

# COMPETITION PROGRAMME 2024

## TEYLERS TWEEDE GENOOTSCHAP

### HAARLEM

In keeping with the *Teylers Stichting's* 200-year-old tradition of promoting academic research, the Directors of this foundation *Teylers Stichting*, together with the members of the *Teylers Tweede Genootschap* (Teyler's Second Society), have decided to hold a competition for the year 2024 on a subject relating to biology.

#### SUBJECT

**We invite a critical study on predicting the risk of invasiveness of exotic species.**

#### DETAILS

Invasive exotic species are a serious threat to native ecosystems and biodiversity worldwide. Invasive exotic species are species (plants, animals, micro-organisms) that establish themselves outside their native range and cause damage to the environment, economy or human health. The problem is caused by several factors. First, human activities are usually the cause of introduction and then changes in climate and land use increase the impact of the exotic species in their new habitat. Invasive exotic species can contribute significantly to the loss of biodiversity by displacing native species, destroying their habitats and causing ecological disturbance. For example, the water hyacinth is an invasive exotic species in several countries that clogs waterways and deteriorates water quality. It reduces the available habitat for native aquatic plants and animals, which seriously affects the biodiversity of water habitats. On land, the Japanese knotweed is a pest in Europe and North America. This invasive plant species displaces native vegetation and can damage foundations and roads. The muskrat is an invasive alien species that was originally introduced for the fur industry. They burrow into banks and dikes, leading to erosion and damage to waterways and wetlands that native animals and plants depend on. Some invasive alien species, such as certain insects and ticks, can spread diseases that pose a threat to human health, such as Lyme disease from ticks.

Because of the impact on people and nature, research into invasive alien species is an important area of environmental- and biodiversity research. Many alien species never become invasive and can even contribute to biodiversity in their new habitat. Therefore, scientists try to understand which factors determine whether an exotic species becomes invasive. We therefore need knowledge that can explain the likelihood of invasiveness, because good predictions of invasiveness can help prevent damage to people and nature.

When it comes to predicting which exotic species become invasive, the main question is: Which properties determine whether an introduced exotic species becomes invasive and how can this knowledge be used to prevent or limit the potential impact of exotic species on humans and nature?

Important sub-research questions here could be: 1. How do invasive exotic species spread? 2. How does genetic diversity influence the adaptability, the speed of spread and the ecological impact? 3. How does climate change influence the spread and impact of invasive exotic species? 4. What is the potential ecological impact of the exotic species on native plants, micro-organisms, animals and ecosystems? 5. Which (preventive) methods are most effective for managing and combating invasive exotic species?

Empirical or theoretical work is requested that provides new insights into how we can best predict the chance of invasiveness of exotic species, in order to develop sustainable management methods.

## FORM OF CONTRIBUTION

Entries should consist of:

1. **A longer study in the form of a publication-ready paper. If a dissertation is part of the submission, the date of the PhD defence will be considered the publication date.**
2. **One or more publications (mostly published during the last three years before 1 January 2027 and of which the submitter is the author or one of the main authors), accompanied by a piece written for the occasion of the competition that has not yet been published and that places the previous publications in a broader scientific context.**

## PROCEDURE

In order to qualify for the competition, candidates should submit four copies of their contribution to the Directors of the *Teylers Stichting* (Spaarne 16, 2011 CH Haarlem) by 1 January 2027 at the latest. Contributions received after that date will not be considered. In accordance with the provisions of Pieter Teyler van de Hulst's will, the author's name may not appear on the unpublished texts. Instead, they should be submitted anonymously, identifiable only by a motto. Submissions should be accompanied by a sealed envelope, marked with the motto that identifies the entry and containing the author's name and address. To avoid a long wait before hearing the result of the evaluation, in case an award has not been made, authors are requested to send together with the sealed envelope an open envelope containing the name and full address of a person with whom the Directors of Teylers Stichting may enter into correspondence confidentially.

## JUDGING

Judging will be carried out by the members of the *Teylers Tweede Genootschap*, who will submit their recommendation to the Directors of the Teyler Foundation within four months of the closing date for submissions. The Directors' decision, which will be made within one month, will be final. All candidates will be notified as soon as a decision is made.

