

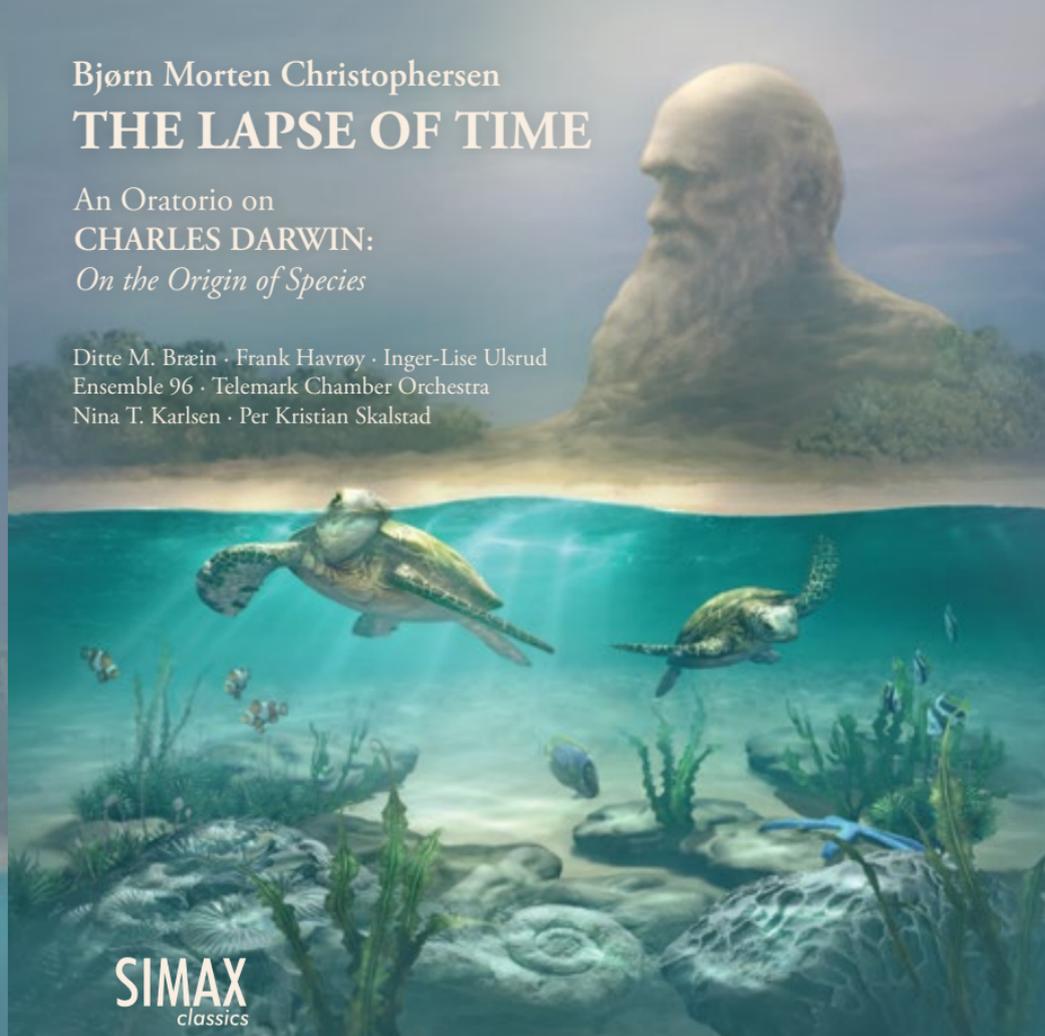


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Bjørn Morten Christophersen  
**THE LAPSE OF TIME**

An Oratorio on  
**CHARLES DARWIN:**  
*On the Origin of Species*

Ditte M. Bræin · Frank Havrøy · Inger-Lise Ulsrud  
Ensemble 96 · Telemark Chamber Orchestra  
Nina T. Karlsen · Per Kristian Skalstad



**SIMAX**  
classics

Bjørn Morten Christophersen  
**THE LAPSE OF TIME**

An Oratorio on  
CHARLES DARWIN: *On the Origin of Species*

1. Part I: Watch the Sea at Work 13:00
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My oratorio *The Lapse of Time* (2013) is no less than a tribute to the evolution of life on earth. Perhaps it also can serve as a musical bridge-builder between natural science and religion, and as a meeting point for common wonder and excitement.

