



Passionate about birds



about early birdwatchers, ingenuity and field studies





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At the beginning of the twentieth century, the way birds were viewed changed in the Netherlands. Before that time, people thought of birds mainly as useful or harmful 'objects', but gradually they began to see them more and more as part of living nature and the realisation dawned that it was desirable to study and protect birds.

The study of birds – also known as ornithology - was on the rise during this period. Amateur researchers played a leading role in this. They spent many hours in the field. In the early days, little was known about the occurrence of birds in different areas. The birdwatchers studied which species occurred where and in what numbers, and what behaviour they displayed at different times of the year. For the first time, they also looked at the relationship between these aspects, which helped to gain a better understanding about birds in relation to their habitats.

The birders made drawings, photographs and films and wrote diaries full of data. As this was pioneering work, they had to be creative. Contemporary tools such as telephoto lenses and birding apps did not yet exist. Their dedication has ensured that the data they collected is still of great importance today. Thanks to these birdwatchers, we have a good overview of bird populations in the past, and we can place the results of contemporary research in a historical context.

This exhibition combines archive material – in some cases never shown before – with objects from private collectors and Dutch museums. Together, they recount the history of field ornithology in the Netherlands and celebrate the special passion of bird lovers of the 20th century and today.

Werkgroep Ornithologisch Erfgoed

The Werkgroep Ornithologisch Erfgoed (WOE, working group on ornithological heritage) was formed out of concern about the possible loss of the archives of birdwatchers from 1920-1970. The challenge for the WOE is to preserve bird archives from the pre-digital period and make them accessible. The WOE has been operating since 2014 as a national contact point for old archives, and is a working group of the Avifaunistische Kring Nederland (AKN, Dutch Avifaunistic Circle). The AKN in turn is a section of the Nederlandse Ornithologische Unie (NOU, Netherlands Ornithologists' Union).

Bird books

In the days of early birdwatchers, there were very few practical field guides. In 1937, the first Dutch bird guide Zien is Kennen! (To see is to know!) by Nol Binsbergen and Dirk Mooij was published, with 311 bird images in colour after watercolours by Rein Stuurman. In 1954, the 'Kist' followed -- J. Kist's Dutch translation of Peterson's Guide to the Birds. In the meantime, the Nederlandse Jeugdbond voor Natuurstudie (NJN, Dutch youth association for nature study) published editions for waterbirds, birds of prey and waders with illustrations of flight images and plumage descriptions. And more low-key Verkade albums also paid attention to birds and nature. The collection of bird books here shows what birdwatchers had to make do with at the beginning of the last century.

on loan from: Gerard Ouweneel, Frank de Miranda and collection Het Natuurhistorisch

Bird Act and Dutch Society for the Protection of Birds

Birds were hardly protected at the beginning of the last century. People caught them for consumption, to keep in cages and as decoration for clothes. Lady Cécile Goekoop-De Jong of Beek en Donk stood up against the latter. Together with her sister, she founded the 'Bond ter Bestrijding eener Gruwelmode' ('Union to End an Abominable Fashion') in 1892.

In 1899, the Nederlandse Vereniging tot Bescherming van Vogels (Dutch Society for the Protection of Birds) was born out of this. The first members were mostly ladies who had spent years campaigning against the killing of birds for the sake of fashion. They were successful and thus the new 1912 Bird Act was born. The Birds Act of 1880 gave protection only to birds useful for agriculture or timber cultivation. With the 1912 law, the Netherlands became the first country in Europe where basically all wild birds have a protected status.



photographs: Photocollection Diepenbrock, ca. 1895-1925, Rijksmuseum Amsterdam (Cécile Goekoop-de Jong van Beek en Donk), Ed Buijsman (hat with young Common Tern, former Hat Museum Utrecht)

Gavel

In 1941, pioneering photographer J. van de Peppel gave this gavel to the Club van Nederlandse Vogelkundigen (Dutch birdwatchers' club, predecessor of the WOE, Working group on Ornithological Heritage) to mark the club's 30th anniversary. He had made the hammer himself, which illustrates how skilful and creative the amateur ornithologists of the time were. The gavel shows the claw of a Marsh Harrier holding an egg. on loan from: National Museum of Photography



• The Bird Act 1910 with 'illustrations of the Birds protected by this Act and by the Hunting Act', so that officials charged with the enforcement would recognise the different species.

• This short documentary with Gerard Ouweneel on the value of nature data is a compilation of used and unused footage taken for Rik van der Linden's documentary Het Vergeten Leven van Nederland (The forgotten life of the Netherlands).



