



BEEs

The LifeWatch ERIC Biodiversity & Ecosystem eScience Conference

Seville
22-24/05/23



Threats and challenges to biodiversity and ecosystem conservation from an eScience perspective



UNIÓN EUROPEA
Fondo Europeo de Desarrollo Regional
Una manera de hacer Europa

Nyctalus lasiopterus populations' trends in Southern
Europe: The Bermuda Triangle

Elena Tena (Estación Biológica de Doñana- CSIC)



CSIC
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

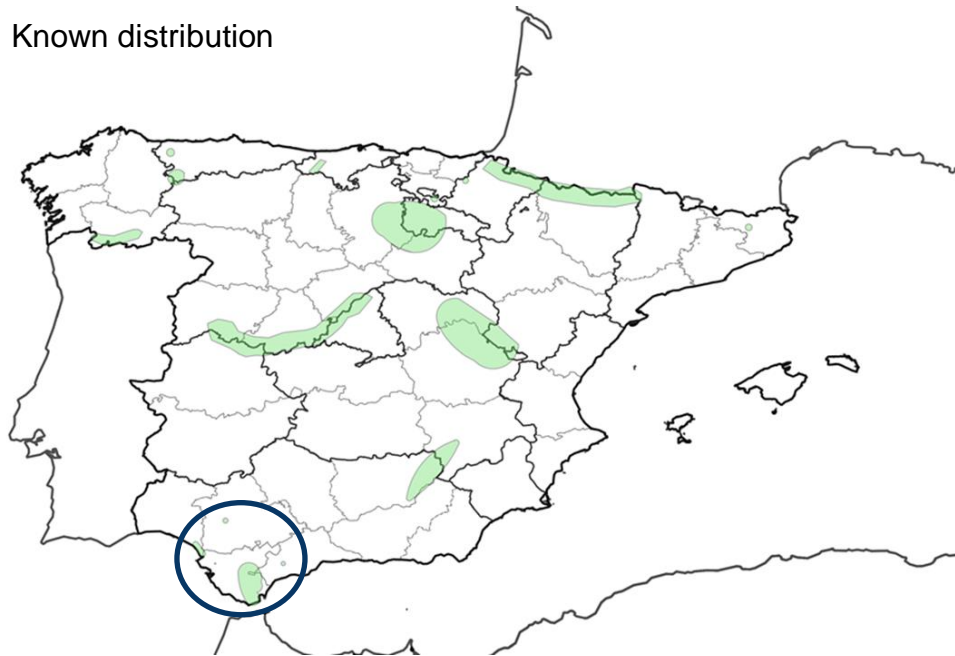


Nyctalus lasiopterus



Nyctalus lasiopterus' populations

■ Known distribution



Nyctalus lasiopterus' populations



Population's census: Doñana



Population's census: Doñana



Population's census: Doñana



Population's census: Doñana Things Board, online platform

Bats Monitoring EBO

Bats Monitoring EBO

Individuo "0007A785A0" detectado en caja refugio "Torre-32B"

Individuo "0007A7A0A1" detectado en caja refugio "Torre-32B"

Individuo "0007A7A0A1" detectado en caja refugio "Torre-32B"

Individuo "0007A7A0A1" detectado en caja refugio "Torre-32B"

Individuo "0007A7A0A1" detectado en caja refugio "Torre-32B"

Individuo "0007A7A0A1" detectado en caja refugio "Torre-32B"

Individuo "0007A77C2D" detectado en caja refugio "Torre-32B"

Individuo "0007A77C2D" detectado en caja refugio "Torre-32B"

