

Title	<b>Breeding ecology of Blue Tits</b>
General metadata	
Abstract	European Blue tits ( <i>Cyanistes caeruleus</i> ) time reproduction so the period for rearing chicks is synchronized with the peak of abundance of caterpillars, most of which feed on young leaves of deciduous trees. A long-term study at Silwood Park aims to understand the extent to which a mismatch between breeding phenology and prey availability affects a wild population of these birds. Hundreds of nest boxes and thousands of oak trees distributed across the campus' woodlands are monitored annually since 2002 to track the breeding activity of nesting tits and record the time of emergence of new oak leaves.
Keywords	Mismatching phenology, food chain, Laying date
Is this part of a larger study?	Yes, these observations are part of the long-term monitoring of oaks and blue tit matching phenology study
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Funding	Imperial College London, Department of Life Science
Data set status and accessibility	
Status	Ongoing
Latest update	December 2022
Latest archive date	December 2022
Metadata status	January 2023
Accessibility	
Storage location and medium	"Research group space: SilwoodLTE", Imperial College London, ICT department
Usage rights	Open access
Geographic metadata	
Geographic description	The study site is Silwood Park Campus from Imperial College London,

	<p>Buckhurst Road, Ascot, Berkshire SL5 7PY, United Kingdom. Silwood Park campus, with about 70 ha, contains ancient woodlands and few-decades-old oak-dominated woodlands. Study oak trees have been set across the campus woodlands, which are classified as W10a, W10e and W16a using the National Vegetation Classification.</p> <p>Silwood Park experiences an average total annual rainfall of 700 mm with little seasonal pattern (1987-2021). Mean hourly temperature is 10.2 °C with mean max of 23 °C in July and mean min of 1.5 °C in January (1987-2021).</p>																	
Bounding coordinates	General for Silwood Park.																	
Latitude	51.411																	
Longitude	-0.647																	
UK National grid																		
Square	SU																	
Easting	94196																	
Northing	68866																	
<b>Temporal metadata</b>																		
Temporal description	Breeding phenology study started in 2002. Missing data for season 2014 because of a gap in project leadership and 2020 because of Covid Pandemic lockdown regulations.																	
Begin	2002																	
End	Ongoing																	
<b>Taxonomic metadata</b>																		
<b>General Information</b>																		
Taxonomic level: Order	Passeriformes																	
Taxonomic level: Species	<p>Table: NAMESP</p> <table border="1"> <thead> <tr> <th>Species</th> <th>Common name</th> <th>Species code (British Trust of Ornithology)</th> </tr> </thead> <tbody> <tr> <td><i>Cyanistes caeruleus</i></td> <td>Blue Tit</td> <td>BLUTI</td> </tr> <tr> <td><i>Parus major</i></td> <td>Great Tit</td> <td>GRETI</td> </tr> <tr> <td><i>Pariparus ater</i></td> <td>Coal tit</td> <td>COATI</td> </tr> <tr> <td><i>Sitta europaea</i></td> <td>Nuthatch</td> <td>NUTHA</td> </tr> </tbody> </table>			Species	Common name	Species code (British Trust of Ornithology)	<i>Cyanistes caeruleus</i>	Blue Tit	BLUTI	<i>Parus major</i>	Great Tit	GRETI	<i>Pariparus ater</i>	Coal tit	COATI	<i>Sitta europaea</i>	Nuthatch	NUTHA
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<i>Sitta europaea</i>	Nuthatch	NUTHA																
<b>Methods metadata</b>																		
General experimental design	<p>There is a network of woodcrete nest boxes across the campus' woodlands used to study the breeding phenology of blue tits. Most boxes have a small entrance (26 mm) but two of the woodlands have also a set of boxes with a larger entrance (32 mm). Boxes with larger entrances can be used by Great Tits and all nest boxes are occasionally occupied by Nuthatches and Coal Tits. Nest boxes have a unique name with a letter and a number. Letters of boxes of the same entrance size and within the same woodland have the same letter (also known as territory). The Number of nest boxes have varied throughout the study. Typically nest boxes are moved to a neighbour tree when the host tree is damaged or fallen. Several have been excluded from the experiment due to the sale of campus land or due to unknown reasons (information loss), like all nest boxes in territory K. In 2022 breeding season there were 224</p>																	

