

## Nov. 2010 Workshop at McGill's Redpath Museum (Montreal)

### **“Perspectives on evolutionary novelty and evo-devo: integrating explanatory approaches in biology”**

#### **Participants:**

Biologists: Ehab Abouheif, Greg Davis, Douglas Erwin, Brian Hall, Benedikt Hallgrímsson, Hans Larsson, Manfred Laubichler, Richard Palmer, Sean Rice

Philosophers: Frédéric Bouchard, Ingo Brigandt, Marc Ereshefsky (Sunday only), Todd Grantham, Paul Griffiths, Alan Love, Justin Smith, Karola Stotz, Denis Walsh, Rob Wilson

#### **Program**

All Sunday and Monday sessions take place in the Auditorium of the Redpath Museum on the campus of McGill University

Each presentation is 20-25 minutes long, directly followed by 10-15 minutes of discussion. After the commentary for the session, there is further discussion on all session papers.

#### **Sunday, Nov. 7**

*Daylight Savings Time ends at 2 am*

8:30 am	<i>Continental breakfast</i>
9:00 am	Ingo Brigandt: Introduction to the workshop <b>Session 1: The developmental basis of novelty</b>
9:10 am	Benedikt Hallgrímsson: “Developmental mechanisms underlying the generation of variation”
9:45 am	Rich Palmer: “Developmental plasticity and the origin of morphological novelty: insights from animal asymmetries”
10:20 am	Ehab Abouheif: “The developmental basis of adaptive appendage evolution in water striders”
10:55 am	<i>Coffee break</i>
11:20 am	Greg Davis: “The evolution of asexuality and viviparity in aphids and their consequences”
11:55 am	Alan Love: Commentary on Hallgrímsson, Palmer, Abouheif, and Davis
12:10 am	Additional discussion on all session papers
1:00 pm	<i>Catered lunch</i>

	<b>Session 2: The structure of evo-devo and evolutionary theory – the place of novelty</b>
2:00 pm	Brian Hall: “Mechanistic explanations of variation and novelty: the same or different?”
2:35 am	Manfred Laubichler: “Developmental evolution as a mechanistic science: conceptual and historical reflections”
3:10 pm	Sean Rice: “The place of development in mathematical evolutionary theory”
3:45 pm	<i>Coffee break</i>
4:10 pm	Doug Erwin: “Novelties that change carrying capacity” (bridging sessions 2 and 3, commentary on this paper on Monday)
4:45 pm	Ingo Brigandt: Commentary on Hall, Laubichler, and Rice
5:00 pm	Additional discussion on all session papers (until 6:00 pm)

7:30 pm *Joint Dinner*

## Monday, Nov. 8

8:30 am	<i>Continental breakfast</i>
	<b>Session 3: Macroevolution and integrating explanatory approaches</b>
9:00 am	Mike Caldwell: “Macroevolution, osteogenesis and the generation of ‘novelty’ in the paddle-like limbs of secondarily aquatic fossil and extant tetrapods” (delivered by Hans Larsson)
9:25 am	Hans Larsson: “Parallel structures in evolution and development: toward a characterization and unification of the evolving genotype-phenotype”
10:00 am	Todd Grantham: Commentary on Erwin, Caldwell, and Larsson
10:15 am	Additional discussion on session papers and workshop topics
11:30 am	<i>Catered lunch</i>