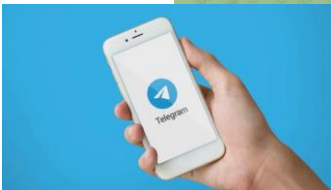
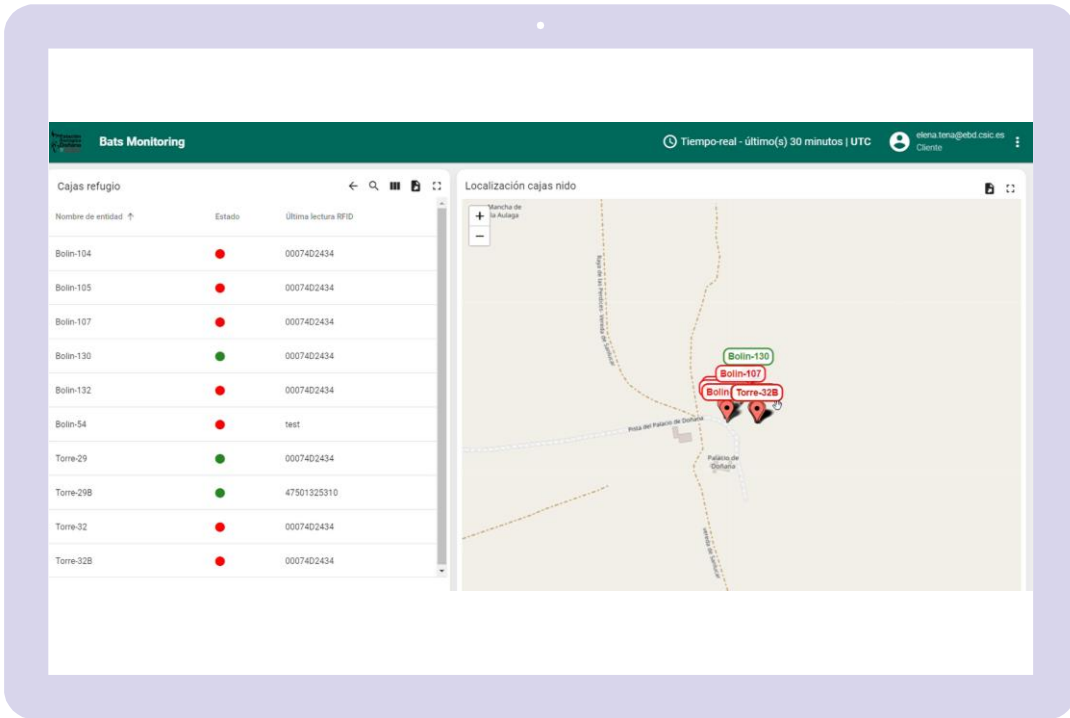
Individuo "0007A77C2D" detectado en caja refugio "Torre-32B"

Individuo "0007A77C2D" detectado en caja refugio "Torre-32B"

Individuo "0007A7A95F" detectado en caja refugio "Torre-29B"

Individuo "00075091D4" detectado en caja refugio "Torre-29B"

Individuo "0007A7A6C1" detectado en caja refugio "Torre-32B"



Population's census: María Luisa & Jerez

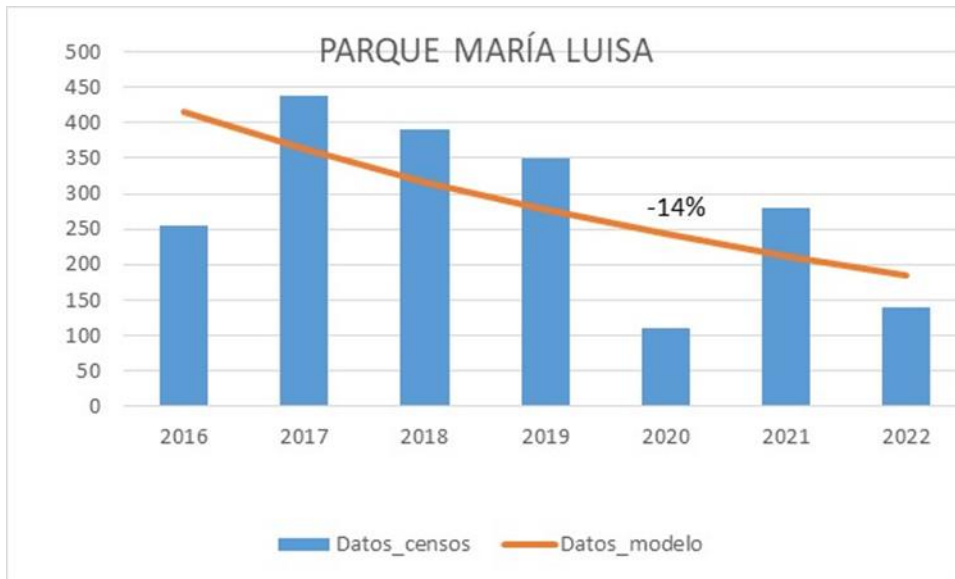


Population's census: María Luisa & Jerez





Census from 2016-2022: María Luisa



Steep decline ($p < 0.01$)