	<p>active nest boxes, 176 boxes have a small entrance (26 mm) that exclude Great Tits and 48 have a larger entrance (32mm).</p> <p>The specific location and detailed information of when nest boxes have been in or out of the study can be found in table: Nextboxes_location.csv</p>										
Data collection	<p>Extracted from: Lopera Doblas (2017) Field Season Protocol -handbook.pdf</p> <p>Regular visits to nest boxes start on 1<sup>st</sup> April (day 1). Monitoring aims to record the stage of nest building, the date when first egg is laid, number of eggs and successful chicks fledging a nest.</p> <p>Females and males breeding in nestboxes are captured, measured and ringed during egg incubation, during the feeding phase (e.g. day 14) or both. Adults and chicks are fit with a ring with a unique number issued by the British Trust of Ornithology (BTO). The BTO data base has also a copy of data of all birds measured, recaptured and ringed for this project. At least from 2021 this data contains nest box location.</p> <p>Some years up to 2015 birds were marked with colour rings beside the metal numbered ring. Females were fit with one red ring in each leg, males with a black ring in each leg. An additional ‘year’ colour ring was added in left leg. Chicks were fit with the ‘year’ colour ring. Rings colours are read from left then right leg, from top to bottom ring.</p> <p>Table: COLOURING</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Colour</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>Black</td> </tr> <tr> <td>O</td> <td>Orange</td> </tr> <tr> <td>R</td> <td>Red</td> </tr> <tr> <td>X</td> <td>Metal ring</td> </tr> </tbody> </table> <p>Blood samples have been taken from adults and chicks using UK Home Office permits. Chick blood samples are taken on day 14 visit except for 2017 when day were taken day 7.</p>	Code	Colour	N	Black	O	Orange	R	Red	X	Metal ring
Code	Colour										
N	Black										
O	Orange										
R	Red										
X	Metal ring										
Quality control	<p>Phenology observations have been done by different researchers over the years. A complete list can be found in file: observers.csv</p> <p>Curation of data files and creation of metadata has been done by several people. Catalina Estrada since November 2022. Please read README_DataBaseBlueTits.txt to see specific issues and decisions.</p>										
Data table metadata											
Number of tables	6										
	<b>NestBoxes_breeding_2015On.csv</b>										
	<b>Parents_2015On.csv</b>										
	<b>Chicks_2015On.csv</b>										
	<b>NestBuilding.csv</b>										
	<b>NextBoxes_location.csv</b>										
	<b>observers.csv</b>										
Format	.csv, .txt										

<b>File name</b>	<b>NestBoxes_breeding_2015On.csv</b>		
<b>Description</b>	<b>Contains the usage of nest boxes throughout the breeding season starting 2015</b>		
Size	222 KB		
Case sensitive	no		
Number of records	1731		
Number of attributes	31		
Orientation	Variables (attributes) included as columns		
Data table structure and attribute description			
Attribute name	Definition	Type	Attribute description
NestBox_Record	Unique number for a nest box usage throughout the study.	Integer	Count Min: 1, Max: 1731
Year	Year the observations were made	Date	YYYY  Min: 2015
NestBoxID	Name of Nest Box. Link to table: NextBoxes_location.csv Parents_2015On.csv Chicks_2015On.csv	String	Alphanumeric Nestboxes are marked with a letter and a number. In general, boxes within each woodland have the same letter.
NestBox_Fate	Whether the nest box showed any signs of been used during the season	String	Text used: if a birds build a nest AND lay eggs unused: if the nest box was empty or have a nest but not eggs were laid
Species	Common name of species that breed on nest box	String	Text Blue Tit, Great Tit, Coal tit, Nuthatch NA: none, not known or not recorded
LayingDate	Day when the first egg of the clutch was estimated to have been laid	Integer	Dates in April days starting 1 <sup>st</sup> April. Example: Day -2: 29 March Day 1: 1 <sup>st</sup> April Day 31: 1 <sup>st</sup> May Day 62: 1 <sup>st</sup> June It is assumed that a Blue Tits female will lay and egg every day. If when visiting a nestbox a single egg is found, the laying date is the date the egg was found. If two (or more) eggs are found, the laying date is the previous day (or one day per egg)
LayingDate_Estimated	Day when the laying date	Integer	Dates in April days starting 1 <sup>st</sup>

