10 reasons | why you should do your bachelor's-/ master's thesis in the ecology department

If you are interested in the questions we study (more information on this on our homepage and in the papers we publish), you may wonder whether or not you should complete your thesis in the department of ecology. Since it is difficult to know beforehand what to expect and since there are many other research groups in Osnabrück that do excellent science, I am summarizing below some arguments that came to my mind and which may help you with your decision:

(1) We are a nice working group
As a scientist, you often work in a team. It is much more fun to collaborate with others and share and discuss ideas and thoughts than working all alone. In our group, we aim at creating an open and supportive environment as well as an interactive and positive working atmosphere. For this, we regularly meet to discuss our work, organizational issues, or other people's publications (journal club). Moreover, once a year we go on a group retreat for few days, where we again discuss ideas and future ways ahead. Besides that, we organize social activities like group breakfast or lunch or meet outside working hours to engage in fun activities.

(2) We work on different levels of biological organization
When starting with your thesis, you might be worried that choosing a certain topic (e.g. microbiology, cell biology, animal physiology) will tie you down to this topic for the rest of your life. No worries – it is not like this. Even after finishing your Master's, you can choose a completely different field afterwards. Still it helps, if you can use some of the knowledge you acquired previously for your next steps. Work in our group covers a broad range of topics from which you can freely choose. We study genomes and regulatory pathways as well as populations of single genotypes or entire polymicrobial communities. Recently, we even started to work with host-symbiont interactions. Depending on your main interests, we can find a level (i.e. gene, cell, population, community, host-symbiont association, etc.) that fits best to what you are looking for.

(3) We use a diverse array of different methodological approaches
Whatever you will do afterwards, it is always a plus if know a number of methods and techniques than can be applied to (completely) other research questions. This is why we aim at exposing our students to a range of different methods including genomics, proteomics, analytical chemistry, genetic manipulation, flow cytometry, microbiology, microscopy, theoretical modelling and computer simulations, etc.. This does of course not mean that every student will learn all the techniques. In contrast, your project will likely only require a subset of those. However, working in an environment in which these tools are applied will make it easier to use them if necessary and by being exposed to them in lab meetings and discussions, you will learn more about the possible approaches that could be used.

(4) You will be free to choose the topic that you are most excited about
I find it very important that every lab member chooses a topic that matches his or her main interests most closely. This does not mean that you will have to make this decision alone. There is always a number of ideas – some more concrete and further developed, others in rather early stages – that you can choose from. Even if you have a completely new idea (new model system, new question, new method) you are more than welcome to discuss it with us so that we can see whether this is feasible or not. The more creative and innovative you are in this regard, the

better. Science is all about free thinking and we try to create a working environment which makes this possible.

(5) You will not be alone
In the beginning of your thesis, working in a research laboratory may overwhelm you and be rather challenging. This is absolutely normal and we all have gone through this. Adapting to this new situation is easier when you have someone to help you and to discuss all the question you might have. This is why we use a buddy-system in our lab: every new lab member will be associated to a more experienced student that ideally works on a topic that is close to what you are working on. This buddy will help you with all questions you might have. In addition, I have an open-door policy, so you are always welcome to come and discuss ideas. Moreover, many other lab members will work on related questions as well. So, there is ample opportunity to discuss your questions individually or in our regular lab meetings.

(6) We aim at publishing our results
As a scientist, you are judged by the work you publish. A main goal of every project we work on in the lab is that we aim for a scientific publication. This does not mean that every result of a bachelor's project is published as a scientific article. However, it means that if your work produces interesting insights, we will write up a manuscript and submit it to a good journal or include it in another paper we write. In our group, everyone that contributed to a scientific article (conceptually or experimentally) will be included as a coauthor on the corresponding publication. In any case, being a coauthor on a scientific publication you produced before finalizing your studies is really a door-opener and will greatly aid your career.

(7) Our lab is equipped with state-of-the-art instruments
As you might know, we just moved to the University of Osnabrück. This means that virtually all of our lab equipment is brand-new and state-of-the-art. In addition, we are part of CellNanOS and thus, members of our team are free to use the infrastructure and facilities provided by this interdisciplinary research center.

(8) In our field, we are well-connected in Germany, Europe, and worldwide
As stated above, science is often a group endeavor and to survive as a scientist, you have to exchange ideas with other scientists. Being well-connected means that often it is easy for us to just call the person that published a certain paper to find out how a certain method exactly works. Moreover, our responsibility for our group members does not end when people hand in their thesis and leave the lab, but well beyond that. We will help you as good as possible to find a position for the next step in your career. Often this means writing supportive letters of recommendations or help with establishing contacts to other colleagues. In any case, by joining the group and working with us, you will become part of this worldwide network within which previous members of the group may help you to find a new job.

(9) We constantly apply for third-party funding
Our research program continuously develops further and with every question we answer, several new interesting possibilities open up. To address these issues, we constantly write grant proposals and apply for third-party funding. This means that if during your Master's thesis you feel that you would like to continue to work on this fascinating project, there might be possibilities that you can also complete your doctoral thesis with us.

(10) We have an awesome coffee machine