I have based the libretto solely on excerpts from Charles Darwin's *On the Origin of Species by Means of Natural Selection* (1859). This book is undoubtedly one of the most important scientific dissertations ever written. It radically changed our understanding of life on earth, who we humans are and where we come from. At the same time, it is exceptionally well written and reader-friendly. Even a layman like me can read it with pleasure. I can not say the same about Einstein's theory of relativity or any article in medicine, biology, physics or chemistry today.

One should not expect poetry and beauty flourish through such a scientific work, but in fact that is the case with Darwin's wonderful text. It is not difficult to spot its beauty, but it was a painstaking task to unwrap the poetry in a singable libretto

while staying as loyal as possible to the original at the same time. For example, Darwin wrote:

*A man must for years examine for himself great piles of superimposed strata, and watch the sea at work grinding down old rocks and making fresh sediment, before he can hope to comprehend anything of the lapse of time, the monuments of which we see around us.*

Step by step I approached a version that I believe both preserves the core of Darwin's text and at the same time can be carried by choral singing. Hence, the opening words of *The Lapse of Time* read as follows:

*Watch the sea at work  
grinding down old rocks  
making fresh sediment*

*Extremely slow*

*The lapse of time  
the monuments around us*

As this excerpt suggests, a fundamental issue in Darwin's book is the enormous time span of which evolution has been at work. How can we understand and experience a time horizon far beyond our own? Perhaps music can come to our aid? Music is indeed the form of art that unfolds itself in time, and it gives us the opportunity to experience and acknowledge time in various ways. Recognition of time outside of humans' horizons is crucial to understand the course of evolution. Like us, every generation in every species has a separate time horizon. We humans have ours, the mistletoe has its own, the porpoise another, yet we are all bound together like branches of a great tree. The tree of evolution.

Part I of *The Lapse of Time* deals with geological changes: "Watch the sea at work, grinding down old rocks ..." The earth itself, the environment of life has changed in parallel with - and even in interaction with evolution. In this opening movement we hear large sound masses in slow change. Then, "from the first dawn of life all organic beings resemble each other in descending degree." Music depicts the beginning of life. But I have not tried to portray the very beginning of life itself, supposedly the point in time when evolution went from pure chemical processes to biology. Perhaps there never was *one* such moment in time. Life still begins to this day too. Each new individual is potentially the start of a new branch of the tree of evolution.

Although we humans have been breeding new species for thousands of years and have thus exploited the fact that life is changing, it was

Darwin who saw the true big picture. He observed that in the wild too, some individuals within one and the same species have beneficial characteristics that make it easier to obtain food, survive and have offspring compared to others. And thus increases the probability that precisely their characteristics are passed on to a new generation. Some individuals are also more resistant to changes in their environment than others. In other words, they have better conditions for surviving and passing on their traits. This is the struggle for existence, the struggle for daily bread, and to survive a new day, a new season, another year. "Struggle for life" is portrayed in Part II of my oratorio. We hear it in regular rhythms as the tireless everyday work. Hearing the phrase "struggle for existence", however, we tend to think of dramatic scenes of the lions' raw hunt or the great white shark throwing itself like a projectile up from a foaming sea with a seal in its mouth. Crucial seconds of the life of individuals! The struggle for life of plants and trees, though, appears as peaceful and predictable in comparison. They fight in completely different ranges of time. Yet, still the individuals that succeed are more likely to pass on their qualities. This process happens by itself in nature and is regulated in interactions between individuals, populations, species, and their environment. And if we can understand that this natural selection of beneficial traits has been acting for millions and billions of years, we can accept it as the explanation for the diversity and complexity of life.