	was observed		<p>April.</p> <p>This is the day when the egg laying date is recorded</p> <p>NA: when laying date is the same as observed date: there is one egg in the nest. NA: when the date of the observation was not reported, or nest was no used</p>
ClutchSize_CheckDate	Day in the season when it is expected the female has finished laying eggs and nest can be check for Clutch size. It is estimated as <b>LayingDate + 15</b>	Integer	<p>Dates in April days starting 1<sup>st</sup> April.</p> <p>NA: no eggs laid, no recorded</p>
ClutchSize	Number of eggs found in nest at the ClutchSize_CheckDate. It includes eggs found broken or accidentally damaged by researcher	Integer	<p>Count</p> <p>NA: no eggs laid, no recorded</p>
Hatching_CheckDate	Day in the season when is expected the eggs will hatch. It is calculated as <b>LayingDate + ClutchSize + 11</b>	Integer	<p>Dates in April days starting 1<sup>st</sup> April.</p> <p>NA: no eggs laid, no recorded</p>
HatchingDate	Day when at least one egg was estimated to have hatched in the clutch	Integer	<p>Dates in April days starting 1<sup>st</sup> April.</p> <p>NA: no eggs laid, no recorded</p>
HatchingDate_Estimated	Day when the HatchingDate was observed	Integer	<p>Dates in April days starting 1<sup>st</sup> April.</p> <p>This is the day when the Hatching date is recorded</p> <p>NA: when hatching date is the same as observed date: the chick seems to have hatched the same day the observation is made NA: no eggs laid, no recorded</p>
Day7_CheckDate	Date when chicks are expected to be 7 days old and first set of measures can be done. Estimated as <b>HatchingDate + 7</b>	Integer	<p>Dates in April days starting 1<sup>st</sup> April.</p> <p>NA: no eggs laid, no recorded</p>
Day7_Date	Actual date when chicks	Integer	Dates in April days starting 1 <sup>st</sup>

	about 7 days old have been counted and measured		April. NA: no eggs laid, no recorded
Day7_ChickNumber	Number of <b>live</b> chicks found in nest at the Day7_Date	Integer	Count NA: no eggs laid, eggs did not hatch, no recorded
Day14_CheckDate	Date when chicks are expected to be 14 days old and can be ringed and measures. Estimated as <b>HatchingDate + 14</b>	Integer	Dates in April days starting 1 <sup>st</sup> April. NA: no eggs laid, eggs did not hatch, no live chicks found, no recorded
Day14_Day	Actual date when chicks about 14 day old have been counted and measured	Integer	Dates in April days starting 1 <sup>st</sup> April. NA: no eggs laid, eggs did not hatch, all chicks found dead previously, no recorded
Day14_ChickNumber	Number of <b>live</b> chicks found in nest at the Day14_Date	Integer	Count NA: no eggs laid, eggs did not hatch, all chicks found dead previously, no recorded
EggsUnhatched	Number of unhatched eggs found in nest. This is typically measured in Day 7 checks. In some years this might have been corrected from Number of eggs – Numbers of chicks (dead & alive)	Integer	Count NA: no eggs laid, no recorded
Fledge_CheckDay	Date when nest can be checked for fledging. Estimated as <b>HatchingDate + 19</b>	Integer	Dates in April days starting 1 <sup>st</sup> April. NA: no eggs laid, eggs did not hatch, all chicks found dead previously, no recorded
Fledge_Date	Actual date when nest was checked, and it was empty	Integer	Dates in April days starting 1 <sup>st</sup> April. NA: no eggs laid, eggs did not hatch, all chicks found dead previously, no recorded
Fledge_ChickNumber	Number of chicks expected to have fledged. This is estimated as the number of chicks counted in day 14 minus any dead chicks	Integer	Dates in April days starting 1 <sup>st</sup> April. NA: no eggs laid, eggs did not hatch, all chicks found dead