-14% anual

68% decline

Census from 2016-2022: María Luisa



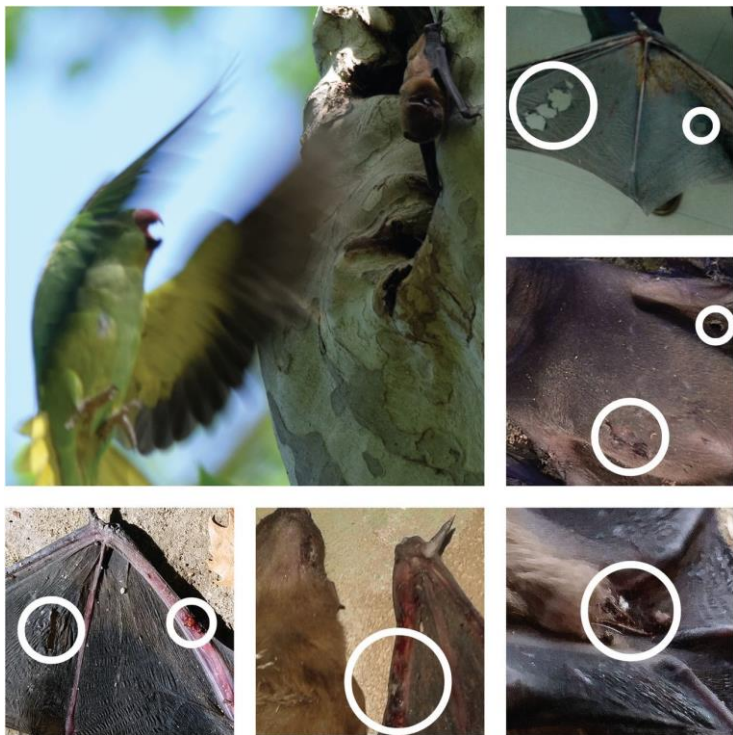
Steep decline ($p < 0.01$)

-14% anual

68% decline



Census from 2016-2022: María Luisa

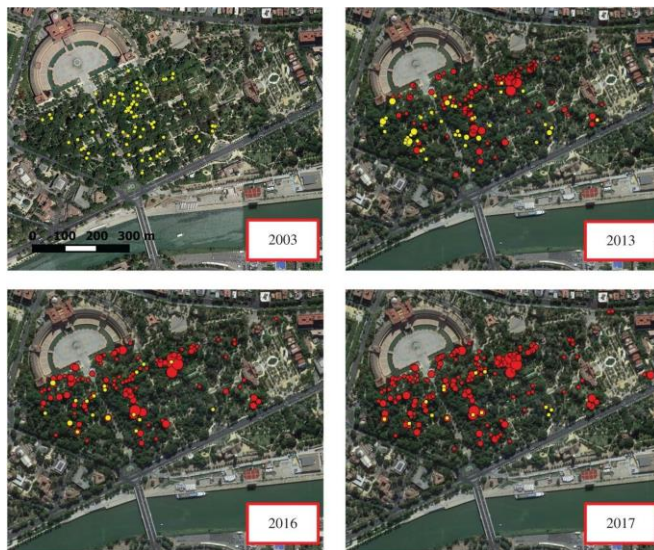


Research article

Nest-site competition and killing by invasive parakeets cause the decline of a threatened bat population

Dailos Hernández-Brito, Martina Carrete, Carlos Ibáñez, Javier Juste and José L. Tella


Published: 09 May 2018 | <https://doi.org/10.1098/rsos.172477>



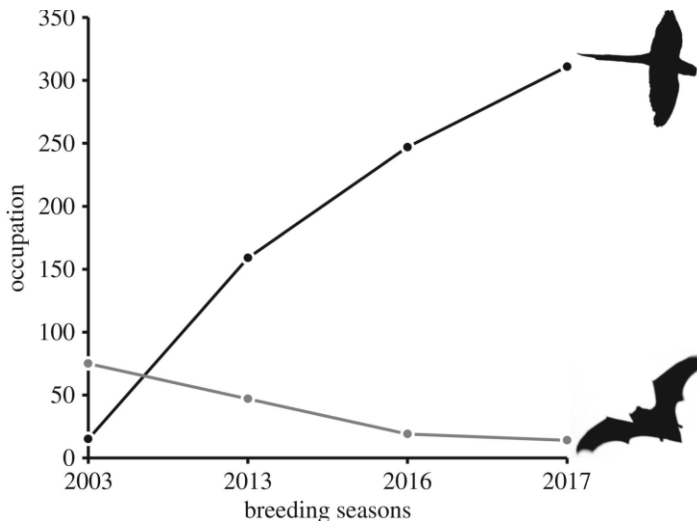
Census from 2016-2022: María Luisa

Research article

Nest-site competition and killing by invasive parakeets cause the decline of a threatened bat population