In the following a cappella interlude, *Mistletoe*, we zoom into the individual specimen. The music



Photo: Farin Rudolf/UTU

becomes more melodic and personal, and the soloists come into focus. The mistletoe's struggle to attract the birds that help it with fertilization. By the way, it is often said that Darwin only in a single paragraph towards the very end of *The Origin* hinted at the place of man in evolution. But I found at least 5-6 explicit but quickly transient references. We hear one of them towards the end of this interlude. Here, Darwin warns against the consequences of overpopulation among humans.

Part III *Change* opens with the chorus and orchestra interacting with their own past. As a distant memory, we hear bits of the opening movement in dialogue with the present music. Part III thus brings Part I back to its present consciousness. But this memory is something else than hearing it as the real now. Our perception of it has changed. The music moves into a development, yet constantly in dialogue with its own past.

Part IV *Extinction* is a homage to all the extinct species in the history of life on earth. It is based on one of Darwin's most beautiful and striking metaphors: namely the depiction evolution as a great tree, with the species as branches stretching in different directions. The spaces between the branches thus represent extinct life. This movement is set in variation form, because, indeed, we are all variants of our ancestors. The main theme gradually take shape. Later it runs in various forms simultaneously in a tangle of winding branches, making up the mighty crown of the tree.

All species affect the nature they live in, usually in minor degree. Still, they change their immediate surroundings, slowly, generation by generation. Nevertheless, it is true that natural selection has followed its course if balance between different species, and likewise between beings and their environment, largely is maintained. Humans was long a part of this. But evolution slowly gave our ancestors cognitive capabilities far beyond other species. At some point this gave us a huge advantage, which is often referred to as "the cognitive revolution", which suggests that it went quite fast - in some thousand years, perhaps. But building the conditions for such a leap of thought must have been a lengthy evolutionary process. Nevertheless, humans developed an extraordinary ability to build complex languages and conceptualize the world around themselves, which again made it possible to transfer knowledge, skills, and ideas much faster and more complex than other animals. The well-known evolutionary theorist Richard Dawkins has called this "memes" - ideas that are transferred from one individual to another to "mutate" from link to link much like genes. In this way, evolution led man almost out of reach of its own forces. Tens of thousands of years ago, we humans even began to largely interfere with the course of evolution through planned breeding, burning forests to facilitate hunting and farming, and exterminating large mammals. We brought a new gear, a new force into nature's processes of change, and we are constantly gearing up. At the same time, our ability to transmit and develop ideas has eased our own struggle for existence. This has given us time and opportunities to think, to reflect and to *ask questions*: Why is the

world as it is? Why do we exist? What is the meaning of life? Is there a God? So, we have also erected temples, churches, concert halls and museums to seek a meaning and the answers that nature alone cannot give us. For it is true that when such a significant part of us humans is governed by thoughts and ideas, by language and culture, as much as by instincts embodied in genes, the theory of evolution alone cannot provide full answers to who we are. Can we, then, still be part of nature's course of life? Is not the thought that evolution alone has led us off its very own course, nearly out of its own reach, quite a wild idea?

The discussion between science and religion became heated after *On the Origin of Species* was published, and it still is in many circles today. Only during the work on this oratorio, I have experienced what I would call childish behavior from both sides: congregations refusing to house the work and biologists refusing to hear it in church. And maybe the work will always fall between two chairs? Yet, many people have for long put this barrier behind them. Biologists have also sought solace in the church and pastors have indeed preached about natural selection.

