

## News from the NOBANIS secretariat

The secretary at NOBANIS Christina Fevejle Nielsen, started on her new job in the Nature Agency, Danish Ministry of Environment in December 2013, and Maya Helene Quaade Caspersen has since January 2014 been the new secretary at NOBANIS, with a current contract until February 2015. Maya has a master degree in biology from the University of Copenhagen, and has experience with IAS from working with regulation in Denmark.

As the new secretary of NOBANIS, I would like to take this opportunity to thank all partners for welcoming me, and for the good collaboration the last couple of months.

This year I will continue the work with revising the database that Helene started and finish the update of the remaining fact sheets. Another project that will have my attention in 2014 is the ATAN project "Achieving the Aichi Target 9, IAS in the Nordic and Baltic region". Read more about the project further down.



## 10 years with NOBANIS (2004-2014)

**This year NOBANIS can celebrate its 10th anniversary. Here is a short summary with background information and achievements of the network (2004-2014)**

The **Nordic-Baltic Network on Invasive Alien Species (NOBANIS)** was initiated as a project funded by the Nordic Council of Ministers in 2004 to fulfilled parts of the CBD Decision VI/23, *Guiding Principles for the prevention, introduction and mitigation of impacts of alien species that threaten ecosystems, habitats or species*.

The aim of the project was to develop a regional, distributed and interoperable network on the critical issue of invasive alien species (IAS) in the marine, freshwater and terrestrial environments and their consequences for biological diversity, the cultural landscape and outdoor life.

The project stop in 2007, but due to the big interest in keeping the network alive among the participating countries made it possible to continue having a secretariat and a portal, funded by the participating countries. The network continued to expand and new countries joined NOBANIS.

# NOBANIS NEWS

European Network on Invasive Alien Species  
Gateway to information on Invasive Alien Species in North and Central Europe

Today there are 20 participating countries: Austria, Belarus, Belgium, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, Germany, Greenland, Iceland, Ireland, Latvia, Lithuania, the Netherlands, Norway (incl. Svalbard and Jan Mayen), Poland, Slovakia, Sweden and the European part of Russia.

And new countries are still expressing their interest in joining the network.

NOBANIS have over the years been active on the international scene regarding Invasive Alien Species:

- Global Biodiversity Outlook is published by the Convention on Biological Diversity and the United Nations Environmental Program. In GBO from 2006 data from NOBANIS were used to illustrate rate of introduction of new species as NOBANIS were the only regional cooperation on IAS at that time
- A comparative assessment of existing policies on invasive species in the EU Member States and in selected OECD countries – A project for the European Commission, DG-ENV, where NOBANIS were collaborating with the French company BIO Intelligence Service.
- The EU funded program DAISIE has received data on IAS from NOBANIS.
- The European Environmental Agency has used NOBANIS as a model for starting a similar portal in the Balkan area and asked NOBANIS to provide information on how to start a project like this.
- EASIN The European Alien Species Information Network that aims to integrate alien species information in Europe to assist the implementation of European policies on biological invasions where NOBANIS has contributed with information to the database from the NOBANIS fact sheets.

In addition, NOBANIS has prepared an Identification key to marine invasive species in Nordic waters, created fact sheet for 94 Invasive species of the region with the help from experts from the various NOBANIS countries and made the project: Risk mapping for 100 Non-native species in Europe.

The NOBANIS database is as far as we know the only database in Europe that is continuously being updated and where the secretariat helps with support and quality check of the data.

The NOBANIS secretary often get inquiries about the use of data from the database for various projects in Europe, latest from Aarhus University that are preparing a project for REFORM (REstoring rivers FOR effective catchment Management), where data from the NOBANIS database from selected countries will be included in an analysis to the gain knowledge on the effects of river restoration on floodplain vegetation.

Read more about the project here: <http://www.reformrivers.eu/>

Right now NOBANIS are working on a new project Achieving the Aichi Target 9, IAS in the Nordic and Baltic region, a project founded by the NORDIC Council of Ministers.

We are also in process of improving the portal to enable more features to be accessible and facilitate new countries to join the portal.