Participants in a field trip of the Dutch Society for the Protection of Birds, Eerde (1930)



Field trip to Zwanenwater by participants in the Seventh International Ornithological Congress, Callantsoog (1930)



Field trip to Zwanenwater by participants in the Seventh International Ornithological Congress, Callantsoog (1930)



Participants in a field trip of the Nederlandse Ornithologische Vereeniging (NOV, Dutch ornithological society), Texel (1930)

photographs: J.P. Strijbos, source: National Museum of Photography

About the birdwatchers in this exhibition



Seven amateur birdwatchers are the focus of this exhibition. Collectively, they have had a major impact on the development of the field ornithology, both through their own research and by documenting Dutch nature areas. Later in life, they often had administrative roles in national and international bird conservation.

This is by no means a complete overview of all the people who have meant a lot to the development of ornithological fieldwork: besides these men, there were many others. The passion for birds was something these seven had in common. But each of them played an important role from their own specialism.

At this point, there are no women in the archives of the Werkgroep Ornithologisch Erfgoed. If we look at photographs from the period 1920-1970, we can see that there were certainly women who were involved in birdwatching. In history, however, they have faded into the background, which means it is impossible to give them the credit and recognition they deserve.



Bernard van Dooren

In daily life, Bernardus van Dooren (1908-1988) worked in the cigar industry. Ever since childhood, he had been fascinated by the breeding birds of the Brabant Kempen region. He kept records of nests found with eggs, collected some of them and noted details. Through Van Dooren's research, we have a detailed documentation of the Kempen avifauna between 1932 and 1977. Data on species that have disappeared as breeding birds in the Netherlands, such as Crested Lark and Tawny Pipit, are of countrywide value. The egg collection he collected is significant as an environmental indicator for the Brabant Kempen before the Second World War.

Van Dooren had an extensive

network and was a member of the Nederlandsche Ornithologische Vereniging (Dutch ornithological society) and its oological (egg research) section for many years.

Egg boxes

These boxes were used by Van Dooren to preserve clutches of eggs permanently. There are 102 boxes, divided into three different sizes and they are made of cedar wood. Cedar has a pleasant smell, will not rot and contains an oil that is toxic to fungi and insects. The entire collection contains 693 clutches of 150 bird species. Each clutch has his own compartment. Species of which the eggs show great variation in shape and colour are represented with more clutches in the collection. The 'records' include a number, bird species, collection date and location for each clutch.

on loan from: Jan van Dooren

Permit

Not just anyone is allowed to collect eggs, search for (and then potentially disturb) nests, ring nestlings or prepare birds themselves. This permit from Van Dooren was issued following the 1936 Birds Act, a refinement of the 1912 Birds Act and for the first time based on European directives.

on loan from: Jan van Dooren

Host species

Cuckoos do not build their own nests, but use nests of so-called hosts. The female usually lays one egg in the nest of a host – usually a small songbird – with a preference for the species by which she herself was raised. In his seven diaries, Van Dooren recorded a total of 79 clutches of the Common Cuckoo that he and his companions found in the Kempen region of Brabant. The Werkgroep Ornithologisch Erfgoed (WOE, working group on ornithological heritage) made this graph with observations from Van Dooren. It shows the distribution of found clutches across 13 species of host birds.

Common Cuckoo

This series of photographs shows the breeding process of the Common Cuckoo. The host is a Common Reed Warbler. The series illustrates Van Dooren's skill in photography. The photographs were taken every other day. The second photo shows a young Cuckoo, but no young Reed Warblers. These were probably pushed out of the nest by the cuckoo chick. The photo series begins in late June 1936. His diary reads on 27-6-1936: 'In the Putten, we found the nest of the Reed Warbler with 3 incubated eggs and 1 Cuckoo egg. The breeding season was already well on its way, so the young could hatch any day. To be able to check carefully when the young cuckoo hatched, we visited the nest every two days: we were unable to detect anything of the hatched young warblers, because when we came to the nest one day, there was only a voung cuckoo in it.'

source: Bernard van Dooren. Brabant-Collection, Tilburg University (photographs) and Jan van Dooren (overview clutches)



Karel Bezemer

Karel Willem Leonard Bezemer (1899-1991) grew up in Wageningen, where he learned about nature and birds from his maths teacher G. Wolda. In 1918, he joined the Nederlandsche Ornithologische Vereeniging (Netherlands Ornithologists' Society). Four years later, he left for Java to work as a government official for six years. As head of the Naval Information Service. Bezemer was also sent to the Dutch East Indies in 1946-47. Back in the Netherlands, his main focus was on international bird protection. He achieved greater international awareness of the need for protection. From 1962, he was secretary-treasurer of the Dutch section of the International Council for Bird Preservation for more than 20 years. In 1974, he was awarded the Gouden Lepelaar (golden spoonbill) by the Dutch Society for the Protection of Birds for his achievements.

