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[NATIONAL GEOGRAPHIC SOCIETY NEWSROOM](#)

## Hunting Records Track UK Game Populations Over Centuries

The Game & Wildlife Conservation Trust (GWCT), based in Fordingbridge, Hampshire, established the National Gamebag Census (NGC) in 1961 in order to provide a central repository of bag records from UK shoots. The Census has become a unique set of data on game and predatory species in the UK which has been gathered from bag...

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[The Game & Wildlife Conservation Trust](#) (GWCT), based in Fordingbridge, Hampshire, established the [National Gamebag Census](#) (NGC) in 1961 in order to provide a central repository of bag records from UK shoots. The Census has become a unique set of data on [game](#) and [predatory](#) species in the UK which has been gathered from bag returns submitted voluntarily and in strict confidentiality each year by its contributors. This census superseded an earlier collection of game records which had been set up in the 1930s by Oxford University.



Red grouse (Peter Thompson, GWCT)

Gamebag records have been recognized as useful population indicators by biologists for over a century. Analyzing bag records and taking five- and ten-year averages provide comparisons of performance between moors, the ability to assess the implementation of management practices, such as [heather burning](#) (muirburn), and a window on the cyclical pattern of grouse diseases like [strongyle worm](#).

1892 Date	Game	Rabbits	Grouse	Red Grouse	Partridge	Pheasant	Woodcock	Snipe	Ptarmigan	Duck	Total
July		30									30
August 4		1								Wild 1	2
- 6										5	5
- 12		12	29							Wild and Culter 2+2 1	46
- 15								3			3
- 16	2	6	8							4+1	21
- 17			4					3		1	8
- 20	1	13	8					1			23
- 23			1							Culter 1	2
- 27		1	2							subf. young 1	4
September 9	1	4								Cul 1	6
- 10		10	2								12
- 20	1	2	1								4
- 23	7	1			2			2			12
- 24	24	6			2			1			33
- 29	2	2									4
October 1	5	4			2	1					12
- 6	7	15			18						40
- 7			1							Cul 1	2
- 8	11	4			6	1					22
- 14	2										2
- 17	1	1	1					1			4

Game book from 1892

Records for the UK Population Census date back to 1801. However, there are six annual gamebag records within the National Gamebag Census (NGC) which pre-date this. The first of this series is from 1789 and the last is dated 1806. The records include the names of those out shooting, their quarry and the variety and quantity of liquor provided! By the time Charles Darwin published *The Origin of Species*, the NGC database [held gamebag records](#) from 26 sites within the UK, and the number of contributing shoots increased to over 200 before the end of the 19<sup>th</sup> century. The number of contributors currently stands at over 900.

## 50 years of the National Gamebag Census under the management of the Game & Wildlife Conservation Trust

The Game & Wildlife Conservation Trust (GWCT), based in Fordingbridge, Hampshire, established the National Gamebag Census (NGC) in 1961 in order to provide a central repository of bag records from UK shoots. The Census has become a unique set of data on game and predatory species in the UK, which has been gathered from bag returns submitted voluntarily and in strict confidentiality each year by its contributors.

**NATIONAL GAME CENSUS  
RECORD SHEET FOR PESTS, PREDATORS, ETC.**

(The information given here will be treated as strictly confidential)

Name and address of Gamebag Keeper: **KEYSTONE & YOUNG LTD.**  
 Name of Shoot: **Abbeyville Reserve** County: **Wiltshire** No. of Acres enclosed: **1**  
 Acreage: **1779** (If a change in acreage has taken place) Year: **1961**

SPECIES	No. BAGGED	SEXES	No. KILLED
Bird	23	Nil	
Wood	235	Males	3
Hedgehog	68		
Rat	658		
Coat			
Grey Squirrel	72		
Sparrowhawk	4		
Common Crow	15		
Wooded Crow	/		
Bank	75		
Jackdaw	17		

Please add names of additional species in list

**PLEASE RETURN THIS SHEET WITH THE BAG RECORD BY 28th FEBRUARY**  
to National Game Census, Fordingbridge, Hants.

**2-part census form sent in 1961**

The current census form is mailed at the end of January each year to more than 900 contributors of the NGC and encompasses 24 huntable bird species, 10 huntable mammal species and 20 common predatory species. Additional information such as the number of keepers and the acreage of the shoot is also recorded on the forms.







