The 2nd annual Symposium on the Evolutionary Genomics of Adaptation
University of Nebraska-Lincoln
October 11-13, 2019

Friday October 11
7:00-8:30 pm Welcome Morrill Hall Lecture Hall 141
Keynote lecture: John Kelly Genotype to fitness in natural populations of yellow monkeyflower

Saturday October 12 Wick Alumni Center Great Hall
8:00-8:30 am Breakfast catered

Oral Session 1
Evolutionary genetics and adaptation in natural populations

8:30-9:10 am Featured speaker: Sarah Fitzpatrick Linking evolution and demography through genetic rescue of small populations
9:10-9:30 am Rena Schweizer Genomic signatures of selection across the oxygen transport cascade in high-altitude deer mice
9:30-9:50 am Zac Cheviron A developmental delay in thermoregulation is associated with adaptive shifts in gene expression in high-altitude deer mice
9:50-10:10 am Anthony Signore Biochemical paedomorphosis and genetic assimilation in the hypoxia adaptation of Tibetan antelope
10:10-10:25 am Arvind Pillai The Origin of Hemoglobin
10:25-10:40 am Break
10:40-11:00 am Jeff Good The evolution of seasonal camouflage
11:00-11:20 am Claire Mérot How are inversions involved in adaptation to heterogeneous environments? Population genomics using low-coverage whole-genome sequencing in a seaweed fly
11:20-11:40 am Jeff Mower Parallel cooption of an alternative holocytochrome c synthesis pathway in diverse plants and algae
11:40-12:00 pm Carolyn Wessinger Floral divergence despite widespread shared variation in a Penstemon species complex
12:00-12:15 pm Tom Nelson Phylogenomics untangles species relationships in a classic adaptive radiation in plants
12:15-1:30 pm Lunch catered

Thank you to our supporters who have helped make this symposium possible
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**Oral session 2**  
Evolutionary genetics and adaptation in domesticated systems

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1:30-2:10 pm</td>
<td><strong>Featured speaker:</strong> Justin Fay</td>
<td>Diversification and domestication of yeast</td>
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<td>2:10-2:30 pm</td>
<td>Jinliang Yang</td>
<td>Epigenetic selection reshapes gene regulation and affects adaptation during maize domestication</td>
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<td>2:30-2:50 pm</td>
<td>Chi Zhang</td>
<td>Genome-Wide Discovery of Genotype-specific Alternative Splicing Variation Linking to Salt Tolerance in a Rice Diverse Population Using VASP</td>
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<td>2:50-3:10 pm</td>
<td>Sara Signor</td>
<td>Evolution of plasticity in response to ethanol between sister species with different ecological histories (Drosophila melanogaster and D. simulans)</td>
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<td>3:10-3:30 pm</td>
<td>Mike Herman</td>
<td>Genomic analysis of natural Stenotrophomonas bacteria and their effects on wild and domesticated C. elegans</td>
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<td>3:30-3:45 pm</td>
<td>Lianna Walker</td>
<td>Signatures of adaptive evolution emphasize potential role of Synaptogyrin-2 variant in PCV2b susceptibility</td>
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<td>3:45-4:00 pm</td>
<td>Break</td>
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<td>4:00-4:20 pm</td>
<td>Rob Unckless</td>
<td>The genetic basis of evolutionary divergence in immune defense in Drosophila</td>
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<tr>
<td>4:20-4:40 pm</td>
<td>Brandon Cooper</td>
<td>The evolutionary genetic basis of Wolbachia spread in a hybridizing host clade</td>
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<tr>
<td>4:40-4:55 pm</td>
<td>Michael Hague</td>
<td>Imperfect maternal transmission and unexpected effects on host fitness underlie fluctuating frequencies of the endosymbiont Wolbachia</td>
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| 5-8:00 pm     | Poster session           | Nebraska State Museum at Morrill Hall  
Catered reception with cash bar |

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Sunday October 13

Wick Alumni Center Great Hall

8:00-8:30 am  Breakfast catered

Oral Session 3
Highlighting evolutionary genetics research with application in conservation, agriculture and animal science, resource management and science communication

8:30-9:10 am  Featured speaker: Maurine Neiman  Sex in the Wild (and Community Engagement in Iowa)

9:10-9:30 am  Charles Fenster  The Natural History of Mutations

9:30-9:50 am  Jessica Petersen  Genetic diversity and relationships among populations of the domestic horse: applications for management and in understanding the genetic basis of various traits

9:50-10:05 am  Guoqing Lu  Preadapted Genomes and Post-introduction Hybridization Likely Associated with the Success of Asian Carp Invasions in the Mississippi River Basin

10:05-10:20 am  Break

Oral session 4
Evolutionary genetics and adaptation in natural populations

10:20-10:40 am  Shabnam Mohammadi  Functional mechanisms of adaptive resistance to dietary toxins in a lineage of Neotropical frogs

10:40-11:00 am  Nick Barts  Mitochondrial evolution underlies convergent adaptation to hydrogen sulfide-rich environments

11:00-11:20 am  Enoch Ng'oma  Diverse biological processes coordinate resource allocation responses to nutritional changes in Drosophila melanogaster

11:20-11:35 am  Omera Matoo  Ethanol, flies and metabolism: linking genotypes to phenotypes

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