Publications

Bezemer wrote about birds ever since he was young. You can see a selection here:

• Four articles about his own fieldwork: Vogelzwermen (Bird flocks); IJsvogelaantekeningen (Kingfisher notes); Een seizoen zonder Sijzen (A season without Siskins); Roestplaatsen van vinkachtigen (Roosting sites of finches); on loan from: Naturalis Biodiversity Centre

• The first 'big day', in which, according to specific game rules, small teams of birdwatchers record as many species of birds as possible in one day;

• Sixteen countries make a plea for the Birds of the Wadden Sea;

• Two articles on meetings that were important for his contacts: Centenary British Ornithologists' Union; Work session of the International Union for the Protection of Nature. on loan from: Naturalis Biodiversity Centre

• Certificate received by Karel Bezemer as an honorary member of the Club van Nederlandse Vogelkundigen (Dutch Birdwatchers' Club).

• On 23 September 1987, several birdwatchers were welcomed to Soestdijk Palace to honour Prince Bernhard for his international work for nature conservation and to discuss important bird conservation projects with him. From left to right: Karel Voous, Gerard Ouweneel, Siegfried Woldhek, Prince Bernhard, Jan Wattel, Arie Spaans, Karel Bezemer and Frits Delfos Visser. *photograph: Dam foto-video*



Tom Lebret

Thomas Lebret (1918-1982) grew up in Dordrecht and roamed the Biesbosch freshwater tidal area from a young age, where he developed a lifelong love of waterbirds. He was often in the company of hunters, decoymen and rush cutters, learning the importance of such a large area of nature. He studied the foraging behaviour (looking for food) of geese both in the Netherlands and in Spain, Canada, Austria, Hungary and Romania. He then linked these data to the possible return of beavers, showing that the relationship between different species is important for optimal management. Lebret played a major role in nature and bird conservation with his insights. When he became a public prosecutor in Middelburg. he worked on conservation and area management in the rapidly changing Delta.

Diaries

All his life, Lebret kept track of his bird sightings in diaries. Through those diaries, you can also see the changes in his life. The diaries he kept in A5 notebooks in his youth are richly illustrated with bird drawings. During the war years, he had to go into hiding in Friesland, which did not stop him from making notes on birds. While working as a public prosecutor, he used a typewriter and A4 notebooks to record his observations.

Winter expeditions

Lebret had befriended British ornithologist Peter Scott, also a waterbird specialist and one of the founders of the World Wide Fund for Nature. When transiting and wintering Red-breasted Geese were discovered in Romania in 1968, it prompted Western European goose lovers to go there in winter. Lebret made five expeditions between 1969 and 1977, three times in the company of Scott. photograph with Peter Scott (Sinoe, Romania, 1971): Gerard Ouweneel photograph taken during winter expedition Romania, 1974: Jos Kuijpers

• Diary from the years of his youth on loan from: Regionaal Archief Dordrecht

• Diary from the wartime years on loan from: Regionaal Archief Dordrecht

• Diary from 1946. Lebret discovered a small colony of Black-crowned Night Heron in the Brabant Biesbosch, a species that had not been known to breed in the Netherlands for 75 years at the time. *on loan from: Regionaal Archief Dordrecht*

• Books published by Tom Lebret. on loan from: Gerard Ouweneel and collection Het Natuurhistorisch

on loan from: Regionaal Archief Dordrecht



Willem Bierman

Willem Hendrik Bierman (1904-1969) kept diaries of his bird observations from 1919 onwards. In the early years, he observed birds in his own surroundings around Hilversum and at his uncle Gerard's house by the dunes of Bergen. Characteristic of Bierman is the precision of his notes and his efforts to transform all data into useful information. He also started to travel outside of Europe early on. The picture shows Bierman aboard the Willem Barentsz, on the voyage to the Southern Ocean. His broad field knowledge led him to become the chairman of the Nederlandse Ornithologische Unie (1959-1969). In daily life, he was an ENT doctor.

