



ARNOLD VAN VLIET: SCIENTIST OF THE PEOPLE

# ‘Media attention is crucial’

Arnold van Vliet is Wageningen UR’s great media success. Helped by members of the Dutch public he exposes the impact of climate change impacts on our daily lives. The time this takes has put his academic career under pressure. ‘To me the impact of an appearance on the TV news is more important than one more academic article.’

TEXT ROELOF KLEIS PHOTOGRAPHY GUY ACKERMANS



## ARNOLD VAN VLIET, HAASTRECHT 1973

- 1991-1996 Degree in Biology at Wageningen University
- 1996 Wageningen University, Environmental Systems Analysis
- 1997 Institute for Forest and Nature Research (now Alterra)
- 1998 National Institute for Public Health and Environment (RIVM)
- 1999 International Center for Integrative Studies, University of Maastricht
- 2000 Board of Foundation for Sustainable Development
- 2001 Launch of Natuurkalender.nl
- 2008 PhD. Thesis: Monitoring, analyzing, forecasting and communicating phonological changes
- 2008 Launch of Natuurbericht.nl
- 2009 Launch of AllergieRadar.nl
- 2011 Launch of Splashteller
- 2012 Launch of tekenradar.nl
- 2014 Launch of Muggenradar.nl

**T**he year is not over yet, but it is already clear that 2014 was an extraordinary year for the natural world. ‘A spectacular year,’ says Arnold van Vliet decidedly. And he should know. He has his finger on the pulse of nature like no one else in the Netherlands. And the patient is running a temperature: 2014 was the hottest year ever. ‘Or at least, since records began.’ You only have to look outside to see what that means. It is mid-November and there are still leaves on many of the trees: the fall is still going on. And yet it started so early. ‘The leaves began to turn in August, much earlier than we expected,’ says Van Vliet, patiently repeating what he had just been explaining on Vroege Vogels [Early Birds], his regular platform on Sunday morning radio. ‘High temperatures after August slowed the turning of the leaves and in the end it was a late autumn.’ This is what Van Vliet does: study changes in the timing of cyclical natural phenomena. Phenology, to a biologist. When do the crocuses blossom and when do the swallows go back to Africa? He focuses especially on the way climate change affects that timing. For his data he relies on about 8000 enthusiastic volunteers who pass on their observations of nature in their surroundings.

### MEDIA REACH

Van Vliet has made this ‘citizen science’ his specialism: conducting research together with the lay people. There are probably very few people in the Netherlands who have never heard of the Nature Calendar or of other hits from Van Vliet’s repertoire such as the Midge Radar, the Tick Radar, the Allergy Radar or the Splash Counter. And it is not difficult to substantiate that claim. Van Vliet keeps track of his media activities. For years he has calculated his ‘reach’ through the media using print numbers and viewing and listening statistics. In this respect too, 2014 was a top year. ‘Last year was a record with 200 million people. Now, with six weeks still to go, I am already at 280 million people.’ For the sake of clarity: these are not ‘separate visitors’ but all the readers, viewers and

listeners who could have seen or heard his message. Through 462 newspaper articles, for instance, and 49 TV programmes, including 14 times on the RTL News and 15 times on the NOS News.

### YEAR OF PLAGUES

There are a couple of explanations for this year's success story. Van Vliet: 'This year we drew attention to Alterra's Green Monitor in the media, as well as the Midge Radar, together with the Laboratory for Entomology. This was the year of plagues of birch parent bugs and spotted-wing drosophila fruit flies. And 2014 has also been an extraordinary year weather-wise. On top of that, Natuurbericht.nl, our nature news website, is being used more and more by journalists as a reliable source of information on nature. Everything we put on there is effectively a press release and can go straight into the papers. And that happens quite regularly.' Heaps of files

Van Vliet first discovered the power of citizen science back during his student days in Wageningen. 'For a final research project at the IBN (now Alterra) I got in touch with the archives of the Dutch Phenological Observation Network. Heaps of files full of citizens' observations going back to 1868. When you analyse that data you see that temperature has a clear effect on what happens around you. Phenology has proven a very good gauge of changes in weather and climate. On the basis of observations by volunteers you get a good picture of what a year looks like and how it compares with other years. The march pansies bloomed 29 days earlier this year than 50 years ago, and 11 days earlier than the average over the last 12 years. That was because of the very mild winter and spring.'

In search of an answer to the question of how nature is changing on a global scale, Van Vliet created an email forum in his student room on the Haarweg, with the aim of improving international communication between phenologists. 'As a student, I soon became a linchpin in the system. It was an

eye-opener for me that you could exchange ideas that way and mobilize the scientific world.' This experience provided the basis for the development of the European Phenology Network, funded by Brussels. A press release about this brought radio programme Vroege Vogels calling. The programme had covered phenology regularly and now the makers wondered whether it would be an idea to tackle it together. During the interview Van Vliet suddenly had a brainwave: ask listeners to send in their phenological observations. 'I had no idea that half a million people listen to Vroege Vogels every week. I had never heard of it. What do you expect, when it's broadcast between eight and ten on a Sunday morning? Hello! I had only just left university.' The first appeal brought in 2000 responses. Van Vliet had to get cracking to communicate with all those people and create and send off forms for them to fill in.

