



iDiv's new building in Leipzig on the Alte Messe area (photo: Stefan Bernhardt / iDiv)

Editorial

I hope everyone is safe in these difficult times. While we just moved into our great new iDiv building (pictured above), unfortunately in person working group meetings have not been possible for months and the situation won't improve for everyone in the near future. Thus, sDiv has substantially increased and widened its services to support virtual group meetings (see [https://www.idiv.](https://www.idiv.de/sdivvirtualmeetings)

[de/sdivvirtualmeetings](https://www.idiv.de/sdivvirtualmeetings)) and will do so even more in the future. We are also working on new ideas for the next call, so stay tuned. Although the global pandemic is affecting us a lot, we still have been very active. Two new synthesis postdocs have just started (Adriana Alzate Vallejo, Juan David Carvajal) and two more will start beginning of next year. The first of three new sabbaticals

(Erik Hom) will start in February 2021. As part of our cross-centre collaborations, we have partnered with the French synthesis centre CESAB to jointly support the working groups [UNICOP & INTRACO](#), which approach questions of co-existence theory from different angles.

Stay safe & healthy!

sMarten Winter
Head of sDiv

Insights from the sDiv Board Co-Chair Prof. Jonathan Chase

As sDiv co-chair and member of the iDiv's governance board I'll take a few moments to update you on a few procedures:

First, we are continually updating our review and board procedures. As the main decision body of iDiv, the SSB appoints the sDiv board. At present, the sDiv board consists of internal members of iDiv, and other members of the broader biodiversity community in Germany. Our core procedures remain in place for reviewing sDiv proposals, but we have worked towards increasing representation from adjacent areas in biodiversity sciences (including policy and social sciences, computer sciences, and microbial sciences).

Second, we are looking towards the future. Our outlook is influenced by three

converging forces: 1) as iDiv is heading into its next funding phase, we are looking towards the role sDiv will play in iDiv science when we become a permanent research facility (with different funding); (2) as synthesis science continues to evolve, we are looking towards being on the forefront of new procedures and approaches; (3) the ongoing COVID-19 pandemic has forced us to reconsider our procedures, and look towards a future 'hybrid' solution that involves great science, but less travel and other CO₂ costs.

We also have a concrete update about sabbaticals. In the past, sabbaticals at iDiv have been funded via the sDiv mechanism. This has allowed us to bring in wonderful scientists for extended stays



Jonathan Chase (photo: Tobias Wagner / iDiv)

and we will continue to do so. However, to broaden representation, we have switched from focusing solely on 'synthesis' sabbaticals to those that could include other equally important aspects of iDiv science (e.g., experiments, theory). A separate call for iDiv sabbaticals will be sent each year, but anyone interested in a sabbatical at iDiv in collaboration with iDiv scientists on any aspect of biodiversity science should feel free to contact us.



sImpact working group in Leipzig in 2013 (photo: iDiv)

Environmental Impact Classification for Alien Taxa EICAT now IUCN standard

by *Sabrina Kumschick*

On 15 September 2020 at the Neobiota conference, the Environmental Impact Classification for Alien Taxa - EICAT for short - was officially launched as a [new IUCN Standard](#). The aim of EICAT is to give environmental managers, scientists and conservation practitioners, as well as the general public, a better understanding of the magnitude of impacts caused by alien (introduced, non-native) taxa. This can feed into policy making and the development of legislation, as well as aiding the prioritisation of management of alien taxa.

The development of the EICAT protocol started in 2013 with a sDiv working group meeting in Leipzig (www.idiv.de/simpact). The aim of the meeting was to gain a better understanding of impacts caused by alien taxa, and of ways to

predict them. Since this workshop, some major steps have been taken in getting EICAT to where it is now. After the initial publication in a scientific journal ([Blackburn et al. 2014](#)), which was basically written in this meeting week, further guidelines were developed to help people to implement the method. They were heavily based on the highly successful Red List of Threatened Species (www.iucnredlist.org; [Hawkins et al. 2015](#)). EICAT has since been applied to classify the environmental impacts of aliens from a range of taxonomic groups (e.g., [Evans et al. 2016](#), [Kumschick et al. 2017](#), [Canavan et al. 2019](#)), putting the protocol to the practical test. A few changes were recommended and implemented in the guidelines.

Up to this point, the implementation of EICAT was mainly an academic exercise.

However, in order for a protocol to be accepted as a standard by IUCN, it has to go through a global participation process involving the IUCN network and other stakeholders, which includes NGOs, governments, and a wide range of other institutions. The feedback received in this process was highly supportive, and included helpful suggestions for further modifications to improve the method. Incorporating these improvements has resulted in the final [IUCN EICAT Categories and Criteria](#), as well as the EICAT guidelines and reporting template.

This success story shows the value of bringing scientists from diverse backgrounds and countries together to collaborate on research questions which can be translated and ultimately applied to improve policy making and management at a global scale.