Binoculars

Bierman was given this Zeiss pair of binoculars (10x48) by his father on his 14th birthday, during the First World War. Thanks to the neutrality of the Netherlands, it was possible to get such a pair of binoculars. He was very happy with his gift and used the binoculars for 50 years. He made the leather casings of the objectives himself. To focus, he had to adjust both oculars separately.

on loan from: Tijo Bierman

Writing set

Bierman crafted this little writing set from an old soap box; with copper spinning wheels, he could spin a paper roll. On the side a copper tube for his pencil. He usually carried the set in his pocket to make short notes every day, and then neatly transcribed them into his systematic diaries in the evening. *on loan from: Jaap Bierman*

Bird stories

Bierman wrote this story in the bleak days of the Second World War. It is addressed to Ernest Lefèbre, friend and fellow birdwatcher, and looks back on the trips they made together since 1919. He saw it as a dedication; in the hope that delving into the past will also give Ernest some enjoyment. *source: Jaap Bierman*

Apostle spoon and postcard

Only recently has it emerged that Willem Bierman is the same person as *De Kika*, a Dutch soldier stationed in the Peel line during mobilisation in 1939-1940. He regularly visited the Koch family in Geldrop. This apostle spoon is a gift to the family, with the inscription 'Wilbert Koch, geboren te Geldrop 5 maart 1941'.

The card was sent by Bierman from the Southern Ocean, congratulating Wilbert Koch's father on his 42nd birthday in 1947. Sender "Je Willem B." ("Your Willem B."). In those days, a postcard from distant lands was quite special. So, it is an indication of how grateful Bierman was for the contact in Geldrop. *on loan from: Wilbert Koch*

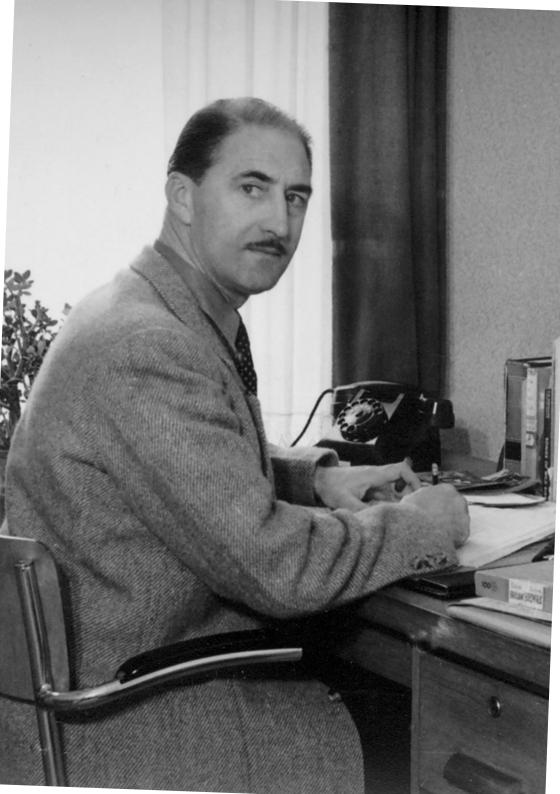
• One of about 20 diaries of observations in the Netherlands and abroad, from the period 1930-1937. *on loan from: Naturalis Biodiversity Centre*

• This diary is part of a two-part overview: Cuckoos and Crows. Bierman designed an entirely unique system for recording his observations. on loan from: Naturalis Biodiversity Centre

• Journal of the voyage with the Willem Barentsz, part I (1946). Bierman maintained discipline in spending hours observing birds from the main ship. Melchior provided the beautiful illustrations. *on loan from: Naturalis Biodiversity Centre*

• Diary of the voyage aboard the Willem Barentsz. This diary is bound in whale leather, probably from the foreskin of the penis. *on loan from: Naturalis Biodiversity Centre*

• Birdwatchers in nature reserve De Beer (1955). From left to right: in front Joop Swaab and Willem Bierman, centre Bik Tekke and Jan Kist, in the back Karel Waldeck, Jan Prins and Hans Klatte. *photographer unknown*



Simon de Waard

Simon de Waard (1905-1986) read Jac. P. Thijsse's book 'Texel' and decided to make a trip to the island. It was there that his love for birds of the sea, beach and dunes was born. He wrote a large number of articles for nature magazines that were popular at the time. But De Waard became best known as a filmmaker. Between 1930 and 1965, he made famous films about birds and nature reserves. In nature area De Beer near Rotterdam, he took beautiful shots of the area's lush nature, with various species of plovers and terns. In 1952. De Waard undertook his first trip abroad (to Sweden and Lapland). From then on, he made several films abroad. He showed the films at lecture evenings across the country and earned his living telling people about nature.