I have, then, also deliberately given *The Lapse of Time* a sacral musical flavor to build a bridge between science and religion. I think of the work like an amazement around ourselves between nature and culture. The wonderfully rich life on the planet, and not least that we are here and can in fact watch and admire it all, appear as - miraculous, indeed! Even Darwin said: "Admire"

- "this wonderful struggle for life" - "around us". - *Around us!* Evolution has taken its course, but we are here watching and admiring. Darwin too assigned aesthetic qualities to nature, like "beautiful" and "brutal", even though the lion is hardly more brutal to the lion than the mistletoe is sly to the mistletoe. At the same time, from the cognitive revolution, we have unfortunately increasingly destroyed nature too, because nature cannot keep up to the pace of change that we humans impose on it.

In the second a cappella interlude, *Bones*, we hear a choir of primates babbling and gesturing. Then an enthusiastic researcher appears. We follow him while he begins to comprehend hitherto unknown facts around him, truths he himself is a part of. The interlude then slides attacca into the finale, which in many ways sums up the work as a whole. The finale culminates in an Epilogue where I have sifted through Darwin's text so thoroughly that it points back to himself, that is, to the almost inconceivable and miraculous fact, mentioned, that he himself can consider what he is a part of, and give it such qualities as beautiful and brutal. "Watch, look, admire!"

The starting point for the oratorio *The Lapse of Time* was conductor Eirik Sorborg and my desire to collaborate on a large-scaled new work. We have a background from the same choir Schola Cantorum in Oslo. When he moved to Møre at Norway's west coast, he started his own choir, Ensemble Dali there. The strong European choral tradition is mainly based on church music, as we saw it. But we wanted to take this tradition with



Photo: Fartein Rudjord/Utio



Photo: Fartein Rudjord/Utio

us to something else. Sørborg asked the crucial question that ignited the spark in me: "What if science is the starting point for such a work instead of the same old biblical texts?" I started looking for text material that very night and kept searching for a long time. But it was difficult to find something that was true, accurate and yet with poetic qualities and simple enough to be sung. I read Richard Dawkins' books for a long time, a great rhetorician, and controversial figure, but even as well-written as his books are, I think they lack singing poetry - a linguistic fuse for musical ideas. After a long time, I embarked on *the source itself*: Charles Darwin. And I immediately realized a great potential.

Shaping the libretto and composing this work has been one of the most rewarding and fruitful things I have done as a composer.

*The Lapse of Time* was, then, premiered by Berit Norbakken (soprano), Frank Havrøy (baritone), Ensemble Dali, Kristiansund Sinfonietta and Eirik Sørborg on 2 and 3 November 2013 in Kristiansund and Ålesund. Then, I spent eight years finding financial support for another performance. Finally, in February 2022, postponed by a year due to the pandemic, Ditte Marie Bræin, Frank Havrøy, Ensemble 96, Telemark Chamber Orchestra and the conductors Nina T. Karlsen and Per Kristian Skaland performed the work in Frogner Church in Oslo. The performance took place as part of the Oslo Life Science Conference and Darwin Day at the University of Oslo. And in that connection, this recording was done.

Bjørn Morten Christophersen,  
April 2022

# THE LAPSE OF TIME

## PART I: WATCH THE SEA AT WORK

Watch the sea at work  
grinding down old rocks  
making fresh sediment

Extremely slow

The lapse of time  
the monuments around us

Long lines of inland cliffs formed  
great valleys excavated  
by the slow action  
of the coastal waves

The lapse of time  
the monuments around us

From the first dawn of life  
all organic beings  
resemble each other  
in descending degrees  
classed in groups under groups

For species have changed  
and are still slowly changing  
successive slight favourable variations  
a slowly changing drama  
One species given birth to other

They all fall into one  
grand natural system

The lapse of time  
the monuments around us

## PART II: STRUGGLE FOR LIFE

Struggle for life  
Struggle for existence

Innumerable beings  
on the face of this earth  
struggle with each other  
in the race for life

Severe competition  
through the course  
of thousands of generations

The lapse of time  
the monuments around us

Every single organic being is  
striving to increase in numbers  
yet, all cannot do so  
for the world would not hold them