Recent Publications

[Bader et al \(2020\)](#) A global framework for linking alpine-treeline ecotone patterns to underlying processes. *Ecography*. (working group [sTreelines](#))

[Comte et al \(2020\)](#) RivFishTIME: A global database of fish time-series to study global change ecology in riverine systems. *Global Ecology and Biogeography*. (working group [sYNGEO](#))

[Freiberg et al \(2020\)](#) LCVP, The Leipzig catalogue of vascular plants, a new taxonomic reference list for all known vascular plants Scientific Data. (Uni Leipzig- sDiv PD collaboration)

[Pe'er, G. & Lakner, S. \(2020\)](#) The Eu's Common Agricultural Policy Could Be Spent Much More Efficiently to Address Challenges for Farmers, Climate, and Biodiversity. *One Earth* 3, no. 2: 173-75. ([sDiv postdoc](#) project)

[Sol et al \(2020\)](#) The worldwide impact of urbanisation on avian functional diversity. *Ecology Letters*, n/a, 962-972. <https://doi.org/10.1111/ele.13495> (working group [sUrBioCity](#))

[Seebens et al \(2020\)](#) A workflow for standardising and integrating alien species distribution data. *Neobiota* 59: 39–59. (working group [sTwist](#))

[Staude et al \(2020\)](#) Replacements of small- by large-ranged species scale up to diversity loss in Europe's temperate forest biome. *Nature Ecology & Evolution*. (working group [sREPlot](#))

[Thompson et al \(2020\)](#) A process-based metacommunity framework linking local and regional scale community ecology. *Ecology Letters*, 23, 1314-1329. (working group [sTurn](#))

➔ Check our new sDiv google scholar page via tiny.cc/sdivscholar

The birth of a paper

An Interview with [Roel van Klink](#), sDiv Postdoc from 2017 to 2020, about his recently published [Science paper](#) on global insect decline.

How did this project come about?

I moved to Leipzig to start my sDiv postdoc in late 2017. For my intended project, I was going to work with long-term monitoring data to study the effects of extreme weather events on insect populations and communities. I was interested in this long-term perspective, because it is largely absent from insect conservation and community ecology, which is what I did most of my previous work on.

But then you changed the project focus, why? And how was this possible given that your funded proposal had a different topic?

About two months into my time in sDiv, a paper that showed a 75% decline of insect biomass in some Western German nature reserves was published (Hallman et al. 2017, PLOS ONE). Although there had been evidence of insect declines here and there for some time, this paper seemed to take ecologists and the general public by surprise. Because I had been working on long-term insect monitoring data already, I knew that there was much data out there that had not been evaluated for trends in total community abundance or biomass. We had expected to hear through the grapevine that there were other teams doing a meta-analysis on this, but after a few months with no news or data requests, Jon Chase, my main collaborator at iDiv, said to me: 'You gotta do it, 'cause no-one else seems to be doing it'. So we discussed this change of topic with Marten Winter, the head of sDiv, and we agreed that it was a very



Roel van Klink (photo: private)

exciting opportunity, since I was both experienced working on insects and with time series. Then I started looking for all openly available data to answer the question of how widespread such declines are.

What was it like to work on such a 'hot topic'?

To be honest, it was rather stressful: The whole time I was afraid that someone else would be doing the exact same thing we were, and that they would scoop us. And that partially happened during the long gestation of our paper: quite some studies came out, including reviews, perspective pieces and more case studies. But nothing emerged that took the approach we took, methodically compiling data from the literature to explore general trends. The time pressure to get this done, while still being comprehensive really gave me grey hair. In addition, there were a number of excellent datasets that we knew existed, but couldn't use because of proprietary restrictions and other reasons.

Your paper came out during the corona crisis, how do you think this affected the reception of the paper?

Our paper came out at the end of April, which was after about five weeks

of lock-down. I think we were lucky, because most news outlets and also the public were getting bored with the news about corona, and were longing for something else. Our paper got quite some media attention, but I had to do all the interviews from home office, with journalists calling on my private number. But I'm quite happy that our paper didn't come out four weeks earlier. I don't think we would have gotten much media attention if it had come out at the start of the lock-down.

What's coming next in terms of this story and for yourself?

While my sDiv position is over, I've now switched over to the Biodiversity Synthesis group of Jon Chase to continue working on this general problem. Although there are many things on the horizon, our first goals are to dig deeper into the current dataset, to analyze response variables other than abundance, and to examine a number of other critical questions about insect community dynamics.