Nature area De Beer

Natural monument De Beer was located on the south side of the mouth of the Nieuwe Waterweg canal, facing Hook of Holland. Jac. P. Thijsse wrote in 1929: 'if Rotterdam ever wanted to build on De Beer at Hook of Holland or otherwise disturb the peace there, there would be protests not only from countless Dutch people but also from foreign connoisseurs and lovers. Twenty-five years from now, we will understand all these things even better than we do now.' De Beer was a nature area that, also because of its size of 1,300 hectares, was unique for the Netherlands. In 1958, the construction of Europort began here, which meant that in five years De Beer would disappear completely. *source: Kadaster / Topografische Dienst*

Film 'Vogeleiland De Beer' (Bird island De Beer)

Simon de Waard regularly visited De Beer and made this film there in 1948. Large beach plains provided an ideal habitat for coastal breeding birds. With the film, Simon de Waard made a tribute to De Beer. source: Simon de Waard - Beeld & Geluid

• Photographs of Simon de Waard with his camera. *photograph: unknown*

• Slide with film by Simon de Waard about De Beer, in original packaging. on loan from: Ann den Bakker-Korfmaker

- First published article about De Beer by Simon de Waard. on loan from: Ed Buijsman
- Report with bird sightings from a visit by Simon de Waard to De Beer. *source: Amsterdam City Archives*

• Book about Simon de Waard and book about nature area De Beer by Ed Buijsman.



Huub Oome

Huub Oome (1937) had a lifelong interest in birds, with a special focus on the (historical) ways of bird trapping. The photograph shows him holding a starling whistle. Between 1970 and 1990, Oome lived near the Biesbosch and managed a finch ringing site (a place where migratory birds were caught). Ringing birds became his hobby. He collected a large quantity of decoys and traps, which are now part of the collection of the Hunting Museum in Doorwerth. In daily life, his speciality was supervising restorative renovations of historical properties, including farms.

Various decoys and traps collected by Huub Oome

Catching and ringing birds is only done for scientific research these days. Migratory routes and winter habitats are thus established. Birds used to be lured and caught for consumption in various ways. For farm workers or peasant farmers, this was an additional source of income. European Golden Plovers, Northern Lapwings, Common Quails and Common Starling were in the fields by the hundreds, sometimes thousands.

- Decoy duck made from club-rush.
- · Decoy Golden Plover.
- Rocker on which a decoy or live bird was placed to lure conspecifics. on loan from: The Dutch Hunting Museum

- Bird whistle for luring Starlings.
- Bird whistle for luring Meadow Pipits.
- Bird whistle made from a quail bone and filled with horsehair, for luring Snipes.
- Net to throw over lured birds to catch some of them.
- Meadow Pipit clap net, which was laid flat next to the feeding site. A strong spring was attached to the net. After birds were lured and sat down to eat, the birder, who was waiting in a hide, pulled the lever. The metal spring tipped the net over the birds, which were thus trapped.

on loan from: The Dutch Hunting Museum



• This video about plover clap traps illustrates the use of various bird traps.

source: Vroege Vogels TV - NPO, 6 December 2020



Frans Kooijmans

In his youth, Frans Kooijmans (1907-1997) was part of a group of young birdwatchers who called themselves the Haagse Trekwaarnemers (Hague migratory observers). He would remain friends with that group throughout his life. Frans was at the forefront of bird photography. At a time when telephoto lenses were not readily available for sale, he was looking for ways to capture birds in their natural habitat. He recorded much of the landscape and birds at De Beer nature reserve. Until then, most of the photographs were of nesting birds, because they stayed still long enough. On 13 December 1929, Kooijmans made a photograph of a flying Sabine's Gull – a photograph that became famous. For his bird photography, Kooijmans received several international awards.

