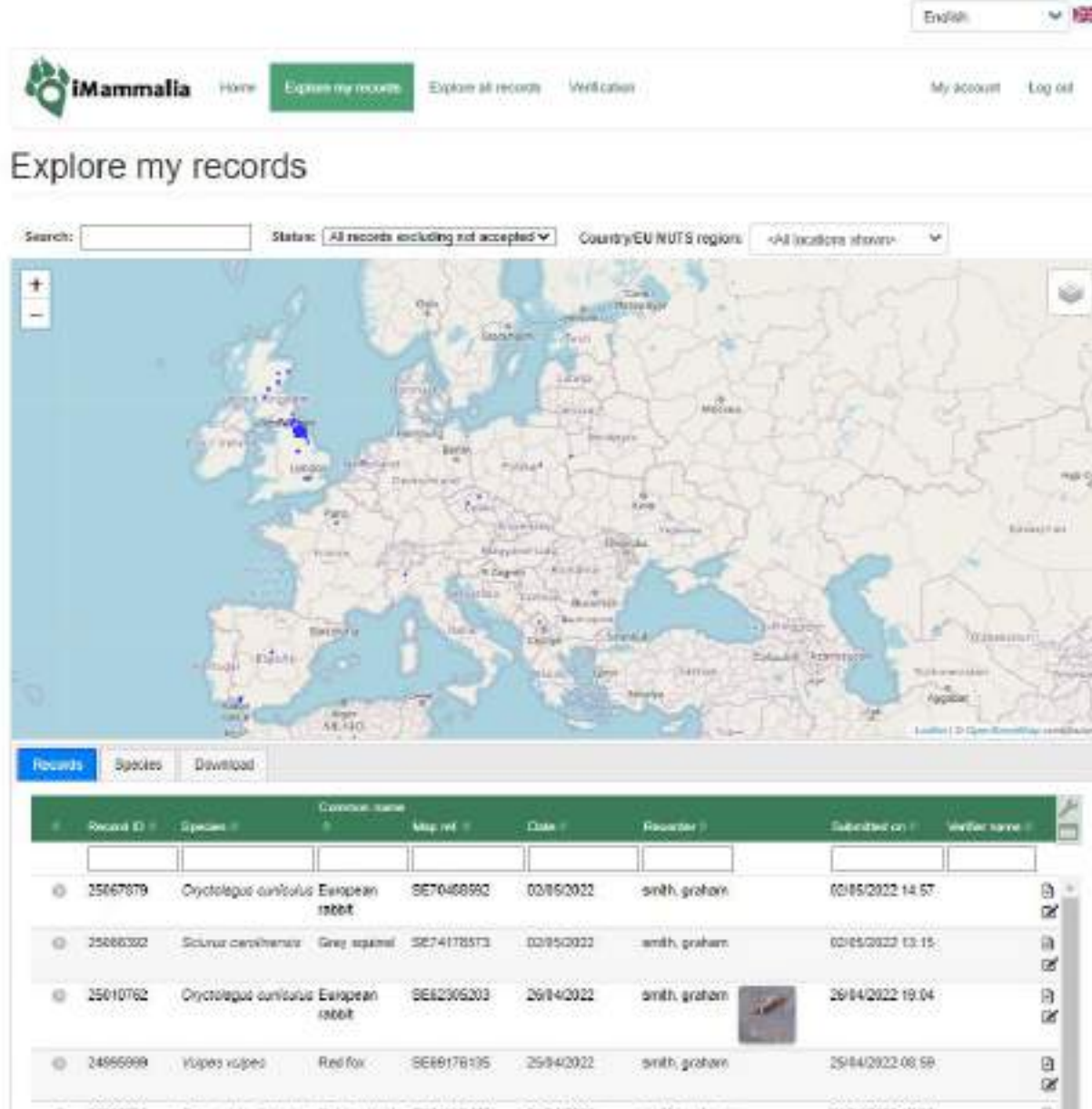
No photo has been added

iMammalia – How do I use it ?



Photo,
description and
full name
are **VERY** helpful

iMammalia – How do I use it ?