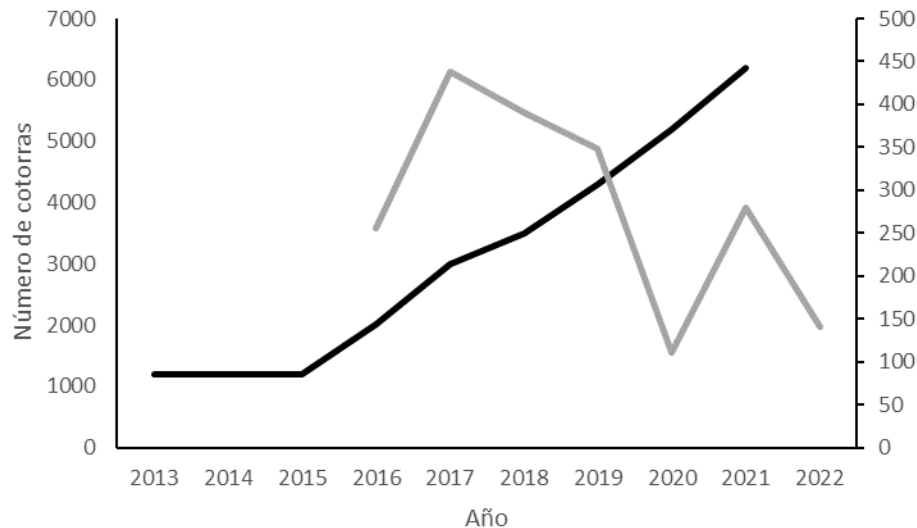
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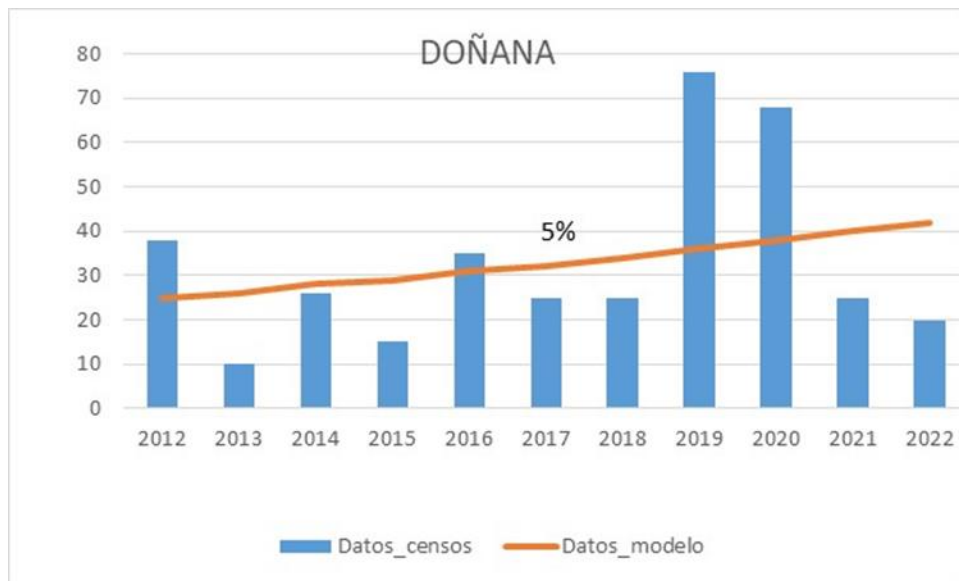


