



HAL
open science

Geographic Origin of Northern Lapwing *Vanellus vanellus* in western France: first results

Emmanuel Joyeux, Estelle Cumin, Charlotte Francesiaz

► To cite this version:

Emmanuel Joyeux, Estelle Cumin, Charlotte Francesiaz. Geographic Origin of Northern Lapwing *Vanellus vanellus* in western France: first results. Annual conference International Wader Study Group 2023, Sep 2023, Sylt, Germany. International Wader Study Group Annual Conference 29 september - 03 October 2023, 2023. hal-04256978

HAL Id: hal-04256978

<https://ofb.hal.science/hal-04256978>

Submitted on 24 Oct 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Geographic origin of Northern lapwings *Vanellus vanellus* wintering in western France : first results

JOYEUX E.¹, CUMIN E.¹, FRANCESIAZ C.²

¹ : Office Français de la Biodiversité – Direction Recherche et Appui Scientifique – Chanteloup – Ile d’Olonne (85) – France – emmanuel.joyeux@ofb.gouv.fr – estelle.cumin@ofb.gouv.fr

² : Office Français de la Biodiversité – Direction Recherche et Appui Scientifique – Juvignac (34) – France – [@C_Francesiaz](https://twitter.com/C_Francesiaz) – charlotte.francesiaz@ofb.gouv.fr

Western France is home to almost 1,5 million Northern lapwings every winter, so that this geographic area plays a key role in the conservation of this species. Nevertheless, the population of Northern lapwings is declining. There may be several reasons for this, including weather conditions, agricultural changes, hunting, climate change... Therefore, it is essential to understand the strengths and weaknesses of this population during winter and the connectivity between populations. To this end, the French Agency for Biodiversity (OFB) is conducting a study until 2025 : to identify and characterise feeding and staging areas, and to determine the geographic origin and main migratory routes of this species.