The screenshot displays the iMammalia website interface. At the top, there is a navigation bar with the iMammalia logo, a language dropdown set to 'English', and links for 'Home', 'Explore my records', 'Explore all records', 'Verification', 'My account', and 'Log out'. Below the navigation bar, the heading 'Explore my records' is followed by search filters: a search box, a status dropdown set to 'All records excluding not accepted', a country/EU NUTS regions dropdown, and a location filter dropdown set to '<All locations shown>'. The main content area features a map of Europe with several red location markers. Below the map, there are tabs for 'Records', 'Species', and 'Download'. The 'Records' tab is active, showing a table of mammal records.

Record ID	Species	Common name	Map ref	Date	Recorder	Submitted on	Verifier name
25067879	<i>Citellus citellus</i>	European rabbit	SE70408992	02/05/2022	smith, graham	02/05/2022 14:57	
25068202	<i>Sciurus cerebriensis</i>	Grey squirrel	SE74118513	02/05/2022	smith, graham	02/05/2022 13:15	
25010762	<i>Citellus citellus</i>	European rabbit	SE82905203	26/04/2022	smith, graham	26/04/2022 19:04	
24965999	<i>Vulpes vulpes</i>	Red fox	SE89176195	25/04/2022	smith, graham	25/04/2022 08:58	

Records can be viewed,
species edited, photos
added or location
corrected on the web
site:

[Explore my records |
MammalNet-Europe
\(brc.ac.uk\)](https://www.brc.ac.uk/mammalnet-europe)

iMammalia – How are records checked ?

All records will be verified by experts by using

- Photos
- Experience of recorder
- Comments
- Email recorder for more information

iMammalia – Verification

All these were submitted as weasels: *Mustela nivalis*



Verification

Search: Status: PendingFilter: 

First loading error!

ID	Species	Common name	Date	Recorder	Determiner	Status	Checks	Last updated	Verifier
25007579	Oryctolagus cuniculus	European rabbit	2022-05-02	smith, graham		1%	02/05/2022 14:57		
25008302	Sciurus caudatus	Grey squirrel	2022-05-02	smith, graham		1%	02/05/2022 13:10		
24998702	Oryctolagus cuniculus	European rabbit	2022-04-19	smith, graham		1%	26/04/2022 19:04		
24998890	Vulpes vulpes	Red fox	2022-04-15	smith, graham		1%	25/04/2022 00:59		
24998894	Sciurus caudatus	Grey squirrel	2022-04-14	smith, graham		1%	24/04/2022 17:59		
24998870	Oryctolagus cuniculus	European rabbit	2022-04-14	smith, graham		1%	24/04/2022 17:59		
24981175	Lepus europaeus	Brown hare	2022-04-19	smith, graham		1%	19/04/2022 00:57		
24981822	Oryctolagus cuniculus	European rabbit	2022-04-19	smith, graham		1%	19/04/2022 00:23		
24936107	Oryctolagus cuniculus	European rabbit	2022-04-16	smith, graham		1%	19/04/2022 19:14		
24928890	Oryctolagus cuniculus	European rabbit	2022-04-16	Smith, Robert		1%	19/04/2022 00:46		
24911748	Sciurus caudatus	Grey squirrel	2022-04-16	smith, graham		1%	16/04/2022 19:01		
24904839	Oryctolagus cuniculus	European rabbit	2022-04-16	smith, graham		1%	16/04/2022 00:48		
24904496	Oryctolagus cuniculus	European rabbit	2022-04-16	smith, graham		1%	15/04/2022 02:15		
24903380	Melospiza melodia	Eurasian linnet	2022-04-15	smith, graham		1%	15/04/2022 19:14		
24897432	Oryctolagus cuniculus	European rabbit	2022-04-15	smith, graham		1%	19/04/2022 19:11		
24896525	Taxus europaea	Common pine	2022-04-15	smith, graham	smith, graham	1%	22/04/2022 20:54		
24896494	Sciurus caudatus	Grey squirrel	2022-04-15	smith, graham		1%	15/04/2022 14:06		
24896481	Taxus europaea	Common pine	2022-04-15	smith, graham	smith, graham	1%	22/04/2022 20:54		
24896876	Sciurus caudatus	Grey squirrel	2022-04-15	smith, graham		1%	15/04/2022 02:28		
24895981	Taxus europaea	Common pine	2022-04-15	smith, graham		1%	22/04/2022		



