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PRESS RELEASE

A Concert of Birdsong from over 2,000 Places around the World

The first stocktaking of the scientific data collected by the citizen science and art project DAWN CHORUS 2021, initiated by BIOTOPIA and Stiftung Kunst und Natur

Using a specially developed smartphone app, the citizen science and art project DAWN CHORUS has this year collected more than 3,400 birdsong recordings from all around the world (2,580 of these within the duration of the scientific project from 1 to 31 May 2021). The project, initiated in 2020 by the Stiftung Kunst und Natur and BIOTOPIA – Naturkundemuseum Bayern, was thus able in 2021 to again gain the support of ordinary people to play an active part in research on biodiversity. DAWN CHORUS has again successfully combined an experience of nature and the protection of species in a highly innovative manner.

Birds are important indicators of changes in many different environments, and the dawn chorus can be a sign of threats to biodiversity. For the second time, people from all parts of the world were asked to record the dawn chorus where they live, and to share and upload their recordings into our global sound map. This year they used the new DAWN CHORUS app, which was developed with the support of the German Federal Cultural Foundation. It turned out to be very popular – around 90% of this year's sound recordings were done with the new DAWN CHORUS app, which to date already has nearly a thousand registered users. All the uploads from 2020 and 2021 are entered into a scientific collection of data and will be compared with audio recordings from future project phases in a long-term study.

In 2021 the DAWN CHORUS app also included the integrated media art feature *Sonic Feather*, developed by the multimedia artists Mika Johnson and Marcel Karnapke. The opportunity to transform the sounds of nature into visual art and to draw the recorded birdsongs with "acoustic ink" was very popular with users. More than 400 original media artworks – unique sound images – were created and shared in the community.

3,400 birdsong recordings from 35 countries: the invitation from Munich motivated people from Helgoland to Singapore to participate

So far this year more than **3,400 birdsongs from 35 countries** have been recorded and shared. Within the project period, most of the users – 78% – were again from Germany, but there were also many people from countries far and wide: the United Arab Emirates, India, Indonesia, Singapore, Lebanon, Oman, Bahrain, Brazil and Nepal. German "hotspots" with higher-than-average participation were Munich, Berlin and the Cologne / Bonn region. We also had a notable number of "super users" among our citizen scientists – people who uploaded more than ten recordings and making up a total of 26% of all the recordings in May.

Bavaria – the home of the project – is the top runner among the German federal states, with **34% of all recordings**. It is particularly pleasing that our invitation was also heard in exotic far-away places, and was also able to collect truly valuable recordings from Germany, in places such as Helgoland.

This year's birdsong concert comes from **2,278 different places** around the world. It is accompanied by more than 1,100 uploaded photos that also make the locations where recordings were made more tangible. While in 2020 65% of all recordings were made in cities and urban environments, in May 2021 51% of recordings were urban and 45% rural.

Blackbird, great tit, and house sparrow are easy to recognize by their song

As well as uploading audio recordings and photos, participants were invited to name the birds that they recognised in the recordings by their song. As last year, the blackbird was top of the list by a considerable margin, with 28% of entries, followed by the great tit (9%), the house sparrow (7%), the ringed dove (4%) and the visually inconspicuous but acoustically clearly identifiable blackcap (4%). The newspaper *Münchner Merkur* reported on a new and more aware way of perceiving nature that the DAWN CHORUS project had provided for many participants: "After using the app, people open their ears a bit more and listen."

The DAWN CHORUS app also gathered information about the intensity and kind of noise interference and pollution during the early morning recordings. As last year, traffic and street noises dominated the list of sources of noise heard, with almost 86% (airplanes: 1.8%, industry: 1.4%, people: 2.3%, other sources: 8.9%). As expected, the intensity was lower at weekends and on public holidays, when compared with normal workdays. More precise studies, in particular in comparison to the "silent spring" of the pandemic, have not yet been undertaken.

Large international fan community in the social media and positive feedback from the press

A large number of citizen scientists were recruited by means of our project communication via both social media and also more traditional journalism. On Facebook, high-quality content and popular challenges, such as the City versus Countryside Challenge, led to the international fan community reaching more than **127,000 followers** within a short period of time (63,500 new fans in 2021). People from 45 nations shared information on the theme of birdsong here.

In a report on the DAWN CHORUS project, the *Frankfurter Allgemeine Sonntagszeitung* addressed the very special effects of early morning birdsong: "The slowing down of human activity during the first Corona lockdown gave the bird world more space to present its acoustics. This is no "silent spring"! Many people were astounded by what could be heard once cars and planes were quiet."

The use of the app and the upload of birdsong is still possible and very welcome, even after the end of this year's scientific project period. People can also still share their recordings and unique *Sonic Feather* graphic artworks via social media and thereby win the interest of other bird lovers.

Artificial intelligence will support identification of species in the future

In order to draw scientifically reliable conclusions and to be able to compare biodiversity over a period of years, further comparative data are required. These will be collected in future project phases, and all the organisers hope for further support of the project from citizen scientists from all over the world, and in particular participation in the same place and at the same time in coming years.

A number of the recordings made thus far are presently being analysed within the scope of several projects. One aim is to establish a database that will enable algorithms to learn to identify species of birds by their song and thus to further develop biodiversity research by using artificial intelligence.

