

Program 6 May 2013

Colloquium 2 seminar: Bridging the gap between genomics and evolutionary biology II

The Norwegian Academy of Science and Letters, Drammensveien 78, Oslo

Introduction

09.00–09.05: Nils Chr. Stenseth: Welcome and opening remarks

Session 1: DNA as marker

The inertness of DNA has already made possible tremendous insights about evolutionary history. What has been achieved by using DNA as a marker, and which outstanding problems can now be addressed using new sequencing methods and analytical tools?

09.05–09.45 Fredrik Ronquist: “DNA as a marker – a phylogenetic perspective”

09.45–10.10 Kjetill S. Jakobsen: “The success story of DNA as an evolutionary tool”

10.10–10.30 Coffee Break

Session 2: Associations between DNA variation and phenotypes

Association studies are providing a better understanding of the relationship between DNA variation and phenotypes. Which set of important ecological and evolutionary questions can be properly addressed by association studies?

10.30–11.00: Walter Salzburger: “Adaptive radiations – why and how?”

11.00–11.30: Hans Ellegren: “How can genomics of the collared flycatcher help us understand the phenotypic variation?”

11.30–12.00: Glenn-Peter Sætre: “A genomic perspective on domestication of sparrows”

12.00–13.00: Lunch

Session 3: Actual identification of causative variation

Actual identification of causative genetic variation in natural populations is steadily gaining momentum. What are the important ecological and evolutionary problems that need such identification to be properly addressed?

13.00–13.40: Michael Berenbrink: “Integrating physiological processes and genomics – are we there yet?”

13.40–14.10: Thomas Flatt: “Population genomic basis of clinal variation in *Drosophila* life history”

14.10–14.50: Michael Purugganan: “Ecological genomics of plant adaptations – is there a need to understand the causative variation?”

14.50–15.20: Øivind Andersen: “Causative variation in hemoglobin genes”

15.20–15.50: Coffee break

Session 4: Causally cohesive understanding of the genotype-to-phenotype relation

Which types of problems within ecology and evolutionary biology need a causally cohesive understanding of the genotype-to-phenotype relation?

15.50–16.30: Andrew Clark: “Are we towards a causally cohesive understanding of the genotype-to-phenotype relationship?”

16.30–17.00: Jonas Warringer: “Decoding the topology of adaptive landscapes in yeast”

17.00–17.30: Thomas Sæviak and Øistein Høien: “How does epigenetic transgenerational inheritance fit into the scheme of genotype-to-phenotype relationship?”

17.30–17.50: Coffee break

Session 5: Analysis and synthesis

The synthesis – is it within reach?

17.50–18.20: Stig W. Omholt: “The conceptual structure of Darwinism in relation to the genomics revolution”

18.20–18.50: Thomas Hansen and Stig W. Omholt: Discussion

18.50–18.55: Kjetill S. Jakobsen: Closing remarks

19.30: Dinner for invited guests