

Ornithology from the Tree Tops

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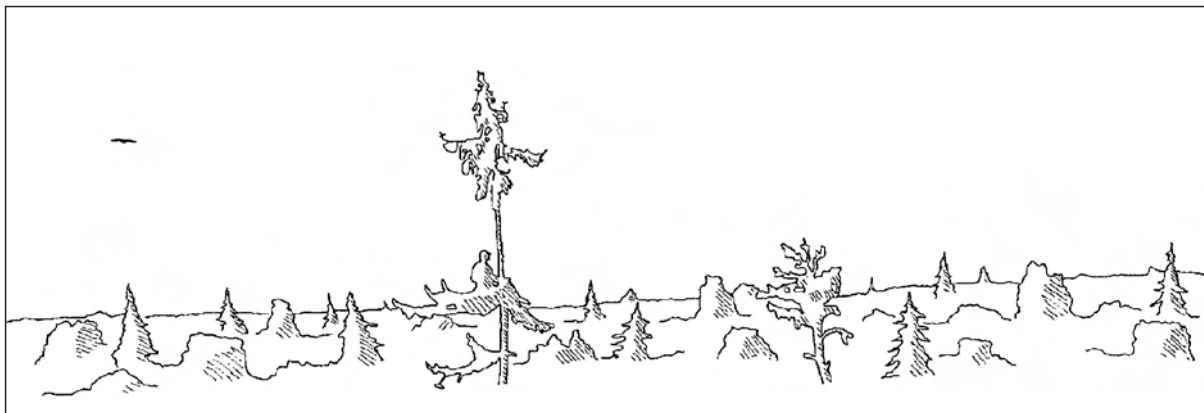
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Ornithology from the tree tops

Observing and recording birds, or any living being for that matter, is now more popular than ever before. The success of websites like *waarneming.nl*, where each and everyone can enter his observations in an easily accessible format (for all to see, which is not without its hidden implications), was recently born out by the entry of the 10,000,000th record in The Netherlands within only four years of its instigation. Almost eight million of these records involved birds, but data on invertebrates – until recently a domain of the happy few – are rapidly on the increase. Any record can be submitted, be it a rarity or a common species. To avoid bad input, a system of validators has been implemented to check the quality of the steadily swelling stream of data. This strategy should remove the most obvious mistaken identities from the dataset, but how effective is it to eradicate, say, 90% of all mistakes and double/triple entries? This leaves scope for improvement, for example via intermittent checks of random samples.

Despite the popularity of this – and other – recording system(s), several questions remain, and some doubts keep nagging. (That is: under the assumption that collecting data serves to answer questions. If it is simply an outlet for nature consumers, or a means to shine brightly among fellow consumers, then much of the following does not apply.) First of all, the quantity of data is no indication of quality, nor does it necessarily lead to meaningful output. Collecting biological data as such is not the problem, especially not in affluent societies where so much time and energy is spent in sports and chasing hobbies. Collecting data of scientific use, though, requires specific and thoroughly tested methods, depending on what questions need to be addressed, and how, given the available resources. This is lacking in the present recording systems on the inter-

net. (I am not talking about the current monitoring systems of SOVON and similar organisations, which use standardised methods.) So, questions about distributional patterns, changes therein over space and time, phenology, migration, densities, reproduction, species ecology, habitat use and so on are difficult to explore, even when clever tricks (statistically or otherwise) are invented to overcome the problems associated with the lack of standardisation and randomisation (see two attempts at comparing existing datasets with those generated via websites: Driessens & Herremans 2010, for avian phenology; Dam & Gotink 2010, for macrofungi). Formulating questions, then shopping for, or inventing, optimal methods for data sampling, is the preferred way of doing research. I am convinced that amateurs are willing and able to participate in such schemes, as has been shown again and again throughout the world, including The Netherlands. It's not quantity we need so much, but quality.

Although well-designed studies are always preferable, this is not to say that amassing observations in a repository is worthless. Especially not when some effort is made to improve the quality of the records. Observers need to know that – before a record is biologically meaningful – a bit more is needed than just the observation of a Hen Harrier on Vlieland on 2 August 2010, 9.14 h. What about age, sex, moult, crop, habitat, behaviour...? Even so, how can we be sure that age-identified birds are a representative sample of the population present at any one time? For example, when I tried to figure out the sex and age ratios of Eurasian Marsh Harriers wintering in The Netherlands (as part of a larger study into the wintering strategy of this species), it became abundantly clear that adult males were over-represented as compared to samples taken specifically to address this question. Also, the majority of observers

did not discriminate between juveniles and adult females (or mixed them up), apart from the fact that most birds were aged nor sexed to begin with. Obviously, we have to tread carefully when using these data.

One of the advantages of sites like waarneming.nl is the immediate feedback. The entire world can see your record, especially when accompanied by photograph or sound recording (hundreds of thousands already), and any doubt about an identity is quickly dispatched by the comments of better versed peers. In birds, this is a rather straightforward business given the improved identification skills of birders. But what about the trickier orders and families of insects? Few people can claim to be an expert, and who among the lay people can tell the difference between a real expert and a bungling, self-proclaimed expert. In other words: is the moth which you entered – with photograph – on the site really what the ‘expert’ tells you? And why? The latter question is of some importance, because it hinges on the notion of ‘learning curve’ and, ultimately, on quality. Why is this micro a *Nemophora violara* rather than *N. cupriacella* (Kuchlein & Bot 2010)? Only when observers learn to distinguish between look-alikes is progress possible, starting with the easy meat and steadily progressing into the more difficult realms of identification (and henceforth, let’s hope, ecology). Time-consuming indeed, as demonstrated by the profusion of high-quality specialists originating from the laps of youth organizations focused on the study of nature, where not a few cracks spent their teens in fine-tuning their identification skills and producing identification keys (Coesèl 1997, van der Eijk *et al.* 2006). In the end far more satisfying and useful to science than relying exclusively on other people’s expertise. So, why not make links to identification keys, of which many are available, albeit widely scattered across the literature and few in digital format? Even when only a tiny proportion of the observers is going to use them, it is still an improvement on the present situation where learning depends upon the comments added (or not) by the expert.

The proliferation of recording systems, digital or not, has now reached the point that competition and chaos threaten. Cooperation seems to be the step to take. Not just to facilitate the observers with a single format, but also to provide a better focus (and hence methodology) for collecting data. A first step has recently been taken in The Netherlands with the creation of a “National Databank”. A welcome initiative, you would say. Until you read the speech of the Minister of Agriculture, which blatantly shows the underlying ideology. When you discard the usual rethorics about biodiversity and durable economy, it simply boils down to shredding nature protection in favour of economy (or, euphemistically phrased in her words: finding the balance between economy and ecology). It’s about putting all those hard-won data, mostly by volunteers with the best of intentions, to good use in minimising the costs and maximising the profits of entrepreneurs. Perhaps I am a bit too distrustful when it comes to governments and professionals in the nature business. But seeing imperfect data, the interpretation and analysis of which are exceedingly difficult even for the initiated, being used by entrepreneurs to improve the cost-effectiveness of their business, gives me the shivers. Is this what the volunteers had in mind when they entered their observations into the database?

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