Let the strongest live and the weakest die

## INTERLUDE 1: MISTLETOE

Mistletoe struggles  
with other fruit-bearing plants  
to tempt birds

As the mistletoe is disseminated by birds  
its existence depends on birds  
it struggles with other fruit-bearing plants  
to tempt birds

Some species may be now increasing in numbers  
yet all cannot do so  
for the world would not hold them

Even slow-breeding man  
there will not be room for his progeny

## PART III: CHANGE

Evolve! Change!  
to beauty and infinite complexity  
Remarkable fact!  
Beauty and infinite complexity

The lapse of time  
the monuments around us

Natural selection  
is daily and hourly scrutinising  
silently and insensibly working  
throughout the world

We see nothing of these  
slow changes in progress  
until the hand of time has marked  
the long lapse of ages

A grain in the balance  
determines  
which shall live  
and which shall die

For those which do not change  
will become extinct

#### PART IV: EXTINCTION

Like the branching of a great tree  
from a single stem  
extinction  
widening the intervals  
extinction  
widening the gaps  
between species

All living species  
connected  
with parent-species now extinct  
connected  
with more ancient species

Inconceivably great number  
of intermediate and transitional links  
between living and extinct  
Such have lived upon this earth

This wonderful relationship  
between the dead and the living

#### INTERLUDE 2: BONES

Bones!  
-in the wing of the bat  
-in the flipper of the seal  
-fin of a porpoise  
-in the fore leg of the horse  
-in the arm of the monkey  
-in the hand of a man  
inherited from a common progenitor

Blind animals in caves:  
the eye is gone!  
Convert a swim bladder into a lung  
Remarkable fact!

Natural selection is daily and hourly working  
throughout the world

#### PART V: NATURA NON FACIT SALTUM (NATURE MAKES NO LEAP)

During the vast periods of time  
before Silurian age and the present day  
the world swarmed with living creatures

What an infinite number of generations  
which the mind cannot grasp  
must have succeeded each other  
in the long roll of years

Slight successive favourable variations  
only by very short and slow steps  
a slowly changing drama

”Natura non facit saltum”

The lapse of time  
the monuments around us

The mind cannot grasp  
a hundred million years  
it cannot perceive the effects  
of slight variations  
through an infinite number of generations

For the lapse of time  
has been so great  
as to be utterly inappreciable  
by the human intellect

Extremely slow  
The lapse of time  
the monuments around us

#### EPILOGUE

Look! Watch! Admire!  
the truly wonderful power  
of natural selection  
around us!

Look! Watch! Admire!  
the sea at work  
the flipper of a seal  
the fin of a porpoise  
the mistletoe, the birds  
the remarkable fact  
Around us!

All species cannot increase  
for the world would not hold them  
even man, there will  
not be room for his progeny

Look! Watch!  
Admire us!  
the human mind!  
the intellect!

Look! Watch! Admire!  
the wonderful struggle for life  
the hand of time  
the beauty and infinite complexity  
the monuments of which we see  
around us

Around us!

Based on Charles Darwin: On the Origin of Species (1859),  
adapted by Bjørn Morten Christophersen



Photo: Bard Gudim

The Norwegian composer **B. Morten Christophersen** (1976-) has written music for orchestra, chorus, chamber ensembles as well as film music and stage music. He has also written more than 150 arrangements, most of them for orchestra. Christophersen has collaborated with Oslo Philharmonic Orchestra, The Norwegian Opera, Bergen Philharmonic Orchestra, Norwegian Radio Orchestra, Kristiansand Symphony Orchestra, Royal Norwegian Navy Band, Ålesund Chamber Music Festival, Schola Cantorum (Oslo), Ensemble 96 as well as Norwegian Broadcasting Cooperation (NRK) and others.

Christophersen is Senior Lecturer at the Department of Musicology, University of Oslo and has been teaching composition, arranging, harmony, orchestration and counterpoint there since 2003. In 2016 he completed his PhD on the Norwegian composer Johan Svendsen's sketches and music theory exercises.