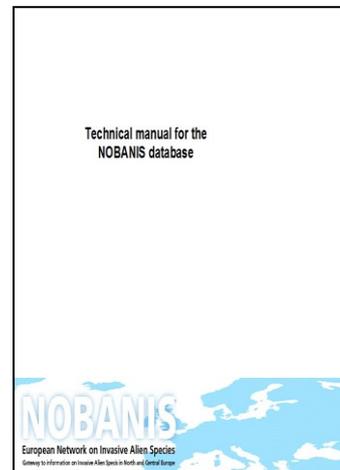
We hope that NOBANIS can precede the work in the future and that the database continues to be a provider of data regarding IAS for various projects in Europe and across the world.

### News from the NOBANIS website

Remember to use the new “Technical manual for the NOBANIS database” when uploading new data to the database. If you haven’t received the manual please contact the NOBANIS secretary on [nobanis@nst.dk](mailto:nobanis@nst.dk)

The NOBANIS database is being updated regularly with the latest data added August 28. 2014. Currently, there are registered 8510, species in the NOBANIS database from our 20 participating countries.

We hope to get on with the reprogramming of the database later this year. The status right now from Artsdatabanken is that in August this year they will get quotation from different companies to build the new NOBANIS.



### Projects by NOBANIS

#### Achieving the Aichi Target 9, IAS in the Nordic and Baltic region (ATAN)

The NOBANIS secretary and 9 participating countries (DK, SE, NO incl. Svalbard and Jan Mayen, FI, IS, FO, EE, LV & LT) are conducting the project: Achieving the Aichi Target 9, IAS in the Nordic/Baltic region.

The purpose of this project is first to identify and priority pathway of introductions by which IAS are introduced in the Nordic and Baltic region, and secondly to conduct a Horizon scanning identifying potential “Door knocker species” that can be expected to be introduced through the most significant pathways identified through the Pathway analysis.

Prior to the Pathway analysis each country updates their own data in the NOBANIS database, with relevant information available using relevant literature and articles and by consulting national experts.

The analysis is conducted for all groups of species registered in the NOBANIS database for the participating countries, and the analysis will contain: number of introduced species, number of invasive species, potentially invasive species and not invasive species, taxonomical groups introduced & species origin.

Furthermore the project will make an analysis of the pathway of introduction and the development over time, by using the data of first arrival and the pathway of introduction.

The list for this Horizon scanning will be assembled by using the NOBANIS database and data from alert lists regarding potential “Door Knocker species” from project conducted by Denmark, Germany, Ireland and Norway. Only species not established in any of the participating countries are listed for the Horizon scanning, including species that are present but not yet established in the wild.

Recommendations on measures to control pathways of interest in the Nordic and Baltic region, along with advice on the development of an early warning system for IAS in the region will be presented.

The project is financed by the Nordic Council of Ministers, and will run until December 31. 2014.

The final report will be published on the NOBANIS website [www.nobanis.org](http://www.nobanis.org) and [www.norden.org](http://www.norden.org)  
For more details about the project please contact the NOBANIS secretary: [nobanis@nst.dk](mailto:nobanis@nst.dk)

## ***Other invasive news***

### **Invasion by the box tree moth *Cydalima perspectalis* Europe under attack!**

*Cydalima perspectalis* was introduced to Europe some years ago from East Asia through the live plant trade, and has become a serious pest one of Europe's most popular ornamental scrubs, the box tree. But also natural *Buxus* populations in Central Europe have been invaded.



Left: Larvae of *Cydalima perspectalis*. Photo: [http://en.wikipedia.org/wiki/Cydalima\\_perspectalis](http://en.wikipedia.org/wiki/Cydalima_perspectalis)

Middle: Box tree infested with the larvae of *Cydalima perspectalis*. Photo: <http://www.boxtreemoths.com/treatment-prevention/>

Right Adult specimen of *Cydalima perspectalis*, Photo: [http://en.wikipedia.org/wiki/Cydalima\\_perspectalis](http://en.wikipedia.org/wiki/Cydalima_perspectalis)

*Cydalima perspectalis* was first discovered in South-Western Germany and the Nederland in 2007, and at the end of 2012 it was officially present in 16 countries, as a result of the trade with ornamental box trees, where eggs and larvae can travel inconspicuously on their evergreen host plants. Moreover the European Union is a free market for living plants, and *Cydalima perspectalis* is not on the EC Plant Health Directive list or classified as a quarantine pest by EPPO.