Details	Comments	Recorder experience
Experience for Vulpes vulpes		
Total records: 45		
Year	Verified	Other
2022	4	5
2021	27	8
2020	5	1
Total	36	14
Experience for terrestrial mammal		
Total records: 511		
Year	Verified	Other
2022	12	140
2021	538	9
2020	31	0
Total	673	149

ID|status|checks

25010762 | |

Accepted name (as entered)

Oryctolagus cuniculus

Common name

European rabbit

Location

-

Vice County

North-east Yorkshire

LRC Boundary

North & East Yorkshire
Ecological Data Centre

Grid ref

SE62305203

Date seen

26/04/2022

Recorder

smith, graham

Determiner

-

Dataset

MammalNet-Europe ::
iMammalia App

Sample comment

-

Occurrence comment

-

Additional occurrence attributes

Submitted on

26/04/2022 19:04

Last updated on

26/04/2022 19:04

Abundance Category

1

Observation method

Direct observation

Observation type

Dead - roadkill

ID in source system

12b12fb7-8126-4b70-8b8b-
cd57592c0eab

Additional sample attributes

Application version

1.4.0.67

Data Source

android

Data Source Version

11

Recorder attributes

Email

graham[redacted]@gmail.com

Derived info

Taxonomy

Chordata :: Lagomorpha ::
Leporidae

iMammalia – How does it help ?

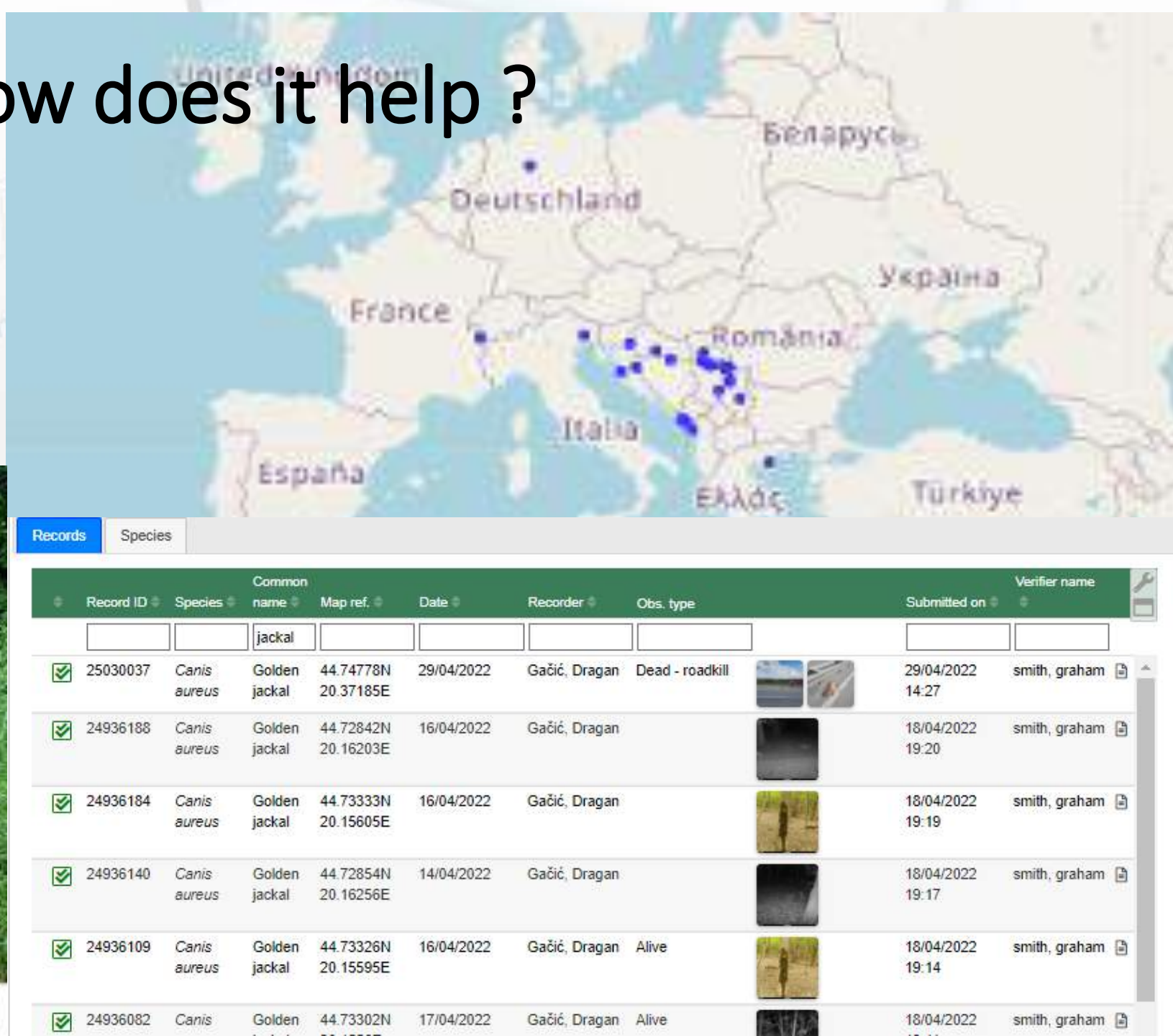
Data are used to:

- Map distribution
- Predict distribution in areas with no records
- Predict risk of disease spread
- Detect diseases

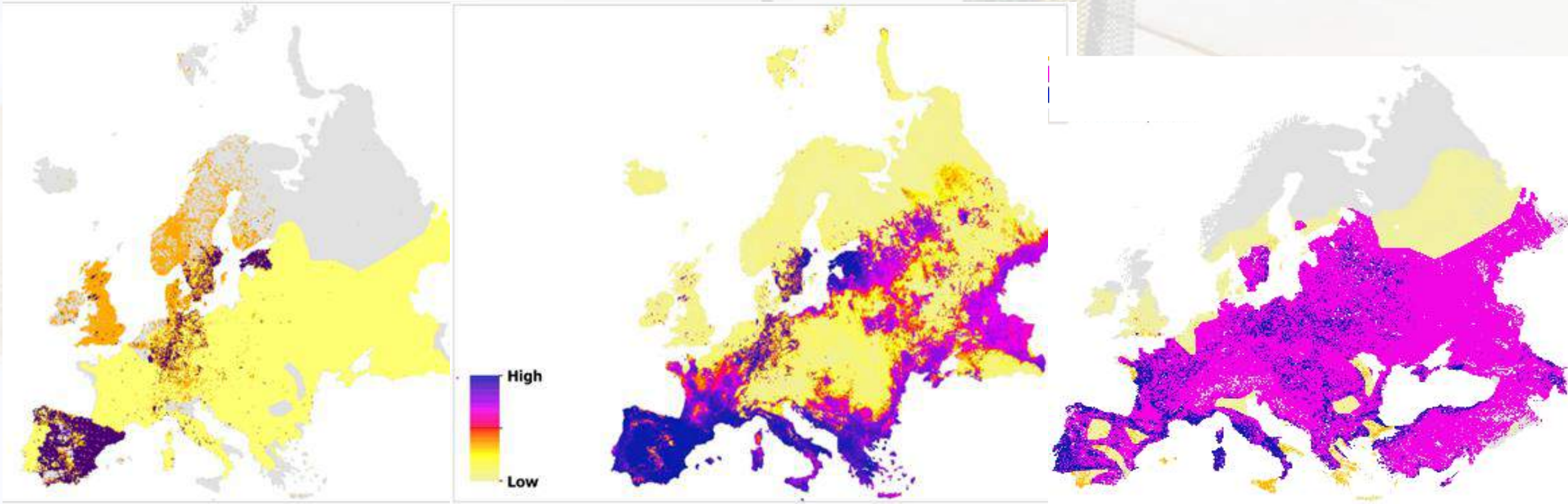
iMammalia – How does it help ?