	found in FledgeDate. In cases where this number was estimated in any other way, this is specified in Notes		previously, no recorded
FullNest_DeadDate	Date after hatching when all chicks were found dead	Date	Dates in April days starting 1 <sup>st</sup> April.  NA: no eggs laid, eggs did not hatch, chicks fledged, no recorded
Female1_RingNumber	BTO ring number that identify female caught in nest box. Link to table: Parents_2015On.csv	String	Alphanumeric  NA: nest no used, female no caught
Female1_CaptureDate	Date when female was captured	Date	Dates in April days starting 1 <sup>st</sup> April.  NA: nest no used, female no caught
Female2_RingNumber	BTO ring number that identify female caught in nest box in a second date. Link to table: Parents_2015On.csv	String	Alphanumeric  NA: nest no used, female no captured in a second date
Female2_CaptureDate	Second date when female was captured.	Date	Dates in April days starting 1 <sup>st</sup> April.  NA: nest no used, female no captured
Male_RingNumber	BTO ring number that identify male caught in nest box. Link to table: Parents_2015On.csv	String	Alphanumeric  NA: nest no used, male no captured
Male_CaptureDate	Date when male was captured	Date	Dates in April days starting 1 <sup>st</sup> April.  NA: nest no used, female no caught
ObserverID	Unique code for lead researcher during the year of data collection. Link to table: observers.csv	String	Code: inicial first name.second names. n.nXX for data related to initials XX initials in raw data of unknown researcher
Notes	Further information associated with nest record. Field notes	String	Text  NA: no recorded

<b>File name</b>	<b>Parents_2015On.csv</b>
<b>Description</b>	<b>Contains information of male and females breeding in nest boxes</b>
<b>Size</b>	174KB
<b>Case sensitive</b>	no

Number of records	1424		
Number of attributes	20		
Orientation	Variables (attributes) included as columns		
Data table structure and attribute description			
Attribute name	Definition	Type	Attribute description
Parents_Record	Unique number for the capture of an adult bird	Integer	Count Min: 1, Max: 1425
Year	Year the observations were made	Date	YYYY  Min: 2015
NestBoxID	Name of Nest Box. Link to table: NextBoxes_location.csv NestBoxes_breeding_2015 On.csv Chicks_2015On.csv	String	Alphanumeric Nestboxes are marked with a letter and a number. In general, boxes within each woodland have the same letter.
RingNumber	BTO ring number that identify bird caught in nest box. Link to table: NestBoxes_breeding_2015 On.csv	String	Alphanumeric
CaptureDate	Date when bird was captured	Date	Dates in April days starting 1 <sup>st</sup> April.  NA: no recorded
CaptureTime	Time in the day bird was captured	Time	HH:MM British Summer Time (BST)
Species	Species code (British Trust of Ornithology)	String	Nominal Table: NAMESP
Sex	Sex of bird captured. BTO used criteria	String	Nominal F: female M: male
Age	Estimated age of bird captured	Integer	EURING age codes 5: 'Hatched during previous calendar year' 6: Hatched before last calendar year' NA: no recorded
RecordType	Whether the capture bird is a new record or recaptured bird	String	Nominal R: Recapture o a previously ringed bird N: New bird ring record
ColourRing	Code of colour rings in legs of capture bird	String	Code for colours and position See table COLOURING  NA: no colour rings present, no recorded