Using a climate model it has been possible to show that the moth can expand its range and be established successfully in most part of Europe, except from Scotland and Fennoscandia.

Adults lay their eggs in patches on the surface of the box leaves. The larvae overwinter in diapause in a cocoon built between leaves. Diapause is induced by day length and temperature.

In warmer areas it might be possible to have two or even more generations occurring per year.

The larvae feed mainly on leaves but can also attack the bark of box trees, which often result in the death of the tree. The effect of the moth is often aggravated by the occurrence of the invasive fungal pathogen *Cylindrocladium buxicola*.

Box tree has through centuries played a central role in the landscape of European gardens, parks, and cemeteries, but due to the pest there are being replaced in the landscape by other plant species. This means that the invasion by the *Cydalima perspectalis* has huge cultural and economic effects besides the serious threat on the natural population on *Buxus* in Europe.

Management of *Cydalima perspectalis* is very difficult and methods such as spraying with chemical insecticides, hand picking caterpillars, by shaking trees or by spraying with water, is only possible when dealing with few box trees. Furthermore is the natural enemy complex in Europe very poor, and only a few parasitoids are mentioned in the Asian literature but little is known on their efficiency and specificity.

The article is published in Aliens the invasive species bulletin, Newsletter of the IUCH/SSC Invasive Species Specialist Group, number 33, 2013 pp. 38-41.

[http://www.isprambiente.gov.it/files/pubblicazioni/periodicitecnici/aliens/Aliens\\_N\\_33\\_LQ.pdf](http://www.isprambiente.gov.it/files/pubblicazioni/periodicitecnici/aliens/Aliens_N_33_LQ.pdf)

## EU IAS Regulation

The long awaited EU regulation on invasive species was first proposed by the EU Commission on September 9, 2013. After a quick process with working group meetings over the winter, the European Parliament rapporteur and the Commission agreed on the text on March 4<sup>th</sup>. However, when the agreement was to be formally approved, a blocking minority appeared with UK and FR among others about the use of delegated acts in the regulation. The regulation was approved by the European parliament in spring 2014. The final vote in the Environment Committee has been postponed due to delays in the juristic-linguistic working group. However, the meeting was held July 1st and thereby all text in English is now agreed. The final language versions will be circulated in August/September. The regulation is expected to enter into force January 1st, 2015.

The main elements in the regulation are:

- According to the Regulation the Member States will be obligated, based on a scientifically based risk analysis, to prepare and update a list of invasive alien species, which are problematic on a European level, and which then will be regulated through the regulation.
- Species that are on the list will be subject to a ban on sales, transport, production, etc.
- It is not known which Invasive alien species that will be covered by the regulation before after the approval of the implementing acts during 2015.
- The agreement does not put a limit on the amount of invasive alien species the regulation should cover.
- Member States will be obligated to manage, control and eradicate invasive alien species covered by the regulation and also to take appropriate restoration measures to assist the recovery of an ecosystem that has been degraded, damaged, or destroyed by invasive alien species of Union concern. Unless a cost-benefit analysis demonstrates, on the basis of the available data and with reasonable certainty, that the costs of those measures will be high and disproportionate to the benefits of restoration.

Find out more:

- [http://ec.europa.eu/environment/nature/invasivealien/index\\_en.htm](http://ec.europa.eu/environment/nature/invasivealien/index_en.htm)

## A New alien species of ctenophore (Comb Jelly) found in Danish waters



*Beroe ovata* (about 5 cm long)  
Photo by Hans Ulrik Riisgård

The discovery of *Beroe Ovata* in Danish waters, may predict future faunal changes in Danish waters and perhaps other temperate coastal waters. The species is specially adapted to operate predation on the invasive eastern American jellyfish *Mnemiopsis leidyi* also known as the killer jellyfish.