082F 028C 05/11/2021 18:33:21



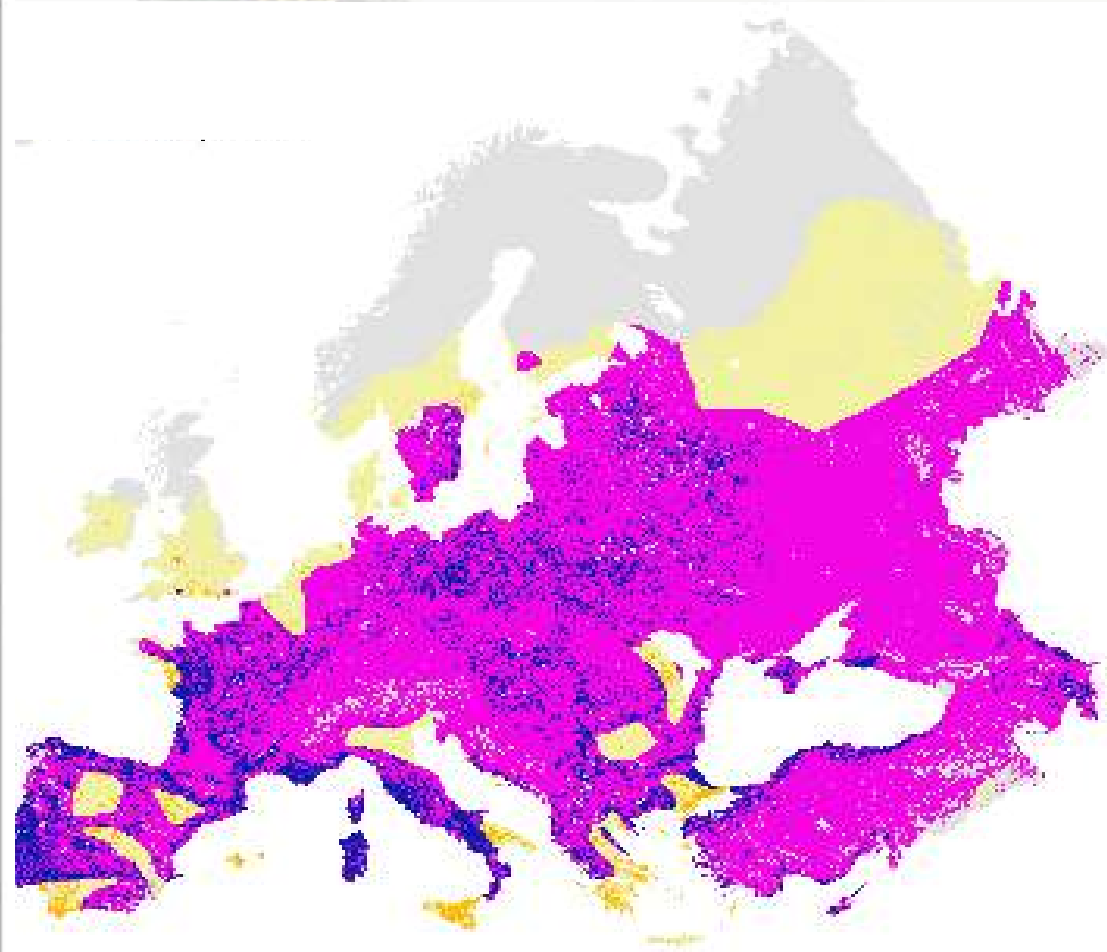