Dr Nicholas Aebischer says, “Although many of the species covered by the NGC are monitored by other UK schemes, no other annual scheme matches the historical depth of the data held in the NGC database. Within the 2,057 sites currently held in the NGC database, 97 hold records for one hundred years or over. The earliest NGC bag records date back to 1789, and the original documents list the members of the shooting party, the quarry shot and the variety and quantity of liquor provided! This particular shoot took place only once a year, and the surviving records diarize ten such occasions ending in 1806. The next oldest record is from 1804, then two from 1823.”

For 1859, the year in which Charles Darwin wrote that “There seems to be little doubt that the stock of partridges, grouse and hares on any large estate depends chiefly on the destruction of vermin” in *The Origin of Species*, the database holds records from 26 sites. The database increases to over 200 sites for the year 1896. Game and predator bags provide an indicator of the success of game management, and are an important source of information on the changes in numbers killed and, by inference, on population densities. As a substantial proportion of the UK countryside is managed for shooting, the data potentially reflect trends in national and regional abundance for a wide range of species.



**Grey partridge (Peter Thompson, GWCT)**

Dr Nicholas Aebischer adds: “The species with the longest series of bag records within the NGC is the grey partridge. The NGC data provide trends in annual bag density for this gamebird dating back to 1826, and one marked collapse of the bags in 1869 correlates directly with the coldest year on record since 1740. The trends produced from the NGC data clearly show the decline of this iconic bird since the Second World War, particularly after the introduction of herbicides and the increase in agricultural mechanisation in the 1950s and 1960s. The official monitoring scheme for UK birds, the British Trust for Ornithology’s (BTO) Common Birds Census, dates from only 1962 and is not, therefore, able to show the full

extent of the decline, which the bags indicate to be around 95%. The Game & Wildlife Conservation Trust is now lead partner in the UK Grey Partridge Species Action Plan, set up as part of the Government's broad-based UK Biodiversity Action Plan to recover the status of a range of wildlife following the Convention on Biological Diversity of 1992."



**Red grouse (Peter Thompson, GWCT)**

Dr Aebischer continues: "Similarly, the range of coverage by the data within the NGC of red grouse starts in 1852 and this index captures the rise in popularity of grouse shooting during the latter half of the 19<sup>th</sup> century, which was boosted by the development of train services between London and Scotland in the 1840s." Again, the Second World War years, when grouse shooting virtually ceased, are distinctly apparent in the trends produced from the NGC data. Although many stocks were rebuilt, the decline from the mid-1970s was incurred by increasing pressure on red grouse and its habitat from predators and afforestation. For this species, the BTO index does not start until 1994, so it cannot detail these long-term trends.



**Woodcock (Andrew Hoodless, GWCT)**

Dr Aebischer confirms: “The best source of information on the status of the UK wintering population of the woodcock is the bag records held within the NGC. The BTO has no equivalent index for this species, making the NGC data the primary source of trends for this migratory bird. It shows the correlation between the temperatures during winter and the bag densities, and how milder winters provide lower bags, as for the years 1849 to 1851 when there was a period of relatively mild winters. More recently, bag sizes increased rapidly from the mid-1970s to exceed those from the last quarter of the 19<sup>th</sup> Century. These high bag yields may reflect a rise in UK overwintering birds as a result of widespread woodland planting, climate change, or perhaps more pheasant shooting days presented by the increase in pheasant releasing, yet the source population of woodcock appears to remain stable.”





**Brown hare (Peter Thompson, GWCT)**

The GWCT is one of 24 organizations participating in the Tracking Mammals Partnership (TMP), which was set up in 2003 by the Joint Nature Conservation Committee (JNCC) to provide an equivalent monitoring service for mammals to the one that existed for birds. The GWCT and the Mammal Society (another contributor to the TMP) are joint lead partners for the UK Species Action Plan of the brown hare. Thanks to its long-term bag records the NGC is the only source of data for the brown hare documenting the historical changes in the population of this species: declines between the world wars mirroring the fall in cereal cultivation, a peak in 1961 reflecting the dearth of rabbits (and hence abundant food) after the myxomatosis epidemic, and another decline over the 30 years up to the mid-1990s when modern farming methods took over from the previously traditional mixed farming systems. More recent bag records show an encouraging increase, which may confirm the value of such policies as mandatory set-aside, agri-environment and stewardship schemes.