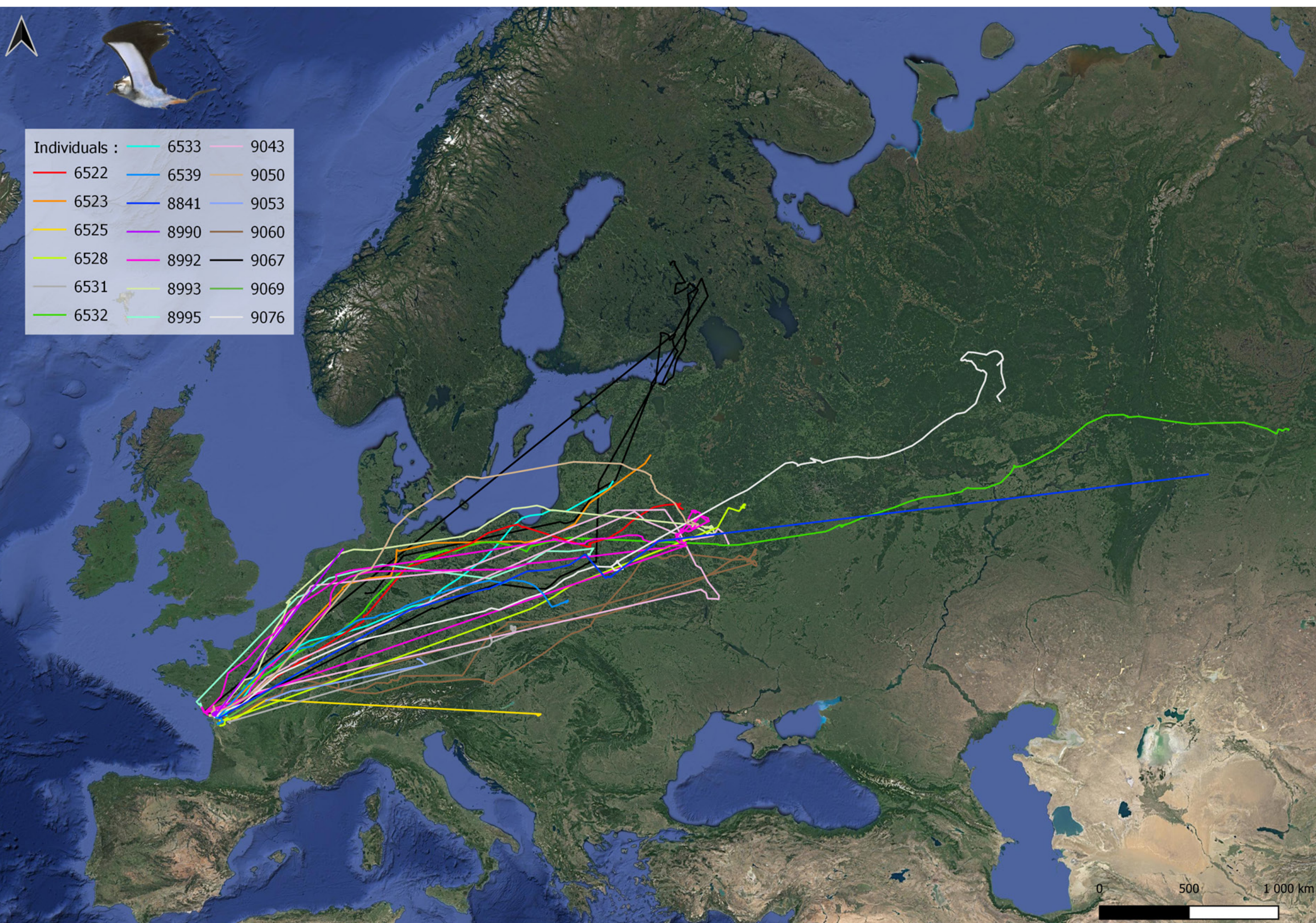


Table 1 : Breeding area of 19 tagged Northern lapwings wintering in France

| ID_logger | Ringing site | Ringing date | Breeding area | Average distance travelled (in km) | Equipment type |
|-----------|----------------|--------------|---------------|------------------------------------|----------------------|
| 8992 | Olonne Marsh | 13/12/2021 | Belarus | 2300 kms | INTERREX_mini2G M1 |
| 8993 | Olonne Marsh | 21/01/2022 | Belarus | 2400 kms | INTERREX_mini2G M1 |
| 9043 | Poitevin Marsh | 08/12/2021 | Belarus | 2500 kms | INTERREX_mini2G M1 |
| 9050 | Poitevin Marsh | 03/01/2023 | Belarus | 2400 kms | INTERREX_mini2G M1 |
| 6522 | Poitevin Marsh | 06/01/2023 | Belarus | 2300 kms | LOTEK_mini2G Lite |
| 6523 | Poitevin Marsh | 13/01/2023 | Estonia | 2200 kms | LOTEK_mini2G Lite |
| 9067 | Olonne Marsh | 30/12/2021 | Finland | 2600 kms | INTERREX_mini2G M1 |
| 9069 | Poitevin Marsh | 05/01/2023 | France | 40 kms | INTERREX_mini2G M1 |
| 8990 | Poitevin Marsh | 04/01/2023 | Germany | 1000 kms | INTERREX_mini2G M1 |
| 6525 | Poitevin Marsh | 06/01/2023 | Hungary | 1600 kms | LOTEK_mini2G Lite |
| 6533 | Poitevin Marsh | 06/02/2023 | Lithuania | 2100 kms | LOTEK_mini2G Lite |
| 8995 | Olonne Marsh | 18/01/2022 | Poland | 1900 kms | INTERREX_mini2G M1 |
| 6531 | Poitevin Marsh | 03/01/2023 | Poland | 1500 kms | LOTEK_mini2G Lite |
| 6539 | Poitevin Marsh | 13/01/2023 | Poland | 1800 kms | LOTEK_mini2G Lite |
| 8841 | Poitevin Marsh | 26/12/2022 | Russia | 4500 kms | INTERREX_mini2G Lite |
| 9060 | Olonne Marsh | 07/01/2022 | Russia | 2700 kms | INTERREX_mini2G M1 |
| 9076 | Poitevin Marsh | 02/02/2023 | Russia | 3500 kms | INTERREX_mini2G M1 |
| 6528 | Poitevin Marsh | 03/01/2022 | Russia | 2500 kms | LOTEK_mini2G Lite |
| 6532 | Poitevin Marsh | 02/01/2023 | Russia | 4800 kms | LOTEK_mini2G Lite |

