



Summer School 2014

Course Title: *Population structure and the genetic architecture of quantitative traits*

EBC, Uppsala University, September 24-26, 2014.

Instructors:

Antoine Kremer, INRA Bordeaux, France

Frédéric Guillaume, ETH, Zurich, Switzerland

Jeremy Berg, UC-Davis, USA

Location: Evolutionary Biology Centre, Uppsala University, Lärosal 2 (lectures and tutorials except on Wednesday) and Hubben/Musen/Disketten (computer sessions). Lärosal 2 is located near the restaurant "Mickes kök" at Norbyvägen 14 (see attached map). Computer rooms Hubben/Musen/Disketten are at Norbyvägen 18 B (near the biology library).

Registration: To register send an email to Martin.Lascoux@ebc.uu.se before July 1, 2014. The course is free of charge. For those coming from outside of Uppsala, you will need to find housing on your own.

Topic: Unraveling the genetic architecture of quantitative traits remains one of the main challenges in biology: How many loci control a given trait? How are the effects of these loci distributed? How is the genetic architecture of quantitative traits affected by population structure and selection? are examples of questions to which we can today only give partial answers because of both practical and theoretical reasons. The course will first give an overview of what is known of the genetic architecture of quantitative traits and of the forces shaping it. We will then focus on the effect of population structure and of migration on the architecture of quantitative traits. Finally we will present methods to detect local adaptation in quantitative traits and identify loci underlying it.

Credits: 2 ECTS

Schedule:

Wed. 24th Sept.

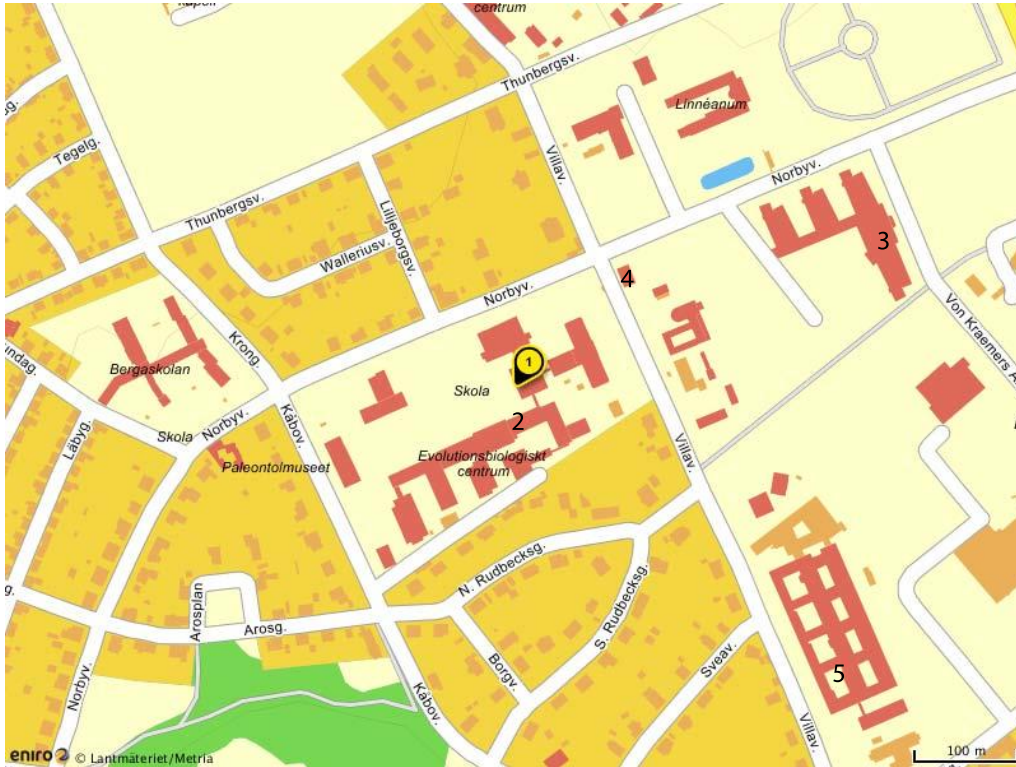
- 9:15-9:30: Introduction and overview.
- 9:30-10:45: The architecture of quantitative traits (FG)
- 10:45-11:15: Break/discussion.
- 11:15-12:30: The architecture of quantitative traits (FG)
- 12:30-13:30: Lunch
- 13:30-15:00: Practical exercises using QuantiNemo (FG)
- 15:00-15:30: Break/discussion.
- 15:30-17:00: Practical exercises using QuantiNemo (FG)

Thu. 25th Sept.

- 9:00-10:30: Population structure, quantitative traits and QTL (AK)
- 10:30-11:00: Break/discussion.
- 11:00-12:30: Population structure, quantitative traits and QTL (AK)
- 12:30-13:30: Lunch
- 13:30-15:00: Tutorial
- 15:00-15:30: Break/discussion.
- 15:30-17:00: Tutorial

Fri. 26th Sept.

- 9:00-10:30: Tests of local adaptation in quantitative traits and QTL (JB)
- 10:30-11:00: Break/discussion.
- 11:00-12:30: Tests of local adaptation in quantitative traits and QTL (JB)
- 12:30-13:30: Lunch
- 13:30-15:00: Tutorial
- 15:00-15:30: Break/discussion



1. Norbyvägen 14
75236 UPPSALA

1. Lecture hall Lärosalen 2 and restaurant Micke's kök.
2. Computer rooms, Norbyvägen 18 B
3. Feiroz restaurant, Blåsenhus, von Kraemers allé 1
4. Café Viktoria
5. Restaurant SGU, Villavägen 18