Annual Censuses and Citizen Science Data Show Rapid Population Increases and Range Expansion of Invasive Rose-Ringed and Monk Parakeets in Seville, Spain

by  Dailos Hernández-Brito ^{1,*} ,  Martina Carrete ²  and  José L. Tella ¹ 



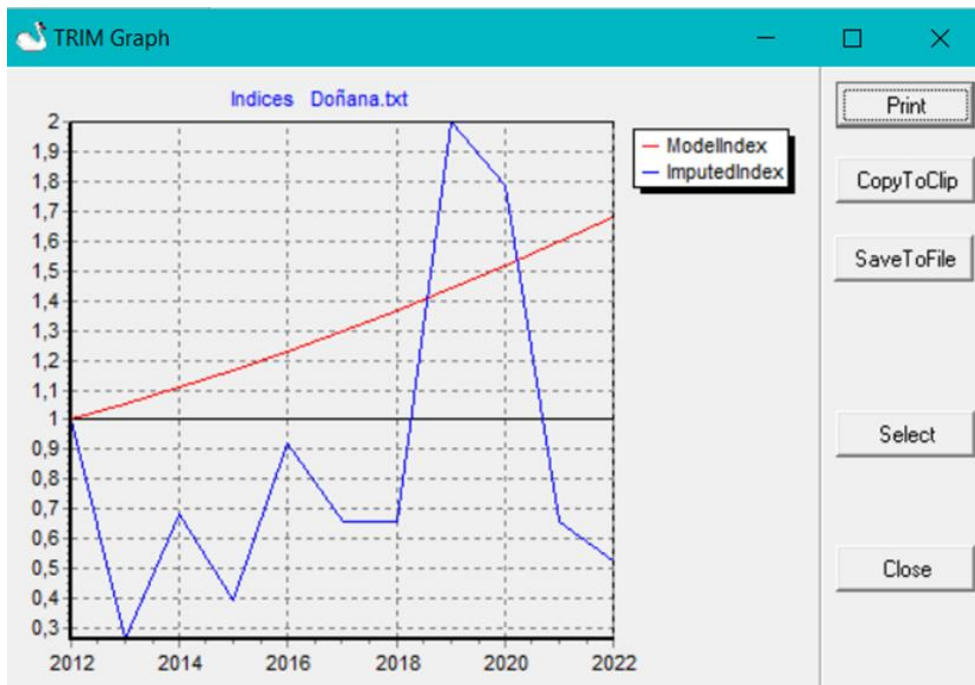
Census from 2012-2022: Doñana



Uncertain

Irregular colony

Census from 2012-2022: Doñana

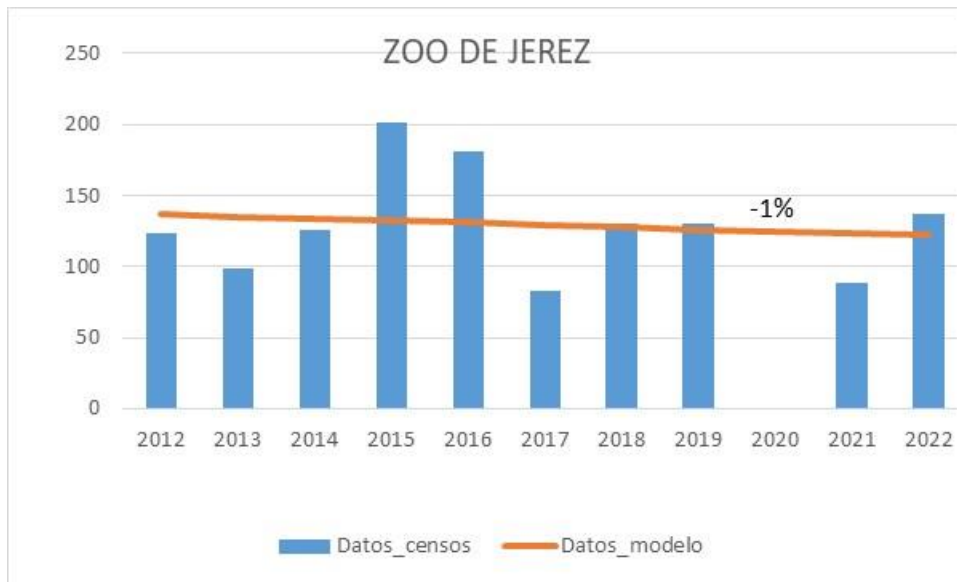


Uncertain

Irregular colony



Census from 2012-2022: Jerez

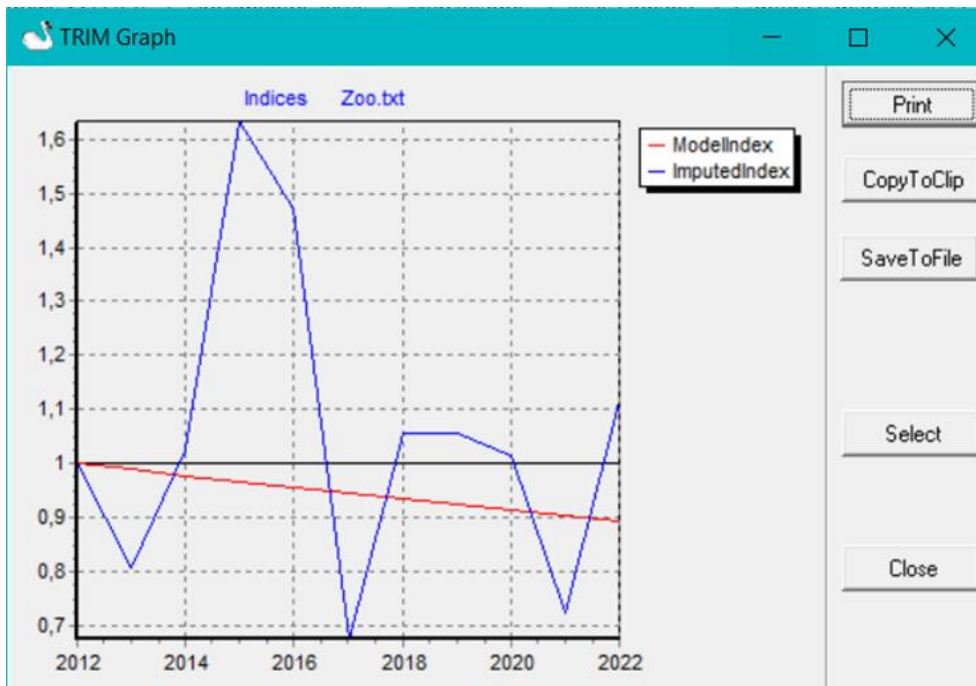


Stable

-1% anual

31% decline

Census from 2012-2022: Jerez



Stable

-1% anual

31% decline

Census from 2012-2022: Jerez


 Acta
Chiropterologica

Acta Chiropterologica, 21(2): 349–358, 2019

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doi: 10.3161/15081109ACC2019.21.2.010