Photo: Ingvild Feenervoll Mellem

The soprano **Ditte Marie Bræin** studied at the Norwegian Academy of Music. She has quickly established herself as one of Norway's most sought-after singers for baroque and contemporary music.

Her large concert repertoire includes operas, oratorios, cantatas and concert pieces by Bach, Handel, Vivaldi, Mozart, Haydn, Fauré, Mendelssohn, Webern, Berg, Messiaen, Berio as well as a number of contemporary composers. Ditte has participated in numerous world premieres of music by Scandinavian composers, among others Bent Sørensen's "St. Matthew Passion".

She has worked with conductors such as Paul Agnew, Marcus Creed, Ottavio Dantone, Kati Debretzeni, Enrico Gatti, Steven Devine and Grete Pedersen, just to mention a few.



Photo: Fredrik Aaff

**Frank Havrøy** is a singer and composer living in Oslo. He is educated at the Norwegian Academy of Music and The Academy of Opera. Frank is quite busy as a singer, performing within a variety of genres, especially focusing on music theatre and contemporary music. Frank has been a member of the Norwegian vocal sextet Nordic Voices since its foundation in 1996.



Photo: Private

**Inger-Lise Ulsrud** has an extensive international concert activity and has taken part in numerous organ festivals and conferences in Russia and many European countries. She is professor for organ literature and improvisation at the Norwegian Academy of Music and also head organist in Uranienborg Church in Oslo. Ulsrud has taken part in many radio-, TV- and CD-recordings.



Photo: Anna Julia Granberg

**Nina T. Karlsen** is a graduate conductor, singer and music teacher at The Norwegian Academy of Music, where in 2010 she completed her master's degree in choral directing with Grete Pedersen, conductor of the Norwegian Soloists' Choir. Currently she is a PhD candidate and lecturer at The Norwegian Academy of Music. Nina often works as a workshop director for choirs. 2012 – 2020 she was appointed cantor in Tønsberg with primary responsibility for the choir there. Nina T. Karlsen has conducted and been artistic director of Ensemble 96 since autumn 2011.



Photo: Øyvind H. Eide

Norwegian conductor **Per Kristian Skaland** works regularly with all the major Norwegian orchestras. Since his debut as a conductor in 2002, he has done a large number of ballets, operas and symphonic concerts all over Norway, in Sweden, Germany and Austria, and on chamber orchestra tours to Denmark, England, Belgium, Russia and the US. In April 2021, he made his Vienna debut, conducting the Vienna Chamber Orchestra in Theater an der Wien.

The Oslo based chamber choir **Ensemble 96** has a special focus on contemporary music and seeks to expand the traditional choir concert by means of collaborations with other artists. Ensemble 96 was nominated for Grammy awards for the CD's *Immortal Nystedi* in 2007 and *Kind* in 2011. Both recorded on the label 2L. It receives financial support from Arts Council Norway.

Ensemble 96 has made first performances of works by, Knut Nystedt, Synne Skouen, Antonio Bibalo, Wolfgang Plagge, Jon Balke, Andrew Smith, Kjell Mørk Karlsen, Kjetil Bjørnstad, Trond Lindheim, Olav Anton Thommesen, Julian Skar, Marcus Paus, Frank Havrøy, Martin Ødegaard, Tyler Futrell and Morten Christophersen, amongst others.

After 30 years of activity, 23 of these in affiliation with Telemark County, **Telemark Chamber Orchestra** holds a strong position in Norwegian musical life. The orchestra, which works on a project-by-project basis, has emerged as a prominent collaborator within the area of contemporary music, and has garnered broad acclaim for its promotion of new art music. In addition to the classical chamber orchestra repertoire, Telemark Chamber Orchestra has for several years regularly presented new works for chamber orchestra, most of which were commissioned by the orchestra itself from Norwegian composers. Several of these works have been released on six of the orchestra's seven CDs. The Telemark Chamber Orchestra will pursue its ambition to present new string-based music when commissioning works, performing at various concert venues, and making recordings.