Fig 1 : Pre-breeding migration route of 19 tagged Northern lapwings

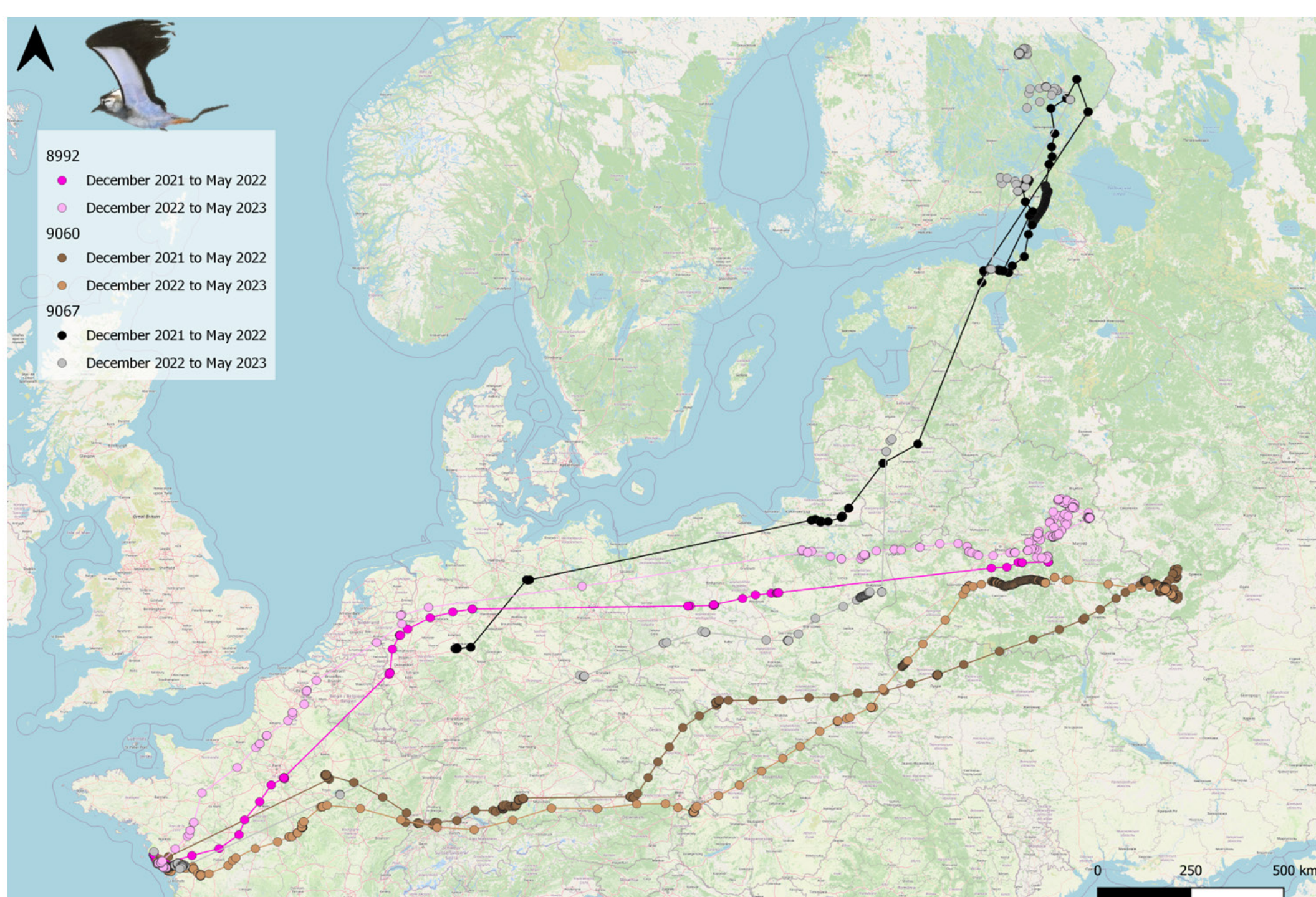


Fig 2 : Pre-breeding migration routes for 3 Northern lapwings during 2021/2022 and 2022/2023



Methods

- Study species :** Northern lapwing *Vanellus vanellus*
- Protocol :**
 - Net caught three hours after sunset on wintering area
 - Capture with a clapnet on the diurnal resting places
- Two study sites :**
 - The Poitevin marsh (Vendée, France)
 - The Olonne marsh (Vendée, France)
- Logger:**
 - 2021/22 : 12 loggers INTERREX GPS/GSM deployed (6 in each site)
 - 2022/2023 : 14 loggers INTERREX GPS/GSM deployed and 6 loggers LOTEK GPS/GSM deployed in Poitevin marsh
 - 9 GPS did not transmit data in winter