'The Canon'

To take photographs, Kooijmans built his own impressive telephoto lens, weighing 16.5 kilos, already before the Second World War. The camera is a plate camera, which itself is quite heavy. It is hard to imagine anyone going out carrying all this weight. He must have loved birds and photography enormously. on loan from: Janny Kwist photograph of Kooijmans with his telephoto lens at Flaauwers Inlaag, province of Zeeland, 1937: Rykel ten Kate

Het Vogeleiland (Bird island)

Kooijmans, along with Van Beusekom, Tinbergen and Rutten, is one of the authors of the book Het Vogeleiland, about birds on De Beer. The book was popular among birdwatchers. Advertisements appeared in various media, including this one from the magazine De Wandelaar (translating as 'The Walker') from 1935. on loan from: Gerard Ouweneel (book) en Ed Buijsman (advertisement)

• Certificate received by Frans Kooijmans on 6 November 1935 in London for his photographic work. *source: Gerard Ouweneel*

• Publication about Frans Kooijmans' photograph of a Sabine's Gull (Limosa, 1949) on loan from: Ann den Bakker-Korfmaker

Here is a selection of photographs

by Frans Kooijmans. bird and landscape photographs: Frans Kooijmans, source: National Museum of Photography canoe photograph: Niko Tinbergen, photograph Kooijmans at De Beer: A. Rademaker, hide photograph: unknown

Building on a good foundation

Around 1970, early birdwatchers laid a good foundation for field ornithology. Instead of individual birdwatchers, organisations emerged to organise and direct fieldwork on a project basis. This is how Sovon (1973) came into being as a knowledge centre on bird populations in the Netherlands. Amateur birdwatchers still play a major role here on a voluntary basis. Bird research could also take place on a progressively larger scale due to these developments. Tracking and identifying rare bird species became increasingly popular. Since 1979, Sovon has been publishing the Vogelatlas van Nederland (Bird atlas of the Netherlands), with the current status of breeding and winter birds. With the publication of reference works and magazines such as Het Vogeljaar, Limosa, Ardea and Dutch Birding, sharing knowledge on bird ecology, distribution and identification has become easier. The advent of email and the internet, and with it certain mailing lists and websites such as waarneming.nl, made this kind of information even more accessible. This also allows more and more attention to bird sounds. The website xeno-canto.org has played an important role here.

New techniques make it possible to collect even more data. Counts

of colony breeders and meadow birds are no longer done only from the ground, but also from the air using drones. Bird ringing allows us to learn more and more about how birds migrate. Transmitters and data loggers provide us with additional information about how certain bird species live. This knowledge is very important: it allows us to protect birds ever better. Some things never change, though: the 'good old' field guide is still used by birdwatchers.

Bird books

In the 20th century, the publication of a number of reference works marked an important change for birdwatchers, such as the bird guides by Lars Jonsson and those by Svensson, Mullarney & Zetterström ('the ANWB bird guide'). Important reference works also appeared in the form of 'The Cramp' (Cramp et al.), the 9-volume reference work on birds of the Western Palearctic. In Germany, the 14-volume monumental work 'Handbuch der Vögel Mitteleuropas' about birds in central Europe (Glutz von Blotzheim & Bauer) was launched in 1966. Every serious birdwatcher at the time subscribed to it, including in the Netherlands. The quality of field guides has improved considerably over the years with more true-to-life

illustrations and clearer descriptions of the birds.

Bird ringing

These are rings like those used in bird research. A bird is caught and a researcher clips a special ring around its leg, using ringing pliers for steel rings. As shown in the overview, each species has its own size ring. There are also collars for some larger bird species. The other pliers are for opening steel rings again. The bird is not bothered by the ring, but thanks to the unique number it carries from then on, it can be identified anywhere. This makes it easy to track the movements of this bird throughout its life. Sometimes they travel very long distances! Much information on migratory birds is available for all to see at www.trektellen.nl and www.vogeltrekatlas.nl.

on loan from: Erwin Kompanje en Norman van Swelm

Tracking birds

Bird ringing provides a lot of knowledge about behaviour, distribution and survival. Along the Rottekade in Zevenhuizen (province of South Holland), young Common Kestrels growing up in a nest box are ringed every year, as was the case on 14 June 2024. Unfortunately, Kestrel chick 4AA starved to death just a week after fledging, as there were hardly any field mice this year, an important prey for Kestrels. The same fate sadly befell a sibling of this bird from the same nest box. Thanks to ringing, we know that chicks from earlier years survived longer. One of the 2021 chicks made it all the way to the island of Texel in the province of North Holland, but ended up against a window there. A 2023 bird fared better, observed alive and well over a year later near Schiedam, 12 km away. The observer read off the code on the ring and reported it via www. griel.nl, a website where anyone can report read bird rings.



