

Citizen science

Insects on the Marker Wadden



Presentatie : Arjan van der Veen

Datum : 12 oktober 2022

Tijdstip : 14:00u - 15:15u

Locatie : Muziekgebouw aan het IJ, Amsterdam

Organisatie : KIMA

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Insects on the Marker Wadden

Who I am

- Urban ecologist at the municipality of Lelystad
- Chairman of national section insects of the KNNV (Royal Dutch Society for the study of wildlife)
- Organizer Nature-café Lelystad and Determination-café for the KNNV department Lelystad
- Urban beekeeper in my small apiary 'Imkerij de Veldbij'



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Insects on the Marker Wadden



- History
- What we do & why
- What we need
- What did we learn
- Future research

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Insects on the Marker Wadden History



- 2018 KIMA research primary production also on insects, weight biomass
- Summer 2019 on a limited scale start monitoring on insect species and weekly collecting the content of the traps
- Autumn 2019 proposal for the citizen science project
- Autumn en winter 2019 press release & social media, interviews on regional radio, articles in newspapers and specialised magazines
- Januari 2020 information meeting future volunteers; 1) collecting content of the traps, 2) determination insectgroups and species and 3) other voluntary work on the islands

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What we do & Why

Motive



- 2018 article in Plos One, Entomologischer Verein Krefeld; 75% of the insects disappeared in 30 years (measured in biomass). Used malaisetraps.
- Research on the Marker Wadden is just like the research of the EVK.
- Unique project; new land in water, 3 km for closest land. What will be the speed different insectspecies will colonize?
- Only 1 other project like this one; for 40 years research in the Lauwersmeer area



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Insects on the Marker Wadden Traps



- 2018 KIMA research primary production also on insects (Phd Yvonne Kahlert), weight biomass
- Pitfalls; used for a short time
- Malaisetraps; named after a Swedish entomologist.
 - 2 on the sand of Zuidstrand and 2 on clay in the centre of the harbor island



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Insects on the Marker Wadden

Traps and volunteers



- Malaisetraps
 - Collecting the content weekly
 - For safety by 2 persons (total 14 persons on the list)
 - Period half april – half october
 - Temporarily stored in a fridge in barrack on the mainland



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Insects on the Marker Wadden Research samples



- Samples collected to determine the weight at Wageningen University
- Back to the fridge in the barrack
- I collect them there for the determination in insectgroups
- Some volunteers do that at home. We have approximately 1 time a month Determinationcafé in the fieldstation of Staatsbosbeheer at the Oostvaardersplassen with 4 – 15 volunteers (total 38 persons on the list)
- If possible we split the samples further, otherwise I give the samples to specialists
- Data are now processed in Excel



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What do we need as volunteers



- We need facilities; very important is a good space to work with the samples and enough space to store them (1 fridge is not enough). A facility closer to the centre of Lelystad should be nice.
- We have problems with the malaisetraps; after 1 or 1,5 season they where damaged so much we couldn't collect good samples. So we need better traps
- It is a lot of work beside my job. It should be nice if more people will be active.



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What did we learn?



- A good space to work and store the samples is important
- Storing data in a good database
- Important that professional organisations support volunteers with materials (malaisetraps, microscopes)
- Be a volunteer beside a fulltime job is a lot of work
- Recruiting volunteers throughout the time is necessary

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Plot ID 2021		Sand 1	Sand 2	Clay 1	Clay 2	Sand 1	Sand 2	Clay 1	Clay 2	Sand 1	Sand 2	Clay 1	Clay 2	Sand 1
Datum legen		26-4-2021				1-5-2021				10-5-2021				17-5-2021
Familie														
Ephemeroptera - Haften														
Odonata - Libellen														
Orthoptera - Sprinkhanen en krekels														
Dermaptera - Onwormen														
Heteroptera - Wantzen								1				3	6	
Homoptera - Gelokkevliegen en cicaden														
Hemiptera - Sternorhyncha (plantenluizen)														
Neuroptera - Netvlsvliegen														
Mecoptera - Schorpioenvliegen														
Trichoptera - Schietmotten														
Hymenoptera - Steenvliegen														
Lepidoptera - Vlinders							1					2		
Coleoptera - Kevers				1								1	4	
Diptera - Tweevleugeligen, Brachycera (vliegen)		4	5	2			45	23	7			183	126	
Diptera - Tweevleugeligen, Nematocera (muggen)		116	89	8			78	44	23			96	79	
Diptera - Nematocera - Psychodidae - Motmuggen		12												
Hymenoptera - Vliesvleugeligen		2										11	21	
Overige														
Collembola - Springstaarten														
Araneae - Echte spinnen		1	1				1					6	7	
Opiliones (Hooiwagens)														
Acariformes - Mijten		1												
Isopoda - Pissebedden														
Chilopoda - Duizendpoten														
Diplopoda - Miljoenpoten														
Annelida - Ringwormen														
Gastropoda - Slakken en naaktslakken														
Totaal		156	95	11	0	0	126	67	30	0	0	302	243	
datum determinatie		14-8-2021	1-10-2021	29-10-2021			1-10-2021	17-7-2021	17-7-2021			1-10-2021	1-10-2021	
Leg. (naam)		Arjan en Ma	Tiede Bakker	Ineke Oosting			Tiede Bakker	Rutger Mau	Rutger Mauritz			Tiede Bakker	Tiede Bakker	

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Insects on the Marker Wadden Research for the future



- We don't know much about colonising (new) land by insects. Research is important for future policy and management in nature
- Support (financial) from professional organisations
- Publishing (not only scientific) can the public be aware of the importance of research and restoring ecosystems
- Make a place/space where public will be informed about research and making (novel) ecosystems. Like a “new nature experience and knowledge centre”
- A good database is important for analysing the observations
- Important to continue research to collect long time data

Questions
or
suggestions?