➔ [van Klink et al \(2020\), Science](#)

Latest sDiv virtual meetings

sPrint: Working out the mechanics of predator-prey interactions to predict the present and future of biodiversity in food webs

12.–16.10.2020

PI: [Mehdi Cherif](#) (Umeå University)

www.idiv.de/sprint

sDevTrait: Streamlining development efforts in tools for ecological trait analyses

26.–30.10.2020

PIs: [Alexander Keller](#) (Uni Würzburg) and [Markus Ankenbrand](#) (Uni Würzburg)

www.idiv.de/sdevtrait

sMile: Synthesising plant metabolomics into biodiversity, life history & ecology

9.–13.11.2020

PIs: [Tom Walker](#) (ETH Zurich); [Franziska Schrod](#) (University of Nottingham)

www.idiv.de/smile

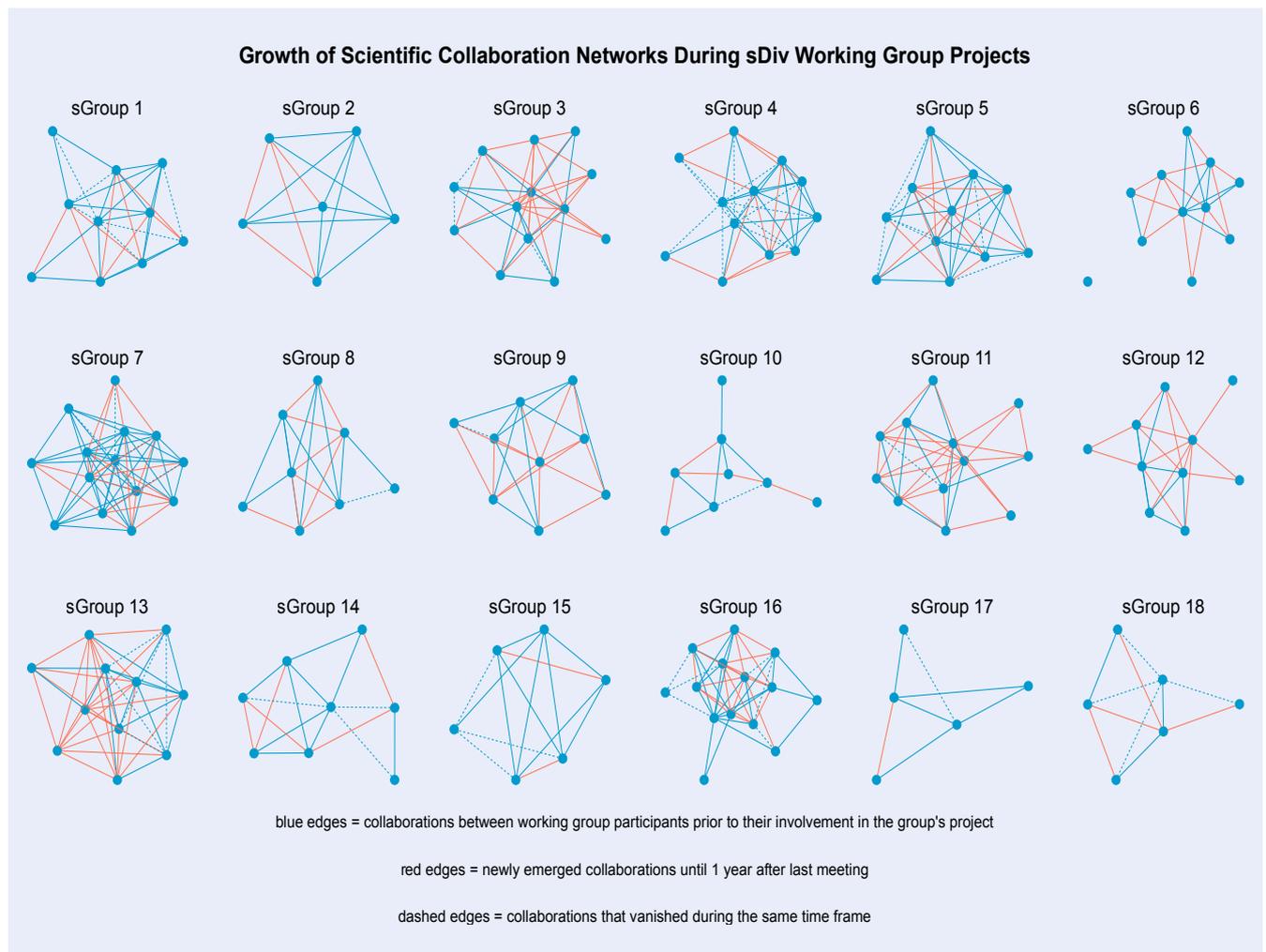


Figure 1: 18 Synthesis working group networks (n=174 participants) comparing collaborations before first and after last working group activities.

sDiv working group participation boosts research collaboration beyond the focus of the project itself

We asked 174 participants of 18 sDiv working groups about their scientific collaborations within a working group beyond the scope of this group project. These group networks (Figure 1) have been monitored twice - once before the first meeting and then again

a few months after the last working group meeting. Between both samples new relations emerged, some persisted and some vanished. On average, after finishing working on most of the group's deliverables the amount of outside-the-project collaborations rose by

53%. However, in order to determine the importance of the synthesis group approach itself and differences to other collaborations, a comparison with non-synthesis working group projects would be necessary.

Since your feedback is always welcome, please do not hesitate to contact sMarten Winter, Head of sDiv, or Doreen Brückner, sDiv administrative assistant, at doreen.brueckner@idiv.de or +49 341 9733130.

With our best regards from sunny Leipzig
sMarten Winter & team



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