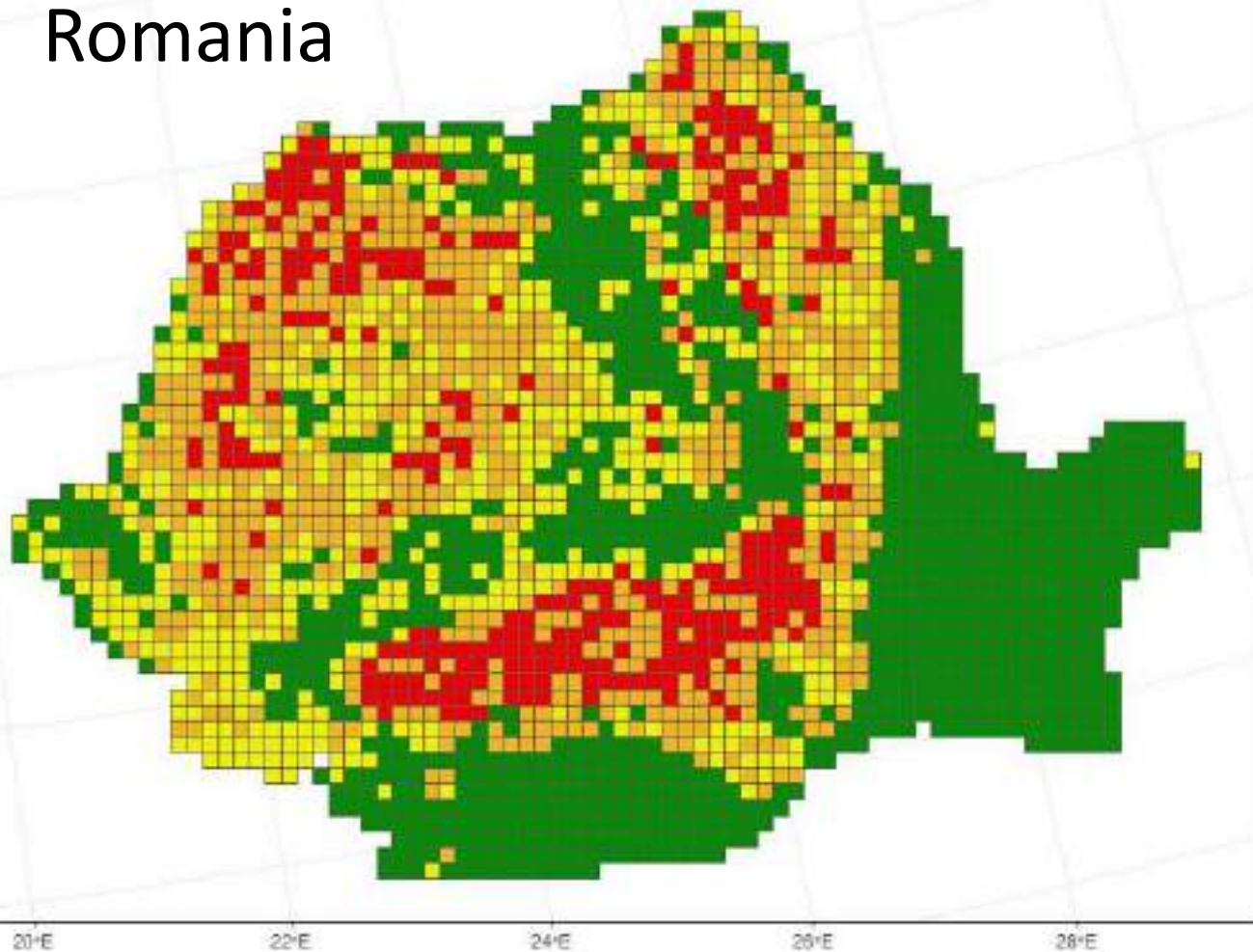
Wild Boar mapping