Arts Council Norway has supported the orchestra's activities for several years through its funding scheme for music ensembles. In 2014 and 2015 Telemark Chamber Orchestra was engaged in an extensive collaboration with the Grażyna and Kiejstut Bacewicz Academy of Music in Łódź, Poland, after having received a substantial EEA Grant. The album *Chasing Strings* (FBRCD-16) with works by Magnar Åm, Jan Erik Mikalsen and Nils Henrik Asheim was nominated to "Spellemansprisen" (Norwegian Grammy) in 2018. *The Lapse of Time* is the orchestra's first recording with the current artistic leader Per Kristian Skaland and is by far TKOs largest production. The orchestra is enlarged with winds, brass, percussion and organ, in addition to Ensemble 96 and the vocal soloists Frank Havrøy and Ditte Marie Bråin.

## ORCHESTRA:

**Flute:** Tanja Helen Kvitnes  
**Oboe/English Horn:** Kjersti Strøm  
**Clarinet/Bass Clarinet:** Beka Sirbiladze  
**Bassoon:** Embrik Snerte  
**Horn:** Fritz Pahlmann, Marie Solum Gran  
**Trumpet:** Erlend Aagaard-Nilsen, Odd Nilsen (Track 1, 2, 4), Benjamin Mortensen (Track 5, 7)  
**Trombone:** Marie Nøkleby Hanssen, Torgrim Grong  
**Tuba:** Andreas Bratland  
**Percussion:** Anders Kregnes Hansen, Åsmund Moen  
**Piano:** Max Nyberg  
**Violin I:** Matias Jentoft (CM), Amanda Horn, Elia Kaden, Daniel Lyngstad, Rønnaug Flatin  
**Violin II:** Ragnhild Lien, Hilde Kolstad Huse, Pål Solbakk, Mons Michael Thommessen  
**Viola:** Anders Rensvik, Marthe Husum, Johannes Skyberg  
**Cello:** Ingvild Nesdal Sandnes, Tove M. Erikstad  
**Contrabass:** Eskild Abelseth

## CHOIR:

**Sopranos:** Johanne Asp, Karen Austad Christensen, Eli Feiring, Elisabeth Neuhaus, Inger Honerød, Sigrid Gunnarsjaa, Kristine Våge  
**Altos:** Barbro Berg, Hanne Løge, Anne Opedal, Liv-Helene Slettum Sivertsen, Åste J. Sjøvaag, Ingrid Stige, Kirsti Vogt  
**Tenors:** Sondre Engesæth, Håvard Gravdal, Stefan Hauptig, Torfinn Kleive, Erik H. Skjønhaug, Ingvar Ørn Thrastarson, Thomas Tinglum  
**Bass:** Osvald Fossholm, Ketil Grøtting, Øyvind Lie Totland, Martin Vargsnes, Ståle Tvette Vollan, Iver Waage, Martin Ødegaard

## THE LAPSE OF TIME BJØRN MORTEN CHRISTOPHERSEN

Libretto based on CHARLES DARWIN: «*On the Origin of Species*» adapted by the composer

### Performers

Soprano Solo: **DITTE MARIE BRÆIN**  
Baritone Solo: **FRANK HAVRØY**  
Organ: **INGER-LISE ULSRUD**  
Choir: **ENSEMBLE 96**  
Orchestra: **TELEMARK CHAMBER ORCHESTRA**  
Conductors: **NINA T. KARLSEN / PER KRISTIAN SKALSTAD**  
Electronics: **SEAN LEWIS**

Producer/Engineer: **SEAN LEWIS**

Recorded in Frogner Church, Oslo 12th and 13th February 2022

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(Based on photos from Natural History Museum, University of Oslo)  
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