HIGH BAT FATALITY RATES ESTIMATED AT WIND FARMS IN SOUTHERN SPAIN

 Sonia Sánchez-Navarro^{1*}, Jens Rydell², David Gálvez-Ruiz³ and Carlos Ibáñez¹
Bat fatalities at wind-farms in the lowland Mediterranean of southern Spain

 SONIA SÁNCHEZ-NAVARRO¹, JENS RYDELL², and CARLOS IBÁÑEZ¹
¹Department of Evolutionary Ecology, Estación Biológica de Doñana (CSIC), Av. Américo Vespucio 26, 41092 Sevilla, Spain

²Department of Biology, Lund University, S-223 62 Lund, Sweden

³Corresponding author: E-mail: sonia.sanchez@ebd.csic.es

$$FR_i = \frac{CFZ_i}{SESR_i}$$

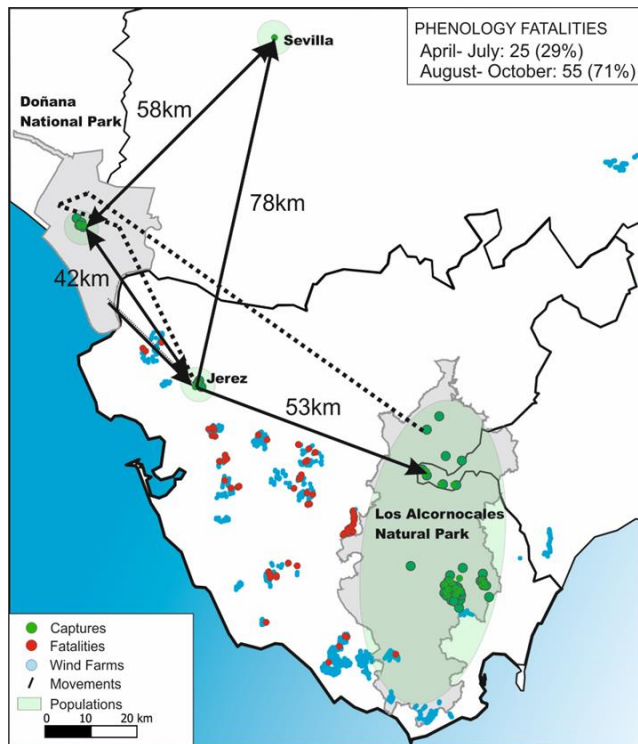
700- 791
N. lasiopterus
dead



Species	Bat fatalities 2005–2016
<i>Pipistrellus kuhlii</i>	147
<i>P. pipistrellus/pygmaeus</i>	1,535
<i>Nyctalus leisleri</i>	30
<i>N. lasiopterus</i>	47