BIOTOPIA will initiate a workshop on this, working with renowned scientists from the Max Planck Society on the recognition of birdsong.

For our online event **Learning from the DAWN CHORUS** at the end of May, BIOTOPIA brought together the musician and author David Rothenberg, the artist Alexandra Daisy Ginsberg and the expert for animal voices and artificial intelligence Dan Stowell. You can see how new technologies and art can deepen our understanding of animal communication, as well as other questions that were discussed, here: <https://www.youtube.com/watch?v=UmtrrN-oJwg> (recording of the event of 31 May 2021).

In the autumn, to mark **World Migratory Bird Day**, we are planning an interactive event on the recognition of birdsong with the ornithologist, behavioural scientist and species expert Philipp Herrmann – known as “bird Philipp.” Information on future events is announced regularly on the BIOTOPIA website (www.biotopia.net).

DAWN CHORUS 2021 in numbers

2,580 birdsong uploads (in the project period in May)

3,412 birdsong uploads in 2021 **in total** to today

Participation by people from **35 countries**

93% of recordings were from Europe.

78% of the recordings come from **Germany**.

34% of the recordings are from Bavaria.

124 birdsongs were uploaded from the United Kingdom, 112 from the USA. A selection of uploads from other countries: 10 from the United Arab Emirates, 9 from India, 4 from Lebanon.

Recordings were made in more than **2,278 different places**.

417 Sonic Feathers were created.

1,114 photos were uploaded.

ca. 63,500 new fans from 45 nations joined us on Facebook.

The DAWN CHORUS initiators about the project:

“I am delighted by the great interest in our community project DAWN CHORUS, which again in 2021 is making an important contribution to biodiversity research and attracting a broad public all over the world to the songs of birds. A key aim of the new BIOTOPIA museum is to make people curious about their environments.”

Prof. Dr. Michael John Gorman, founder director of BIOTOPIA – Naturkundemuseum Bayern

The DAWN CHORUS birdsong can be heard at **#dawnchorus2021** und **#stopandlisten** on

Facebook [@DawnChorusStopAndListen](https://www.facebook.com/DawnChorusStopAndListen)

Instagram www.instagram.com/dawnchorus_stopandlisten
[@dawnchorus_stopandlisten](https://www.instagram.com/dawnchorus_stopandlisten)

and at www.dawn-chorus.org.

PRESS IMAGES on request.

"Dawn Chorus – The App" was developed in conjunction with the "dive in. Programme for digital interactions" project of the Federal Cultural Foundation, supported by the Federal Government Commissioner for Culture and the Media in the NEUSTART KULTUR programme.

DAWN CHORUS is a cooperation project by BIOTOPIA – Naturkundemuseum Bayern, Stiftung Kunst und Natur, and Förderkreis BIOTOPIA – Naturkundemuseum Bayern e.V.

The citizen science and arts project is part of the UN Decade on Ecosystems Restoration.
<https://www.decadeonrestoration.org>

DAWN CHORUS – PROJECT PARTNERS:

Bavarian State Ministry for Science and Art
Bavarian State Ministry of the Environment and Consumer Protection
Bavarian State Ministry for Education and Culture
Bavarian Academy for Nature Conservation and Landscape Management
Bayern 2
BirdLife International
BUND Naturschutz in Bayern e.V.
Haus der Kunst München
Landesbund für Vogelschutz in Bayern e.V.
Ludwig Maximilian University Munich, chair for the teaching of biology
Max Planck Society
Max Planck Institute for Ornithology
Museum for the United Nations – UN Live
NABU – Naturschutzbund Deutschland (Nature and Biodiversity Conservation Union)
#NatureForAll / IUCN International Union for Conservation of Nature and Natural Resources
Soundtent
The Bavarian Natural History Collections
UN Decade on Biodiversity
University of Salzburg, department for the teaching of biology
VBio
World Migratory Bird Day
WWF

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DAWN CHORUS – THE INITIATORS:

BIOTOPIA – Naturkundemuseum Bayern is presently planned as a new museum for the natural and environmental sciences in Munich Nymphenburg. It will redefine the concept of a museum of natural history for the "age of biology," expanding and replacing the present Museum of Man and Nature. As an interface between science, art and society, BIOTOPIA will present interactive exhibitions, events, festivals, digital education and mobile programmes across Bavaria as a new platform for discussion and education in the life sciences and sustainability. BIOTOPIA is an international lighthouse project of the Free State of Bavaria with private support from the Förderkreis BIOTOPIA – Naturkundemuseum Bayern e.V., chaired by Dr. Auguste Princess of Bavaria. More information: www.biotopia.net

Stiftung Kunst und Natur (formerly Stiftung Nantesbuch) provides spaces and interdisciplinary programmes for the sensory exploration of art and culture and of nature and landscape. It aims to inspire and activate people. This cultural institution was founded in 2012 by the entrepreneur Susanne Klatten and operates in two locations. In Nantesbuch in the foothills of the Bavarian Alps the foundation is developing a large natural site with comprehensive renaturation, landscape management, and forest transformation projects, as well as farming and forestry, presenting a diverse programme of cultural events and education on art and nature. In Bad

Homburg in the state of Hesse, the Museum Sinclair-Haus offers a venue for exhibiting contemporary international art. More information: www.kunst-und-natur.de

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