## PRIZE

The prize consists of a medal struck from the *Teylers Tweede Genootschap's* dies. The medal will be awarded to the winner(s) at a special ceremony in the *Teylers Museum*. Professional journals and the press, and possibly other interested parties and institutions, will receive ample advance notice of the award ceremony.

## PUBLICATION

Responsibility for publication rests with the author of the winning contribution, although the *Teylers Stichting* and the *Teylers Tweede Genootschap* may consider lending assistance. On publication, reference should be made to the fact that the text has received an award from the *Teylers Stichting*.

## INFORMATION

Further information may be obtained from the secretary of the society (see below). Journal editors and others who wish to draw the attention of their readership to the competition, but who do not wish to print the competition details in full, are urged to advise intending candidates to consult the programme for full details of the competition. The application form

can be found on [www.teylersstichting.nl](http://www.teylersstichting.nl).

For more information about Pieter Teyler van der Hulst, the *Teylers Stichting* and its related institutions, such as the two learned societies, the museum and the almshouse, please consult *Teyler 1778-1978* (Haarlem 1978), *De idealen van Pieter Teyler. Een erfenis uit de Verlichting* (Haarlem 2006) and [www.teylersstichting.nl](http://www.teylersstichting.nl).

#### CURRENT COMPETITIONS

- Competition 2022 (History): a study on the tension between crisis management and crisis experience, applied to a topic from Dutch history (Middle Ages to the present). (deadline before 1 January 2025).
- Competition 2023 (Literature): a study of how the Middle Ages and/or the Golden Age have been represented in the literature and culture of the Low Countries since 1800 (deadline before 1 January 2026).

For full details of both competitions please contact the secretary or visit

[www.teylersstichting.nl](http://www.teylersstichting.nl)

#### SECRETARY

Prof. dr. Y.L. Bleyerveld: [bleyerveld@rkd.nl](mailto:bleyerveld@rkd.nl)

#### SUBMISSIONS

Submissions should have reached the Directors of the *Teylers Stichting* (Spaarne 16, 2011 CH Haarlem) before 1 January 2027. (Spaarne 16, 2011 CH Haarlem).

MEMBERS OF *TEYLERS TWEEDE GENOOTSCHAP*

Prof. dr. W. van Anrooij, Professor of Dutch Literature before Romanticism, Leiden University

Prof. dr. Y.L. Bleyerveld, Senior Curator Drawings and Prints c. 1500-1800, RKD – Netherlandish Institute for Art History, The Hague / Professor by special appointment Leiden University

Dr. L.M.G.F.E. Claes, University lecturer at the Institute for History, Leiden University

Prof. dr. J. Ellers, Professor of Evolutionary Ecology, Head of Department of Ecological Science, and Director of Amsterdam Institute for Life and Environment (A-LIFE), Vrije Universiteit Amsterdam

Prof. dr. B.A. de Graaf, Professor of History of International Relations & Global Governance, Utrecht University

Prof. dr. F.H. van Lunteren, Professor of History of Natural Sciences, Leiden University

Prof. dr. ir. W. van Saarloos, Professor of Theoretical Physics, Leiden University and former director KNAW



Medal of the *Teylers Tweede Genootschap* (gold, 72 mm, c. 120 g, 14 carat); dies by J.G. Holtzhey, 1778:

- beneath the radiant all-seeing eye of Providence are Physics with her globe and compass, Poetry with her lyre, History with her book, Drawing with her brush and palette, and Numismatics bearing a tray of medals; OMNES ARTES QVAE AD HVMANITATEM PERTINENT HABENT QVODDAM COMMVNE VINCVLVM (all arts and sciences relating to human civilisation share a common bond)

- in a laurel wreath DOCTRINAE PRAEMIUM EX TESTAMENTO PETRI TEYLER V D HVLST HARLEMENSIS NATI DIE XXV MARTII MDCCII DEFVNCTI DIE VIII APRILIS MDCCCLXXVIII (prize for scholarly achievement in accordance with the last will and testament of Pieter Teyler van der Hulst of Haarlem, born 25 March 1702, died 8 April 1778).