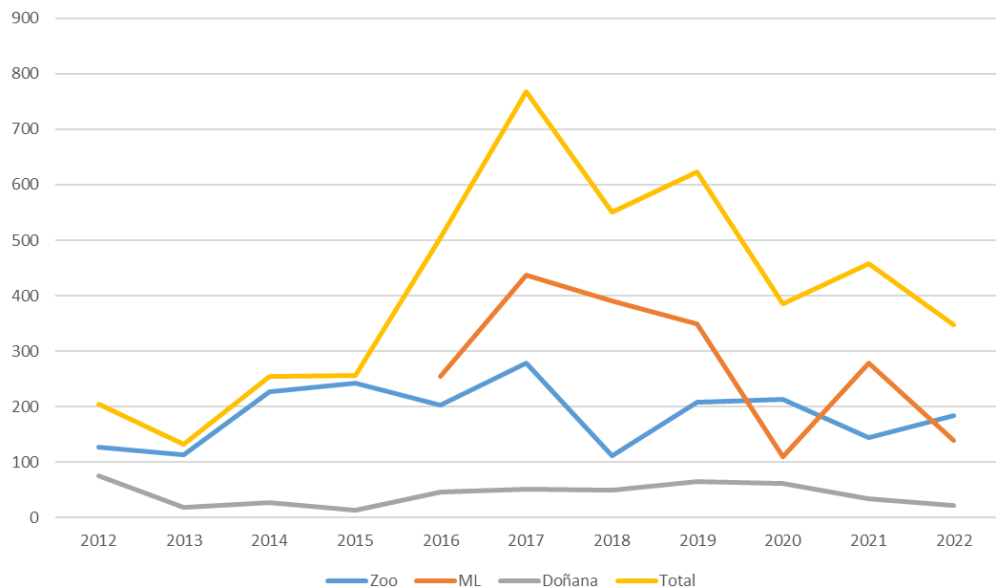
306-327
N. lasiopterus
dead

Census from 2012-2022: Jerez



Global Census from 2012-2022

Nyctalus lasiopterus Census July



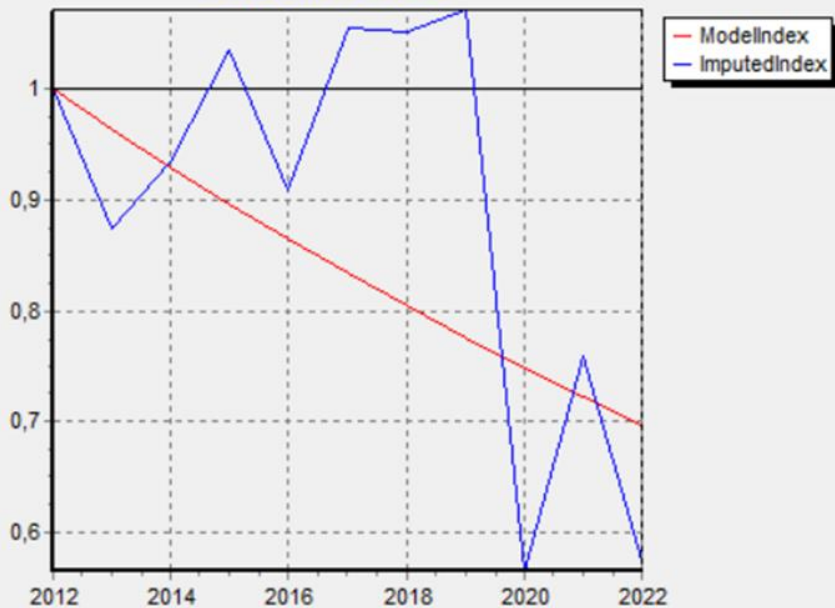
Moderate decline ($p < 0.01$)

-4% anual

Global Census from 2012-2022

TRIM Graph

Indices DOÑANA_PM_ZO



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Moderate decline ($p < 0.01$)**-4% anual**



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Seville, 22-24 May 2023

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Global Census from 2012-2022



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@Stefan Greif



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Thank you! | www.lifewatch.eu/bees-2023