BloodSample	Name of vial containing blood sample for bird	String	Consecutive numbers unique within a breeding season  NA: no sample available
Wing	Wing length defined as distance on the closed wing from the foremost extremity to the longest primary feather (BTO)	Integer	Units: millimetre to the closest millimetre  NA: no recorded
Tarsus	Tarsus length of bird	Floating point	Units: millimetres to 0.01 precision. Uncertain if refer to minimum or maximum Tarsus (BTO: Ringer's Manual)  NA: no recorded
Head	Total head length measured from base of skull to tip of bill	Floating point	Units: millimetres to 0.01 precision. (BTO: Ringer's Manual)  NA: no recorded
Beak	Bill length of bird measured from base to tip of bill or beak	Floating point	Units: millimetres to 0.01 precision. (BTO: Ringer's Manual)  NA: no recorded
Weight	Total weight of bird	Floating point	Units: grams to 0.01 precision.  NA: no recorded
Mites	Presence of mites on one extended wing of bird	String	Count or categories 0: no mites observed > < 10 > < 20 > 40 > 50  NA: no recorded
ObserverID	Unique code for ringer associated with record. Link to table: obervers.csv	String	Code: initial first name.second names. n.nXX for data related to initials XX initials in raw data of unknown researcher
Notes	Further information associated with bird record. Field notes	String	Text  NA: no recorded

<b>File name</b>	<b>Chicks_2015On.csv</b>
<b>Description</b>	<b>Contains information of chicks breeding in nest boxes</b>
Size	559KB
Case sensitive	no
Number or records	5390

Number of attributes	22		
Orientation	Variables (attributes) included as columns		
Data table structure and attribute description			
Attribute name	Definition	Type	Attribute description
Chick_Record	Unique number for the capture of a bird	Integer	Count Min: 1, Max: 5391
Year	Year the observations were made	Date	YYYY  Min: 2015
NestBoxID	Name of Nest Box. Link to table: NextBoxes_location.csv NestBoxes_breeding_2015On.csv Parents_2015On.csv	String	Alphanumeric Nestboxes are marked with a letter and a number. In general, boxes within each woodland have the same letter.
ChickID	Identification of a chick within nest. Used when chicks were measured at day 7 and day 14	String	Mix Most years reported as consecutive numbers. Some years reported as nail cutting identification code: L: left leg R: right leg Nails 1 to 4
Species	Species code (British Trust of Ornithology)	String	Nominal Table: NAMESP
RingNumber	BTO ring number that identify bird caught in nest box	String	Alphanumeric  NA: bird no ringed
Day7_CaptureDate	Date when bird was captured, 7 days after estimated hatching.	Date	Dates in April days starting 1 <sup>st</sup> April.  NA: no capture at day 7
Day7_CaptureTime	Time in the day bird was captured, 7 days after estimated hatching.	Time	HH:MM British Summer Time (BST)  NA: no captured at day 7
Day7_Weight	Total weight of bird	Floating point	Units: grams to 0.01 precision.  NA: no recorded
Day14_CaptureDate	Date when bird was captured, 14 days after estimated hatching.	Date	Dates in April days starting 1 <sup>st</sup> April.  NA: no captured or dead at day 14 visit
Day14_CaptureTime	Time in the day bird was captured, 14 days after estimated hatching.	Time	HH:MM British Summer Time (BST)  NA: no captured or dead at day 7,