Transmitters and data loggers

Transmitters and data loggers can provide a lot of information about where birds fly and how they live. The location of a bird that has a transmitter is determined through GPS (GPS transmitter) or by measuring light intensity (light logger). Motion sensors provide information about behaviour. That way, we receive information about times and places when researchers cannot be there. The 2021 image shows the route of the Pink-footed Goose "4K" that was transmitted in Finland in April of 2019. The route clearly shows that the goose crossed the North Sea (probably with favourable winds), while they usually fly to Denmark overland. During the crossing from Norway to Spitsbergen, you see it first returns to land when flying above the sea (probably due to strong headwind).

There are several types of transmitters that differ in how they work and how they are attached. on loan from: NIOO-KNAW (Vogeltrekstation)

• Geolocator or light-level logger (0.35-2.0 grams, for the smallest songbirds): These transmitters are attached around the legs with two elastic loops. The light intensity is stored every 10 minutes, which can be read out after recapturing the bird. These specimens were used in 2017 on Eurasian Blackcaps to record their migration from the Netherlands to Morocco and back.

• GPS-GSM transmitter (9-30g, prototype, for birds of around 300g (sandpipers, gulls, crows) and larger): This type is attached to the back with a lightweight harness around legs and neck. A small solar panel provides power. Besides the location, the bird's activity is also recorded. A transmitter of the same type was used between 2019 and 2022 on a Barnacle Goose that flew with it several times to northern Russia and back.

• GPS-GSM transmitter (27 grams, older type, for birds of around 1000 grams (waterfowl, birds of prey) and larger): This type is attached to the back with a lightweight harness around legs and neck. A small solar panel provides power. Besides the location, the bird's activity is also recorded. This transmitter was used on a Greater White-fronted Goose that migrated back and forth with it between Germany and the northern Russian island of Kolguev around 2017. • GPS-GSM collar transmitter (22 grams, for birds of around 1300 grams and heavier, especially geese and swans): This transmitter is attached around the neck of a goose or swan. Collar transmitters work similarly to backpack transmitters but are more comfortable to wear for large birds. This transmitter was fitted to a Greater White-fronted Goose on 7 May 2024, but was found without the bird in early September along the banks of Smålandsfarvandet, Denmark.

• GPS collar transmitter (70 grams, older type with battery): This type did not yet have the ability to transmit data over the GSM network. The sparse GPS positions had to be read with an antenna that had to be within a few hundred metres of the bird. The downloading process could sometimes take hours. This transmitter was used on a Bewick's Swan between 2005 and 2008, which carried it on several return flights between the Netherlands and the Russian Pechora Delta.





Barnacle Goose with transmitter on nest. *photograph: Cynthia Lange*



Barnacle Goose with transmitter on nest. *photograph: Cynthia Lange*



Flying Barn Swallow with geolocator. *photograph: Jouke Altenburg*



Caspian Terns along the Afsluitdijk dam on 10 August 2024. The yellow-ringed bird was ringed as a nestling on 22 June 2022 in Finland (1168 km to the north-east). *photograph: Garry Bakker*



Black-headed Gulls along the Afsluitdijk dam on 18 August 2024. The ringed bird was ringed as an adult on 5 February 2017 in Zagreb, Croatia, and subsequently found in Alphen aan den Rijn, the Netherlands (2021) and in Poland (2022, 2023 and 2024). photograph: Garry Bakker



All the ring and recovery locations of the Kestrel. The number of dots in and around the Netherlands shows that the Dutch breeding birds at most wander around a bit. The individuals that do migrate do so mainly over a north-south oriented migration path. *source:* <u>vogeltrekatlas.nl</u> photograph: Garry Bakker

Birdwatching for all

Although most bird research is now coordinated by professionally trained ornithologists, amateur birdwatchers still play an important role. A large group of experienced amateurs volunteer regularly to survey species and numbers. Thanks to the internet, information, such as where and when birds are seen and heard, can be shared widely. Binoculars have improved and telescopes are becoming available to a wider audience, so presentday birdwatchers no longer have to make their own telephoto lenses like Kooijmans. For various target groups, bird books and charts are now on the market. So, everyone can help with bird surveys, including in their own gardens.

By registering which birds you spot on waarneming.nl, your sightings become publicly available. Researchers can then use this data to better understand bird behaviour and thus better protect them. Apps such as Merlin Bird ID and Obsidentify can help you identify which bird you are looking at. So birdwatching is now easier than ever. Moreover, because all observations can be linked digitally, it is easy to make connections. Every observation made is thus of value within the knowledge network. So even one observation on an online platform is of value to science.