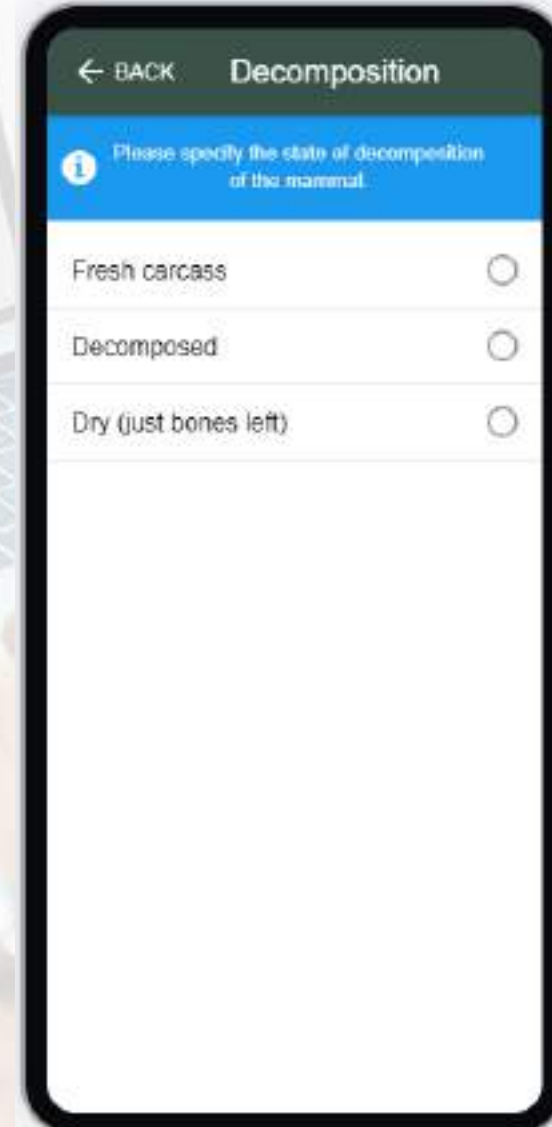
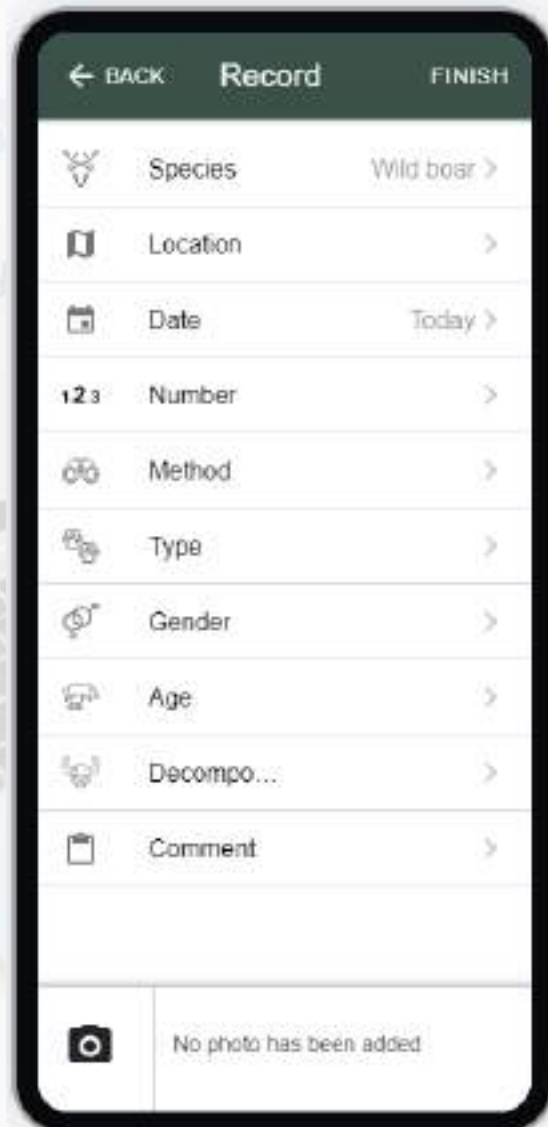
Left to right: suitable GBIF data 2014-2017; initial map; latest map