			no recorded
Day14_Wing	Wing length defined as distance on the closed wing from the foremost extremity to the longest primary feather (BTO) measured 14 days after estimated hatching	Integer	Units: millimetre to the closest millimetre  NA: no recorded
Day14_Tarsus	Tarsus length of bird measured 14 days after estimated hatching	Floating point	Units: millimetres to 0.01 precision. Uncertain if refer to minimum or maximum Tarsus (BTO: Ringer's Manual)  NA: no recorded
Day14_Head	Total head length measured from base of skull to tip of bill measured 14 days after estimated hatching	Floating point	Units: millimetres to 0.01 precision. (BTO: Ringer's Manual)  NA: no recorded
Day14_Beak	Bill length of bird measured from base to tip of bill or beak measured 14 days after estimated hatching	Floating point	Units: millimetres to 0.01 precision. (BTO: Ringer's Manual)  NA: no recorded
Day14_Weight	Total weight of bird measured 14 days after estimated hatching	Floating point	Units: grams to 0.01 precision.  NA: no recorded
Day14_Mites	Presence of mites on one extended wing of bird estimated 14 days after estimated hatching	String	Count or categories 0: no mites observed < 5 > < 10 > < 20  NA: no recorded
BloodSample	Name of vial containing blood sample for bird	String	Consecutive numbers unique within a breeding season  NA: no sample available
Fledge_Date	Date when nest was checked, and it was empty. Bird expected to have fledge if dead body is not found on nest	Integer	Dates in April days starting 1 <sup>st</sup> April.  NA: Bird dead, no recorded
Dead_Date	Date when nest was checked bird was found dead	Integer	Dates in April days starting 1 <sup>st</sup> April.  NA: Bird fledged, no recorded
ObserverID	Unique code for ringer associated with record.	String	Code: initial first name.second names. n.nXX for data related to

	Link to table: observers.csv		initials XX initials in raw data of unknown researcher
Notes	Further information associated with bird record. Field notes	String	Text  NA: no recorded

<b>File name</b>	<b>NestBuilding.csv</b>		
<b>Description</b>	<b>Gives information of the stage of nest development at the start of the breeding season</b>		
Size	40KB		
Case sensitive	no		
Number of records	421		
Number of attributes	6		
Orientation	Variables (attributes) included as columns		
Data table structure and attribute description			
Attribute name	Definition	Type	Attribute description
Nest_Record	Unique number for the nest observations	Integer	Count Min: 1, Max: 421
Year	Year the observations were made	Date	YYYY  Min: 2022
NestBoxID	Name of Nest Box. Link to tables: NextBoxes_location.csv NestBoxes_breeding_2015On.csv Parents_2015On.csv	String	Alphanumeric Nestboxes are marked with a letter and a number. In general, boxes within each woodland have the same letter.
Date	Date when observation was made	Date	Dates in April days starting 1 <sup>st</sup> April. March 31 <sup>st</sup> = 0 March 30 <sup>th</sup> = -1 March 1 <sup>st</sup> = -30
Nest_score	Number representing the stage of development of nest the day of visit	String	Score 0: nest box empty 0.25: evidence that nest building has started c.c. a few pieces of moss 0.5: layer of moss has been laid out and shaped 1: a layer of soft material has been laid out (feathers, hair, wool)
ObserverID	Unique code for ringer associated with record. Link to table: observers.csv	String	Code: initial first name.second names. n.nXX for data related to initials XX initials in raw data of unknown researcher, XX.ug id data taken as part of an undergraduate course
Photo_link	Link to a photograph of the nest	String	Links deposited in Epicollect5 projects

			NA: not link or photograph available
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<b>File name</b>	<b>Observers.csv</b>		
<b>Description</b>	<b>Gives information of people involved in data collection</b>		
Size	2KB		
Case sensitive	no		
Number or records	20		
Number of attributes	6		
Orientation	Variables (attributes) included as columns		
Data table structure and attribute description			
Attribute name	Definition	Type	Attribute description
ObserverID	Unique code. Link to tables Nextboxes_location.csv Parents_2015On.csv Chicks_2015On.csv	String	Code: initial first name.second names. n.nXX for data related to initials XX initials in raw data of unknown researcher
FirstName	Observer first name	String	Text
SecondName	Observer second name	String	Text
Email	Observer email address when participated in project	String	Text NULL: unknown
ObserverType	Observers position at Imperial College London or other institution during data collection	String	Codes proj.stu: Master or Undergraduate student proj.staff: Project leaders or technicians amat.vis: visitor  NULL: unknown
Notes	Further information associated with researcher	String	Text

