



LUND
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Individual study plan for postgraduate education

Daphnia Magna

Dnr: STUD
2016/XXX
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18:38:21

Third-cycle programme subject: Biology (MNBIOL00) Naturvetenskapliga fakulteten

Doctoral student

Name: [Daphnia Magna](#)
Swedish civic registration number: XXXXXX-XXXX
Email address: daphnia.magna@biol.lu.se
Department: Biologi
Admission date: 2012-05-02

Supervisory committee, director of studies and head of department

Main supervisor: NN
Supervisor: CC
Supervisor: -
Representative of the department: [name of the examiner QQ](#)
Scientific mentor: MM

Director of studies: [Karin Rengefors](#)
Head of department: [Christer Löfstedt](#)

The third-cycle (doctoral) programme

Third-cycle programme subject: [Biology \(MNBIOL00\)](#)
Course requirements: [60 hp](#)
Thesis requirements: [180 hp](#)
Half-time evaluation or similar: [Half-time seminar or similar](#)

Mandatory courses or other activities eligible for credits

[Introductory course, Faculty of Science \(0.5 credits\)](#) [Graduate studies in biology: the science and its philosophy \(1.5 credits\)](#) [Introduction to teaching methods \(3 credits\)](#) [Evolutionary processes \(2 credits\)](#) [Recommended: Statistics for Biologists \(7.5 credits\)](#) [Conferences \(max 15 credits\)](#) [Midway review \(15 credits\)](#)

Resources

Funding of the position as doctoral student

State type of funding for the position (e.g. employment based on external grants; employment through faculty funding; industry funding; stipend) and the proportions in percent if several sources of funding are used.

Year 1: VR Year 2: VR Year 3: [Aquatic Ecology](#) Year 4: [Aquatic Ecology](#)

Basic resources and project funding

List basic resources such as work place, computer, telephone, etc. Specify source

of funding for research projects, conference participation and similar. work place, computer, telephone [source of all funding: NN's VR grant](#)

Supervision

Forms for supervision, from main supervisor and other supervisors, and labour division: [main supervision from NN, strong contribution of co-supervisor CC. Supervision consists of joint research group meetings one hour once a week. Individual meetings with NN every two weeks, 1-2 hours. Co-supervisor joins for discussions on experimental design and interpretation of data, approximately 2-3 times per semester.](#)

Latest doctoral student progress meeting (minutes shall be kept separately)

Date: [2016-02-03](#)

Participants: [NN, CC, MM](#) , examiner

Year/semester for planned degree of doctor: [2017/VT](#)

Activity

Workload: [100 %](#)

Teaching/admin/other (portion in relation to full-time): [10 %](#)

Activity third-cycle programme (portion in relation to full-time): [90 %](#)

Activity third-cycle programme and departmental duties/student union commissions (% of full-time)

Term	Postgrad studies		Departmental duties	
	Planned	Actual	Planned	Actual
VT 2012	60%	60%	0%	0%
HT 2012	90%	90%	10%	10%
VT 2013	85%	85%	15%	15%
HT 2013	85%	85%	15%	15%
VT 2014	85%	85%	15%	15%
HT 2014	85%	85%	15%	15%
VT 2015	85%	85%	15%	15%
HT 2015	85%	85%	15%	15%
VT 2016	85%	0%	15%	0%
HT 2016	0%	0%	0%	0%
VT 2017				

Completed courses and other credit-awarding components

Credited courses (attended prior to admission)

Name:

Slutdatum:

Antal hp:

Registrerad i LADOK: Yes

Name:

Slutdatum:

Antal hp:

Registrerad i LADOK: Yes

Name:

Slutdatum:

Antal hp:

Registrerad i LADOK: Yes

Total, credited courses: 0 hp

Courses and other credit-awarding components within the third-cycle programme

Name: [Introductory Course](#)

Slutdatum: 2013

Antal hp: [0.5](#)

Registrerad i LADOK: [Yes](#)

Name: [Evolutionary Processes](#)

Slutdatum: 2013	Antal hp: 2	Registrerad i LADOK: Yes
Name: The science and it's philosophy		
Slutdatum: 2014	Antal hp: 1.5	Registrerad i LADOK: Yes
Name: Statistics for biologists		
Slutdatum: 2013	Antal hp: 7.5	Registrerad i LADOK: Yes
Name: literature course: "Animal Eyes", MF Land & DE Nilsson, Oxford U		
Slutdatum: 2013	Antal hp: 3	Registrerad i LADOK: Yes
Name: Pedagogic introduction		
Slutdatum: 2014	Antal hp: 3	Registrerad i LADOK: Yes
Name: conferences		
Slutdatum: 2014	Antal hp: 15	Registrerad i LADOK: Yes
Name: Halftime Seminar		
Slutdatum: 2014	Antal hp: 15	Registrerad i LADOK: Yes
Name: Applied Project Management		
Slutdatum: 2015	Antal hp: 2	Registrerad i LADOK: Yes
Name: Sensory Ecology		
Slutdatum: 2013	Antal hp: 6	Registrerad i LADOK: Yes

Total, within the third-cycle programme: 55.5 hp

Total, all completed courses and credit-awarding components: 55.5 hp

Remaining, courses and other credit-awarding components: 4.5 hp

The doctoral thesis

Type of thesis: Collection of articles

Language of the thesis: English

Title of the thesis (preliminary): Adaptations for dim light vision in hawkmoths

Overview of the planned thesis work

[The thesis investigates adaptations for under water vision in aquatic insects. The main focus are neural adaptations which increase the visual sensitivity, and in addition to this, optical adaptations, as well as behavioural performance of aquatic insects are investigated, in order to obtain a comprehensive picture from neuron to behaviour how these insects manage to see well in dim light.](#)