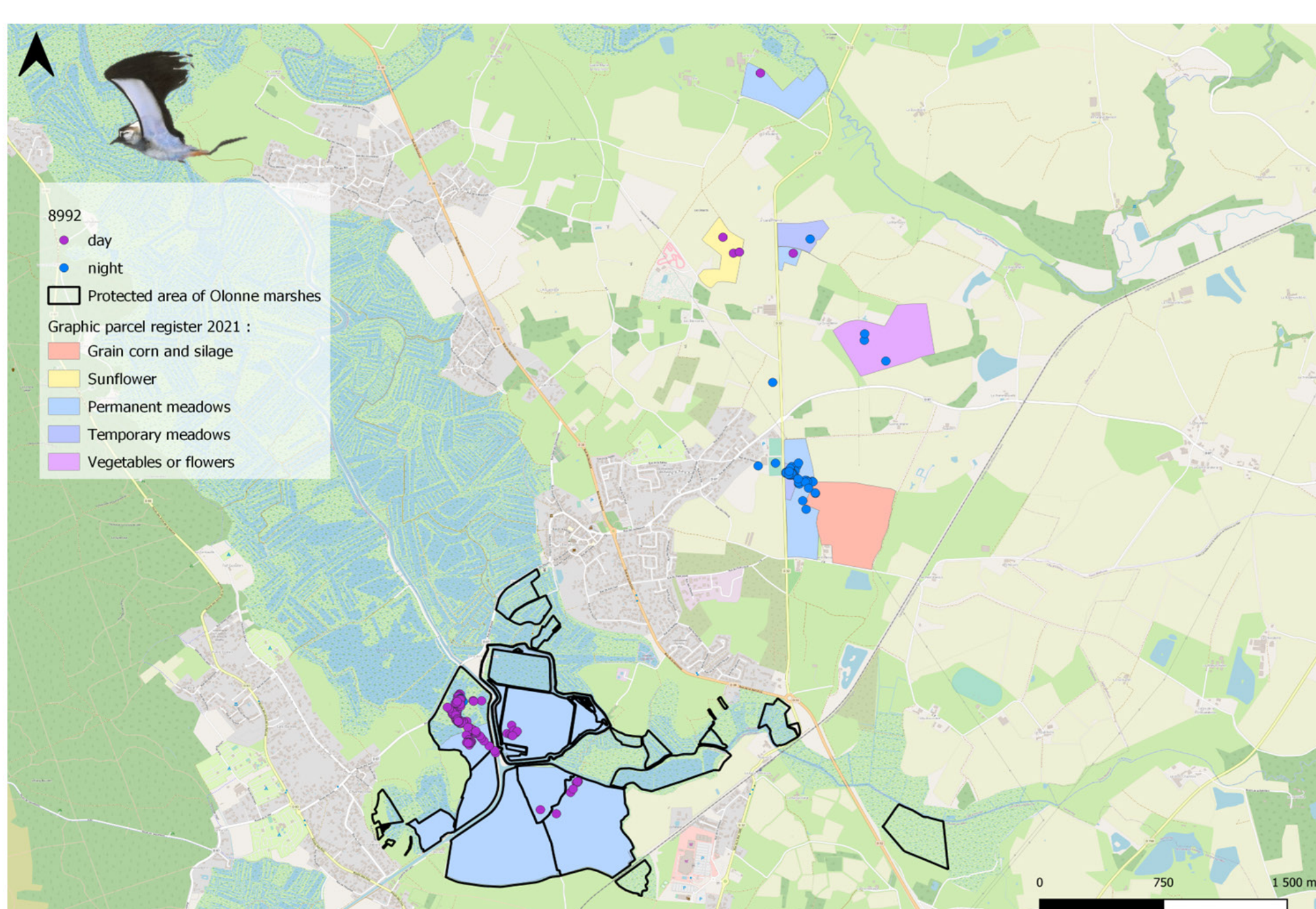


Fig 3 : Example of spatial occupation in winter (January 2021) by Northern lapwing equipped with logger 8992

Results

- Nearly half of these birds bred in Eastern Europe (Belarus, Poland and Russia). The remaining birds bred in Finland, East Russia (beyond the Ural mountains), Hungary, and even one bird stayed in Poitevin marsh to breed a few km away from where we caught it (Table 1 & Fig 1).
- Some tracks also suggest fidelity to nesting and wintering sites for 3 birds fitted in 2021 (Fig 2).

Perspectives

The next step of this study is to look at how Northern lapwing use farmland in winter. This will involve identifying daytime quiet zones and night-time feeding areas in relation to their trophic interest. The initial results (Fig 3) show a selection of habitat types.

Conclusion

Western France is home to many birds from Eastern and North-Eastern Europe. These diverse origins highlight the significant responsibility of this geographical area in hosting these birds.

Therefore, it is important to define the main feeding areas, which fluctuate with changes in farming practices, as well as the quiet areas where lapwings can meet their ecological needs.

The aim is therefore to strengthen France's role as a host country for these birds by promoting farming and management that are conducive to the conservation of this declining species.