### MEDIA TALENT

Van Vliet gets into the media on a regular basis. That is a talent, but there is also a clear strategy behind it. 'You see, I want to achieve certain goals in my work. For Nature Calendar, for instance, we want to monitor timing in nature and the effects of climate change on it. We want to trace the ecological and socio-economic consequences of those changes and develop the tools with which people can adapt to them. One of the ways we do that is AllergieRadar.nl. Attention in the media is a crucial part of the process of citizen science. That attention is the driver for bringing in observations and funding. If you cannot mobilize masses of people it gets difficult.'

There are limits, though. The Splash Counter set up in 2012 has already been abandoned. The idea was to get a picture of insect populations in different parts of the Netherlands and see how their densities varied over the years. After every car journey, participants counted the number of dead insects on their number plates. The figures were astonishing. 'In July 2012 we had an >

'We had on average two insects per kilometre on the number plates'

## VAN VLIET'S NATURE EMPIRE

Arnold van Vliet was the founder of De Natuurkalender in 2001. About 8000 volunteers form the basis of this knowledge network about timing in the natural world. They monitor 300 species of plant and animals and send their observations to Wageningen. Meanwhile Van Vliet and his team of two colleagues and many volunteers are also working on other related activities. Together with Leiden University Medical Centre they manage AllergieRadar.nl, linking the symptoms of about 7500 hay fever patients with the flowering season of plants. The site also provides pollen count alerts during the growing season. On tekenradar.nl, a collaboration with public health organization the RIVM, people can see what the risk of a tick bite is in a given area. That 'tick forecast' is based on the weather and the number of ticks caught by volunteers at 15 locations. A new initiative this year is the Muggenradar, which Van Vliet set up with the Laboratory for Entomology. The public are asked to report problems with midges and send in dead specimens. The aim is to gain insight into what species of midge are present, and when and where. Arnold van Vliet also developed and managed the news site Natuurbericht.nl, where he publishes a minimum of two bulletins a day.



average of two insects per kilometre on our number plates. If you do the sums you arrive at 133 billion victims per month during the peak season.'

There was tremendous media interest but the number of participants was disappointing. 'Just try getting down on your hands and knees to inspect your number plate and then wipe it clean. You do find yourself wondering what the neighbours will think. Only about 500 people signed up. Anyway, there was no budget to continue this research. But I still think it is a way of getting a good idea of changes in insect population density.'

Short-lived though it was, the Splash Counter was Van Vliet's biggest media hit. 'I gave interviews with the BBC, CBC in Canada and SBS in Australia. It was an eye-opener to see how easy it is to get into the living rooms of America and Australia. I find that fascinating.'

## SAD NOTE

Impact is the key word in everything van Vliet gets involved in. As a young lad in the small town of Haastrecht he was not much of a nature-lover. It was the stories about the threat to nature and the severe loss of biodiversity that attracted him to biology. 'Nature documentaries on television always ended on a sad note. And they still do, really. As a secondary school student I realized things were going in the wrong direction. At some point I said to myself: I want personally to make a significant contribution to solving these problems.' It was an obvious decision to come to Wageningen. 'In those days there was a television programme called 'Yes Naturally', presented by Jan-Just Bos. And he was just walking around here in Wageningen!'

His media fame has made Arnold van Vliet an ambassador both for his own field and for Wageningen UR. 'Van Vliet is by far our biggest crowd-puller. And that reflects on our institution,' says press officer Bouke de Vos. 'In fact, Arnold has become his own brand. And he doesn't let himself get carried

away by hypes. What he has to say is always down-to-earth.'

But that focus on the media does have its price. Van Vliet's scientific impact is modest. Van Vliet, whose PhD in 2008 was about his work on the Nature Calendar, is aware of the criticism but does not go along with it. 'Yes, I could publish more academic articles. But what would I achieve by that, in terms of the ultimate goal I have set myself? There are various ways of generating impact. You can build an academic career and gear everything to that. And then you are a top scientist with publications in Nature and Science. And then? To me the social impact of an appearance on the TV news is much more important than one more scientific article. I love the fact that through my work with the Tick Radar, far fewer people get Lyme's disease, and that we are coming to grips with the issues.'

In the academic world – van Vliet works at the Environmental Systems chair group – this focus on social impact makes him a bit of an oddball. Promotion to assistant professor is therefore unlikely, in spite of all he has done for the university. 'When graduate schools are inspected, relevance to society is one of the main focal points in the evaluation. Our group gets maximum scores for that. But at the moment that is not reflected in the university's evaluation system.'

### A DREAM COME TRUE

His own thing will soon be taking Van Vliet beyond the borders of the Netherlands. Next spring sees the launch of Nature Today, an international version of the Dutch website *Natuurbericht*. This is his dream, as he says himself. 'It will be a global news service on nature. Internationally, so much data is generated without getting any publicity. There is so much potential. Journalists have so many questions and they don't know who to call about what's going on.' Nature Today is intended as a platform for scientists and their stories. After all, who reads all those scientific articles, Van Vliet wonders out loud. 'They play a fundamental role in the



**'Thanks to the Tick Radar far fewer people are going down with Lyme's disease'**

scientific process. Absolutely. But ordinary people don't read them. Scientists themselves hardly read scientific articles anymore. I even think they would reach more of their colleagues with their story through a platform such as Nature Today. As a scientist you want to change things, don't you? You want to generate knowledge that is of some use to society. So share that knowledge too!' ■

*Would you, as a scientist, like to share your knowledge and stories about changes in nature?  
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