Evaluation and planning

Evaluation and planning of research (sub-projects of the thesis work)

Sub-project 1

Title: [Adaptations for nocturnal and diurnal vision in aquatic insects.](#)

Author(s): [Daphnia Magna, XX, ZZ, CC, NN](#)

Data collection: [100 %](#)

Analyses: [100 %](#)

Writing: [100 %](#)

Manuscript submitted: [Yes](#)

Manuscript accepted: [Yes](#)

Planning:

Sub-project 2

Title: [Spatial and Temporal Summation boost sensitivity in aquatic insects](#)

Author(s): [Daphnia Magna, XX, NN](#)

Data collection: [100 %](#)

Analyses: [100 %](#)

Writing: [100 %](#)

Manuscript submitted: **Yes** Manuscript accepted: **No**
Planning:

Sub-project 3

Title: **A comparative analysis of neural adaptations for vision in different light environments.**

Author(s): **Daphnia Magna, NN**

Data collection: **85 %** Analyses: **85 %** Writing: **50 %**

Manuscript submitted: **No** Manuscript accepted: **No**

Planning:

Finish data collection (if supply of animals allows) by April, and submit manuscript latest in May (material & methods, introduction already written).

Sub-project 4

Title: **Flight performance in damsel flies reveals adaptations for dim light vision.**

Author(s): **Daphnia Magna, SS, NN**

Data collection: **100 %** Analyses: **70 %** Writing: **20 %**

Manuscript submitted: **No** Manuscript accepted: **No**

Planning:

Finish flight data analysis by end of February, SS will finalize modelling part of manuscript, NN will write manuscript (material & methods written) by June (deadline for submission, as work is part of a special issue) and SS and NN will comment.

Sub-project 5

Title: **Optical adaptations for vision in different lake environments in aquatic insects**

Author(s): **SS, Daphnia Magna, NN**

Data collection: **50 %** Analyses: **25 %** Writing: **%**

Manuscript submitted: **No** Manuscript accepted: **No**

Planning:

Both anatomical and physiological data collection necessary by SS and Daphnia Magna. This will be done during the spring of 2016. SS will analyse the data and present result in August.

Planned courses or other credit-awarding activities

Woods Hole summer school 2016

Planned participation at conferences

No more conferences planned, maximum amount of credits obtained.

Planned departmental duties

Teaching in Aquatic Ecology VT 2016

Popular Science Communication Workshop VT 2016

Planning of other tasks

Activities (carried out or planned) to achieve the learning outcomes stated in the higher education ordinance

Knowledge and understanding

- demonstrate broad knowledge and systematic understanding of the research field as well as advanced and up-to-date specialised knowledge in a limited area of this field

**carried out: half-time essay (approved), 2 submitted & 2 published manuscripts
planned: dissertation**

- demonstrate familiarity with research methodology in general and the methods of the specific field of research in particular

**carried out: half-time essay (approved), 2 submitted & 2 published manuscripts
among those one 1 published methodology paper, course: Graduate studies in biology
planned: dissertation**

Competence and skills

- demonstrate the capacity for scholarly analysis and synthesis as well as to review and assess new and complex phenomena, issues and situations autonomously and critically

carried out: reviewed 1 paper, half-time essay planned: more manuscript reviews, dissertation

- demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work

carried out: 4 manuscripts published / submitted as first and corresponding author planned: more manuscripts and research projects to be conducted and finalised

- demonstrate through a dissertation the ability to make a significant contribution to the formation of knowledge through his or her own research

carried out: planned: dissertation planned

- demonstrate the ability in both national and international contexts to present and discuss research and research findings authoritatively in speech and writing and in dialogue with the academic community and society in general

carried out: work presented at three national and two international conferences, popular scientific outreach (short video, science slams) planned: dissertation

- demonstrate the ability to identify the need for further knowledge

carried out: half time essay completed, future and present projects approved in doktorandsamtals planned:

- demonstrate the capacity to contribute to social development and support the learning of others both through research and education and in some other qualified professional capacity

carried out: teaching as lab assistant and seminar teacher in a number of graduate and undergraduate courses, popular science outreach, supervision of project student planned: supervision of master student

Judgement and approach

- demonstrate intellectual autonomy and disciplinary rectitude as well as the ability to make assessments of research ethics

carried out: introduction to research ethics as part of the course graduate studies in biology, collaboration and exchange with other researchers in related disciplines planned: ethics workshop

- demonstrate specialised insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used

carried out: popular science outreach, course: graduate studies in biology planned: organization of "science and Society" workshop within the annual biology PhD student conference in Lund in March 2016

Approximate time covered of the third-cycle programme (at the end of the latest completed semester) corresponding to 6.6 out of 8 semesters, or 82.5%.

Approximate remaining time of the third-cycle programme (at the end of the latest completed semester) corresponding to 1.4 out of 8 semesters, or 17.5%.

Date of decision for the department: 2016-04-15 18:38:21

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Daphnia Magna
PhD Student

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NN
Main supervisor

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CC
Supervisor

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Supervisor

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Examiner XX
Representative of the department

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Christer Löfstedt
Head of department