Find out more:

- [http://www.aquaticinvasions.net/2014/AI\\_2014\\_Shiganova\\_etal.pdf](http://www.aquaticinvasions.net/2014/AI_2014_Shiganova_etal.pdf)

## France culinary experience at risk – Snails of the menu!

March 4, 2014 - The France signature dish is might of the menu do to invasive species of worms with an appetite for native snails.

Find out more:

- <http://www.theguardian.com/world/2014/mar/04/new-guinea-flatworm-threatens-snails-france>



*Platydemus manokwari* preying on a snail.  
Photo: <http://dx.doi.org/10.7717/peerj.297/fig-5>

## Alien plant species in Iceland

A paper dealing with alien plant species diversity has been recently published in "Flora - Morphology, Distribution, Functional Ecology of Plants".

The publication is an effect of a project carried out by botanists from the Icelandic Institute of Natural History (Iceland) and the Faculty of Biology of the University of Warsaw (Poland). The study provides first comprehensive and up-to-date results on alien plant taxa in Iceland since 1967. The presence of 336 alien vascular plant taxa, including 277 casuals and 59 naturalised taxa (two invasive) was evidenced. The authors investigated distribution patterns of alien plant taxa in Iceland and environmental factors that shape these patterns. Dynamics and temporal trends (incl. species immigration rate) in the alien flora of Iceland were also assessed. Maximum entropy modelling was used to predict the impact of climate change on the distribution of naturalized alien taxa.

Wasowicz P., Przedpelska-Wasowicz E., Kristinsson H. 2013. Alien vascular plants in Iceland: diversity, spatial patterns, temporal trends, and the impact of climate change. *Flora* 208 (10-12): 648-673, <http://dx.doi.org/10.1016/j.flora.2013.09.009>

## Gulf Wedge Clam – a new invasive species in Poland



*Rangia cuneata*  
Photo: KATARZYNA HORBOWA

*Rangia cuneata* originates from the Gulf of the Mexico. The species was first found in Europe in Belgium in 2005, in the pipes of a cooling water system of an industrial plant.

It is unknown how the species has been introduced from its native habitat in the Mexican Gulf to Europe.

In 2010 a specimen was found in the Russian part of the Vistula Lagoon, and now the species has been found in the Polish part as well.

Studies have showed that the combination of low salinity high turbidity and a soft substrate of sand, mud and vegetation appear to be the most favorable habitat for *R. cuneata*. Conditions which are present in the Polish part of the Vistula Lagoon, giving the species the best possible support for developing a dynamic population.

The naturalization of *R. cuneata* could potentially poses a threat to the ecosystem of the Vistula Lagoon.

The full article was published in Folia Malacologica (Warzocha J., Drgas A. 2013. The alien Gulf wedge clam (*RANGIA CUNEATA* G. B. SOWERBY I, 1831) (MOLLUSCA: BIVALVIA: MACTRIDAE) in the polish part of the Vistula lagoon (SE. BALTIC). [Folia Malacol.](#) 21(4): 291–292.

## Parakeets – Beautiful but pesky

The Rose-ringed Parakeet, native to Africa and India, has established itself in over 100 cities across Europe, and is now considered among the top 100 invasive alien species. The COST Action network ParrotNet is aiming to understand the invasive dynamics of parakeets, and the impact they have across the European continent.

Find out more: [View the publication here](#)



Rose-ringed parakeet  
Photo: Yaki Zander.  
<http://www.pbase.com/yakizander/image/122802465>

## Giant aquatic fern added to the IUCN Invasive Species list

The Giant Salvinia (*Salvinia molesta*), an aquatic fern has been added to the list of 100 of the World's Worst Invasive Alien Species. Compiled by the IUCN Species Survival Commission Invasive Species Specialist Group, (ISSG) the list aims to increase awareness about invasive alien species and to help prevent further invasions.

Recently the rinderpest virus was removed from the list and a review was conducted to decide which invasive species should be added. The review involved more than 650 experts from 63 countries. More than 10,000 invasive species were assessed in terms of their capacity to spread and their potential ecological or economic impact.