Wild Boar map overlap with domestic pigs

Romania



Wild Boar – ASF detection




Additional reporting system for wild boar carcasses for ASF investigation and an

Email alert system

Explore all records

Search: Status: Country/EU/MTS region:



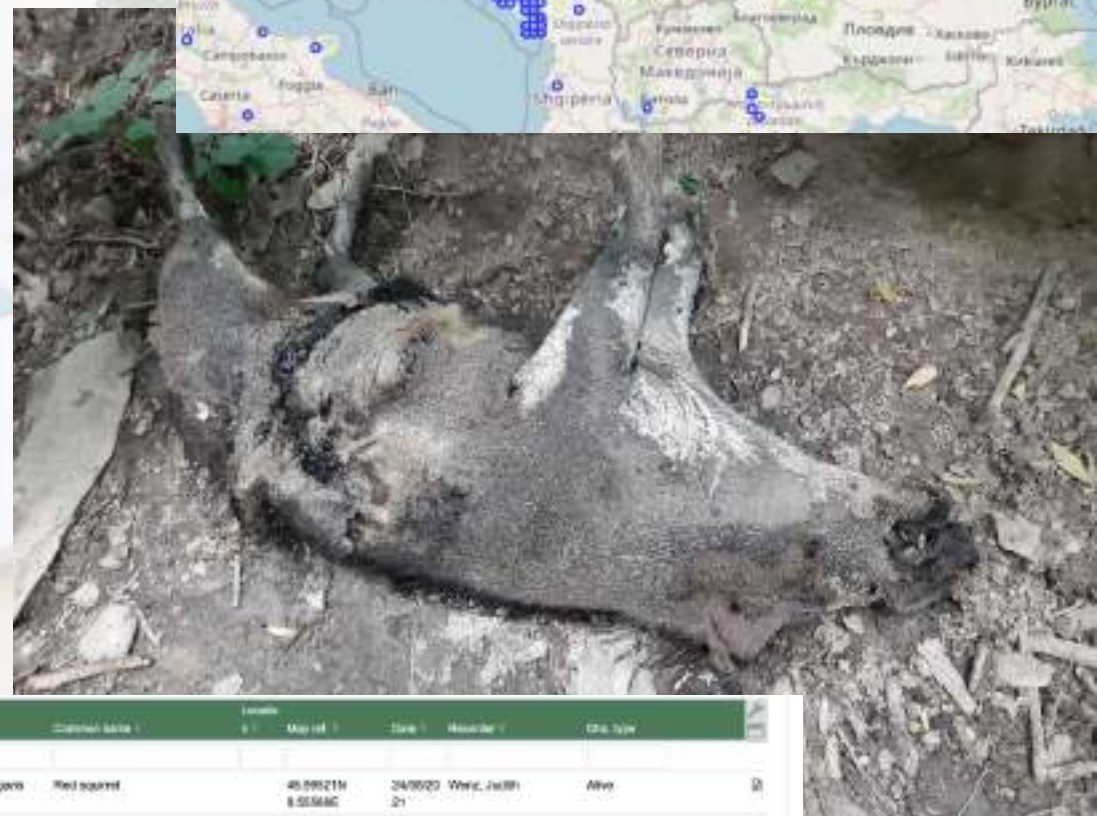
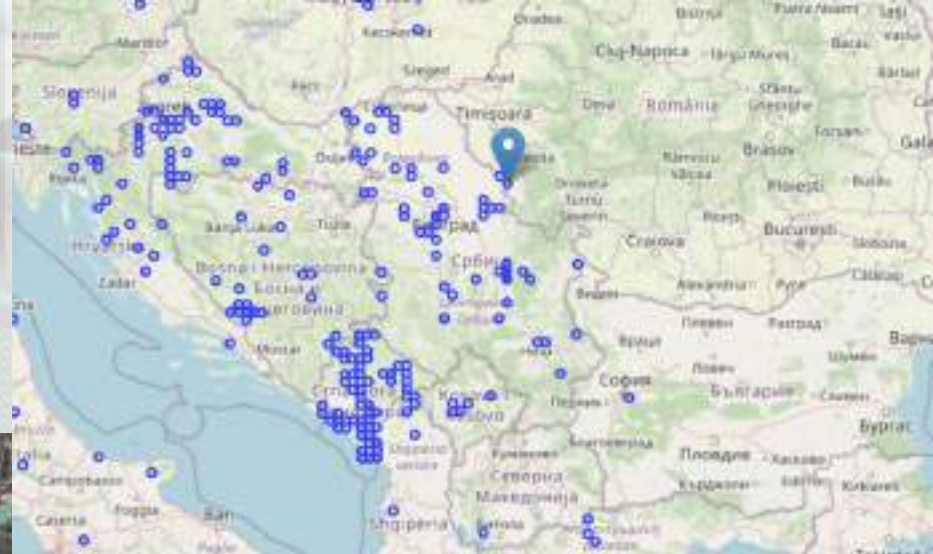
Records Species

Record ID	Sex	Species	Common name	Map ref	Date	Recorder	Obs. type	Submitted on	Webster name
20296297									
20296297	♂	<i>Canis lupus</i>	Red fox	10.000000	20296297	10.000000	10.000000	11.11.2021	10.000000

Showing all records

iMammalia

1.1



Record ID	Sex	Species	Common name	Map ref	Date	Recorder	Obs. type	Submitted on
218000	♂	<i>Sciurus vulgaris</i>	Red squirrel	45.99521N	24/06/20	Wenz, Judith	Alive	21
218000	♂	<i>Sciurus vulgaris</i>	Red squirrel	45.99595N	21/06/20	Wenz, Judith	Alive	21
218003	♂	<i>Oryctolagus cuniculus</i>	European rabbit	36.99512N	21/06/20	blanco, jola	Dead - roadkill	21
218000	♂	<i>Lepus europaeus</i>	Brown hare	44.71600N	20/06/20	Gaál, Orsi	Alive	21