Identifying birds

The Dutch Society for the Protection of Birds' Nationale Tuinvogeltelling (national garden birdwatch) is now a very well-known event. Thanks to this largest 'citizen science' project in the Netherlands, we are learning more and more about how birds use our gardens in winter. Birding professionals Camilla Dreef and Nico de Haan created this free garden bird course to help people identify the birds around them. The apps Merlin Bird ID and Obsidentify help participants determine which bird they are spotting. source: Dutch Society for the Protection

of Birds, Cornell Lab of Ornithology, IVN Natuureducatie

Birdwatching

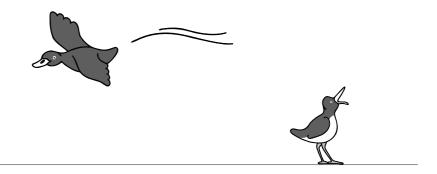
Birdwatching and 'scoring' or 'ticking' a particular species has become increasingly popular. When a special bird is spotted, groups of people head out to see and possibly photograph it. Pursuing and photographing as many species as possible is called twitching. On this photograph birdwatchers look at the Brown Shrike.

• Vogelbescherming Havik 85 HD' telescope and 'Vogelbescherming Stern' binoculars on loan from: Dutch Society for the Protection

on ioan from: Dutch Society for the Protection of Birds



photograph: Garry Bakker (Netterden (Gld), 19 January 2014)



Birdwatching

Find the mounted birds in the room and find out which species it is on the wall.

photographs: Garry Bakker and Chris van Rijswijk (European Greenfinch, Eurasian Wigeon and Common Sandpiper)

Colophon

'Passionate about birds - about early birdwatchers, ingenuity and field studies is a collaborative project of Natural History Museum Rotterdam and the Werkgroep Ornithologisch Erfgoed (WOE, Working Group on Ornithological Heritage, https://www.ornithologischerfgoed.nl).

Exhibition concept and texts

drs. Shirley Jaarsma, head of public affairs Natural History Museum Rotterdam drs. Anne van Hazel, employee exhibitions & public affairs Natural History Museum Rotterdam Frank de Miranda, chair Werkgroep Ornithologisch Erfgoed Jorna Kniese, member Werkgroep Ornithologisch Erfgoed

With contributions from

Ed Buijsman, Paul Keuning, Gerard Ouweneel en Ed Veling (Werkgroep Ornithologisch Erfgoed), Garry Bakker and Sander Elzerman (Rotterdam Urban Ecology Unit)

Images

Nederlands Fotomuseum, Heimans en Thijsse Stichting, Tilburg University, Cornell Lab of Ornithology, IVN Natuureducatie, Vroege Vogels TV, Beeld en Geluid, Kadaster, Vogelbescherming Nederland, Vogeltrekatlas, Rijksmuseum Amsterdam, Naturalis Biodiversity Centre, Jouke Altenburg, B. van Amerongen, Garry Bakker, Jaap Bierman, Ed Buijsman, Dam foto-video, Florian Diepenbrock, Bernard van Dooren, Jan van Dooren, Rykel ten Kate, Paul Keuning, Frans Kooijmans, Roald Kooijmans, Jasper Koster, Jos Kuijpers, Cynthia Lange, A. Rademaker, Chris van Rijswijk, Rie Rosmolen-Murre, Kees Schreven, Jan Pieter Strijbos, Niko Tinbergen, Gerard Ouweneel, Simon de Waard, Hans de Waard, Pim Waldeck

Exhibition and graphic design

Studio La Meul, Rotterdam Drawings - Saskia Meulendijks Graphic design - Arnoud Verheul

Exhibition construction

Decorofzo - David van der Wees ManuelArt - Jerrel van den Hoven

Production

Jeroen Bakker, Anibal Lizardo, Quintus belichting, Atelier van Zijderveld

Translation

Jean Tee

Loans

Naturalis Biodiversity Centre, Dutch Hunting Museum, Regionaal Archief Dordrecht, National Museum of Photography, Dutch Society for the Protection of Birds, Vogeltrekstation, Stadsarchief Amsterdam, Ann den Bakker-Korfmaker, Ewout Bezemer, Jaap Bierman, Tijo Bierman, Ed Buijsman, Jan van Dooren, Wilbert Koch, Erwin Kompanje, Janny Kwist, Frank de Miranda, Gerard Ouweneel, Norman van Swelm **Exhibition partners**





With thanks to

het het Cultuurfonds J.E. Jurriaanse V ZABAWAS Uise Mathilde Fonds Kleinschalige Projecten Natuuredu Meester Prikkebeen Fonds