<b>File name</b>	<b>NextBoxes_location.csv</b>		
<b>Description</b>	<b>Give information about the location and type of Blue and Great Tit nest boxes</b>		
Size	25KB		
Case sensitive	No		
Number or records	340		
Number of attributes	12		
Orientation	Variables (attributes) included as columns		
Files used to fill data	Read README_DataBaseOaks.txt to find out how this table was built		
Data table structure and attribute description			
Attribute name	Definition	Type	Attribute description
NestBoxID	Name of Nest Box. Link to tables	String	Alphanumeric Nestboxes are marked with a

	NestBoxes_breeding_2015On.csv Parents_2015On.csv Chicks_2015On.csv		letter and a number. In general, boxes within each woodland have the same letter.
Type	Type of nest box, determined by the size of entrance hole	Integer	Nominal 26: entrance hole is 26 mm diameter 32: entrance hole is 26 mm diameter
TreeID	Unique number given to each tree, Link to table trees.csv in Oaks DataBase	Integer	NA: unknown
latitude	Latitude: north-south position WGS84	Floating point	Geographic coordinate in decimal degrees NA: unknown
longitude	Longitude: east-west position WGS84	Floating point	Geographic coordinate in decimal degrees NA: unknown
northing	Great Britain, National Grid, northing (Ordnance Survey)	Floating point	Geographic coordinate NA: unknown
easting	Great Britain, National Grid, easting (Ordnance Survey)	Floating point	Geographic coordinate NA: unknown
species	Scientific name of species of tree where nest box is located	String	NA: unknown
InOut	Whether the tree (TreeID) currently host a nest box	String	In: Nest box is currently on this tree Out: Nest box was moved to other tree or taken out of the study
action	Whether the nest box (NestBoxID) was introduced or removed from a tree (TreeID) in the given date/year	String	set: nest box hanged on tree out: nest box removed form tree
year	If action set: year of the first breeding season when tree (TreeID) hosted nest box (NestBoxID) If action out: year of the last breeding season when tree (TreeID) hosted nest box (NestBoxID)	Date	YYYY
date	Day when a NestBoxID was set up (set) or taken down from a tree (TreeID) (out)	Date	DD/MM/YYYY NA: not known

Data anomalies	
	README_DataBaseOaks contains information of data curation for table NestBoxes_location.csv

	<p>README_DataBaseBlueTits contains information of data curation for other tables described here.</p> <p>Location of nest boxes in territory K (NestBoxID: K01 to K12), E09, E14, E19, J11 were estimated from a printed map.</p> <p>Date of set up, removal or changes of nest boxes location was not recorded before 2019. The year of nest boxes set up or removal before 2019 have been derived from the breeding records.</p>
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Supplemental descriptors	
Publications	6
Website	<a href="https://www.imperial.ac.uk/silwood-park/research/silwood-lte/blue-tits/">https://www.imperial.ac.uk/silwood-park/research/silwood-lte/blue-tits/</a>
How to cite database	Contact <a href="mailto:c.estrada@imperial.ac.uk">c.estrada@imperial.ac.uk</a>
How to acknowledge dataset	Contact <a href="mailto:c.estrada@imperial.ac.uk">c.estrada@imperial.ac.uk</a>
Additional information	<p>Sampling protocols can be found in: Lopera Doblaz (2017) Field Season Protocol, file: handbook.pdf</p> <p>Oak databse</p> <p>Maps showing nest boxes and trees in google, GIS</p>