Native to Brazil, the Giant Salvinia is a floating aquatic fern that thrives in slow-moving, nutrient-rich, warm, freshwater. A rapidly growing competitive plant, it has spread throughout the tropics and subtropics. It doubles in abundance within days, forming dense, floating mats that reduce water-flow and lower the light and oxygen levels in the water. This stagnant dark environment negatively affects the biodiversity and abundance of freshwater species, including fish and submerged aquatic plants. Its spread can also impede water-based transport and clog irrigation and power generation systems.



Left: Giant Salvinia covering a farm pond. Photo: Ted D Center USDA ARS

Middle: Giant Salvinia, Photo: Scott Bauer USDA ARS

Right: Giant Salvinia, Photo: Kevin Roberts

By being added to the list it is hoped that this heightened focus on the species will increase awareness and stimulate more conservation action to reduce its impact, and more in general on the severe impacts caused by biological invasions worldwide.

The full list of the World's Worst Invasive Species can be viewed [here](#)

The review was featured in an article published in Nature ( Luque GM, Bellard C, Bertelsmeier C, Bonnaud E, Genovesi P, Simberloff D, Courchamp, F (2013) Alien species: Monster fern makes IUCN invader list. [Nature](#), 498, 37)

For more information please contact Dr. Piero Genovesi [piero.genovesi@isprambiente.it](mailto:piero.genovesi@isprambiente.it)

## New Pathway for Invasive Species - Science Teachers

Aug. 7, 2012 — A survey of teachers from the United States and Canada found that one out of four educators who used live animals as part of their science curriculum released the organisms into the wild after they were done using them in the classroom.

Find out more:

- [http://www.sciencedaily.com/releases/2012/08/120807151307.htm?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+sciencedaily/earth+climate/invasive+species+\(ScienceDaily%3A+Earth+&+Climate+News+--+Invasive+Species\)](http://www.sciencedaily.com/releases/2012/08/120807151307.htm?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+sciencedaily/earth+climate/invasive+species+(ScienceDaily%3A+Earth+&+Climate+News+--+Invasive+Species))

## Invasive Species of the Week

IUCN/ISSG has a new series of 'Invasive Species of the Week' that focus invasive alien species that have contributed to the decline and extinction of species populations. <http://www.issg.org/>

This week it is *Dicrurus macrocercus* commonly known as the Black drongo.

The 'Invasive Species of the Week' button can be featured on your site by inserting a one line script. Please get in touch with [s.pagad@auckland.ac.nz](mailto:s.pagad@auckland.ac.nz), if you want the script sent to you.

## Astacus leptodactylus – found in Øresund?

In the beginning of July 2014, a specimen believed to be of the species *Astacus leptodactylus* was caught in Øresund, close to the bridge on the Danish side.

The specimen was delivered to the Natural History Museum in Copenhagen, where DNA analysis will be made in order to determine if the specimen is *Astacus leptodactylus*.

If it turns out to that the specimen is of the species *Astacus leptodactylus* it could be the first time the species has been found in brackish water in Denmark.



*Astacus leptodactylus* Photo: Kathe Jensen.

## ***New reports on IAS***

### **Pathways for non – native species in Denmark**

This report is the result of collaboration between the Danish Nature Agency and the Department of Geoscience and Natural Resource Management, University of Copenhagen.

The purpose of this project was to provide an updated overview and analysis of pathways of introduction of non-native species in Denmark. In order to achieve this, an evaluation of adverse effects on the environment and human interests such as the economy and public health was performed.

The NOBANIS database has formed the basis for identifying non-native species pathways of introduction and possible vectors. The database includes 2.690 species, and an additional 109 species were added. An extensive literature search was completed for 2.079 of these species (77.3 %). For each of these, the adverse effects on four environmental categories were evaluated based on the Belgian HARMONIA method (also called ISEIA guidelines, HARMONIA information system (version 2.5)). An assessment of adverse effects on health and economics was also added. Furthermore 213 of the examined species were assessed by external specialists.