**Muntjac deer (Peter Thompson, GWCT)**

The GWCT participation in the TMP prompted its scientists to review the spread of deer throughout the UK, using the data held within the NGC. By transposing the data onto maps at a county level, the spectacular expansion of the roe deer across Great Britain between 1969 and 1990 is transparent. Chinese muntjac deer were introduced to Woburn Park, Bedfordshire in 1894, and the progress of escapees from this herd can be tracked from the NGC data. Considering that the first appearance of this species within the NGC was during the 1980s, its records indicate a rapid establishment in the Home Counties within a decade, followed by on-going range expansion.

Dr Aebischer says “we expanded the list of species covered by the annual census form to include pest and predator birds and mammals when we set up the NGC in 1961, and inherited several sets of cull records from estate gamebooks extending back over 100 years. The majority of the early cull records are from Scotland, starting with weasel in 1879. By the mid-1920s data became available for weasel, stoat, brown rat, grey squirrel, moorhen and the corvid family from 30 shoots in Cambridgeshire, Cumbria, Hampshire, Shropshire and Wales, as well as from sites in Scotland. After 1961 the number of sites with predator data increased to over 300. More than 500 shoots now return such data each year since the 2000/01 shooting season.

The spread of wild-bred American mink across the UK is also revealed from the NGC dataset. The outbreak of myxomatosis in rabbits is echoed in the bag records of stoat and weasel, as the rabbit is the main prey of stoat, and the absence of grazed grassland by the rabbit led to a decline in numbers of field voles which are the main diet of the weasel.

**Gillian Gooderham** is National Gamebag Census Co-ordinator at the Game & Wildlife Conservation Trust.



The Game & Wildlife Conservation Trust manages research projects in a variety of disciplines encompassing expertise from its scientists in biology, botany, entomology, and ornithology, covering a broad range of environment from moorland, heathland and farmland to wetlands and other riparian territories, which aim to restore and conserve wildlife and its habitat, and to provide a sustainable source of game for future generations. The applied science carried out by the Trust often provides a basis for elements in conservation schemes run by Natural England or Scottish Natural Heritage, and can be directly applied by farmers and gamekeepers across the UK. GWCT scientists have produced over 900 scientific papers in peer-reviewed journals since 1929, and with other work published in books and chapters of books, and also in unpublished Ph.D. theses by doctoral students, the total number of scientific articles currently runs at over 1,600.

Full details of the work published by the GWCT can be found on its website:

[www.gwct.org.uk](http://www.gwct.org.uk) The National Gamebag Census is continually seeking new participants from the UK, especially Northern Ireland which is currently under-represented in the scheme. Its co-ordinator, Gillian Gooderham, will welcome any enquiries via e-mail: [ggooderham@gwct.org.uk](mailto:ggooderham@gwct.org.uk) telephone: 01425 651019, fax: 01425 655848, or mail to the GWCT Headquarters at Burgate Manor, Fordingbridge, Hampshire, SP6 1EF.

#### **References:**

Tapper, S.C. (1992). *Game Heritage: An Ecological Review from Shooting and Gamekeeping Records*. Game Conservancy Ltd, Fordingbridge.

(2006). *Game Conservancy Trust Annual Review 2005*, (37): 1-100.

(2007). *Game Conservancy Trust Annual Review 2006*, (38): 1-96.

(2009). *Game & Wildlife Conservation Trust Annual Review 2008*, (40): 1-96.

(2010). *Game & Wildlife Conservation Trust Annual Review 2009*, (41): 1-80.

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## **Meet the Author**

### **Gillian Gooderham**

Gillian Gooderham is National Gamebag Census Co-ordinator at the Game & Wildlife Conservation Trust.