The main outcome of this project was the analysis of introduction pathways along with an updated database with added columns for introduction pathways and effects on the environment and society. An analysis of the identified Pathways of Introduction, Mode of Entry and vectors was performed for each species group. The most common pathways, modes and vectors were identified for each species group. An analysis of Pathways of Introduction was performed across all species groups. As a result of this method it was possible to identify species that have considerable adverse effects on environment, health and economy in Denmark. The Danish Black list consists of 62 species and the Observation list consists of 47 species. By using this method, it was possible to place the assessed species on the Black list and Observation list based on objective evaluations and their scores on environmental impact. Based on the ISEIA score categorization by HARMONIA, 31 species should be allocated to the Black list and 71 species to the Observation list. By adding the assessment of adverse effects on economy and health an additional 10 species were identified and should be added to the Black list. The species with scores matching high risks were identified.

This project has identified pathways of introduction for non-native and invasive species. By identifying these pathways, it may be possible to prevent introductions of new species, or to limit further introductions of problematic species already recorded in Denmark. This assessment provides an objective method that provides a framework for future decisions on which species should be targeted with management plans.

The results of the analysis showed, that the most common pathway for IAS was horticulture, which also was the pathway that contained most species with a high score.

The rapport is available online: <http://ign.ku.dk/formidling/publikationer/rapporter/filer-2014/pathways-for-non-native-species-in-DK.pdf>

### **Unintentional introduction of IAS through plant import.**

Import of horticultural goods is one of the main vectors for unintentionally expansion of alien species both globally and in Norway. The Norwegian Biodiversity Information Center has in 2013 launched a project with the aim of increasing the knowledge of the mechanisms behind, and to assess to which extent alien species arrive in Norway as hitch-hikers in import of horticultural product.

The report is available in Norwegian with an English abstract:

- [http://www.nina.no/Portals/0/Nyhetsaker/Dokumenter/NINA%20Rapport%20915\\_I%C3%A5st.pdf](http://www.nina.no/Portals/0/Nyhetsaker/Dokumenter/NINA%20Rapport%20915_I%C3%A5st.pdf)

### **Horizon scanning for new invasive non-native species in the Netherlands**

According to the Dutch species register there are 2011 non-native species present in the Netherlands. Moreover, a number of non-native species that are established in climatically similar countries may be transported to and potentially colonize the Netherlands. A number of these species are invasive. In 2013, the European Commission published a policy proposal for the prevention and management of invasive alien species introduction and spread. The document proposes three intervention types: prevention, early warning and rapid response, and management.

To allow the effective prioritization of preventative measures and early eradication of potentially invasive - non-native species in the Netherlands, insight is required into the species that can access the Netherlands via relevant pathways and establish here. Therefore, the Dutch Office of Risk Assessment and Research Planning of the Netherlands Food and Consumer Product Safety Authority (NVWA) requires that a horizon scanning project is carried out. The horizon scan identifies potential invasive non-native species in the Netherlands and assesses the relative risk posed by each species, including information about their origin, vectors and pathways. In addition, an overview is given of potentially effective approaches for prevention that address the most commonly occurring dispersal pathways and vectors.

The rapport is available online: [www.vwa.nl/txmpub/files/?p\\_file\\_id=2206751](http://www.vwa.nl/txmpub/files/?p_file_id=2206751)

## ***Meetings and congresses***

### **NEOBIOTA 2014**

#### **“Biological Invasions: From understanding to action”**

8th European Conference on Biological Invasions, 03-08 NOVEMBER 2014, Antalya-Turkey.

For more information:

[www.neobiota2014.org](http://www.neobiota2014.org)

### **Workshop**

#### **“Spatial Issues in Arctic Marine Resource Governance”**

Stockholm, Sweden, 4th-6th of September 2014

The workshop is part of the project: Marine Resource Governance in the Arctic. The workshop is financially supported by Nordic Council of Ministers' Arctic Co-operation Programme 2012-14.

For more information:

- [www.sdu.dk/arctic](http://www.sdu.dk/arctic)

### **Workshop**

#### **“MASTS Annual Science Meeting: Marine Invasive Workshop”**

Edinburg, September 5, 2014

This workshop will look at methods, examples and case-studies for the detection, impacts, control, eradication, prevention and management of marine invasive species.

For more information:

- <http://www.nonnativespecies.org/news/events.cfm>

### **Congress**

#### **World research and innovation congress**

#### **“OCEANS”**

15-16 October 2014, LISBON OCEANARIUM, Portugal

For more information:

- <http://wric-oceans.com/>