

# A New Face

## Forest Health Research Scientist

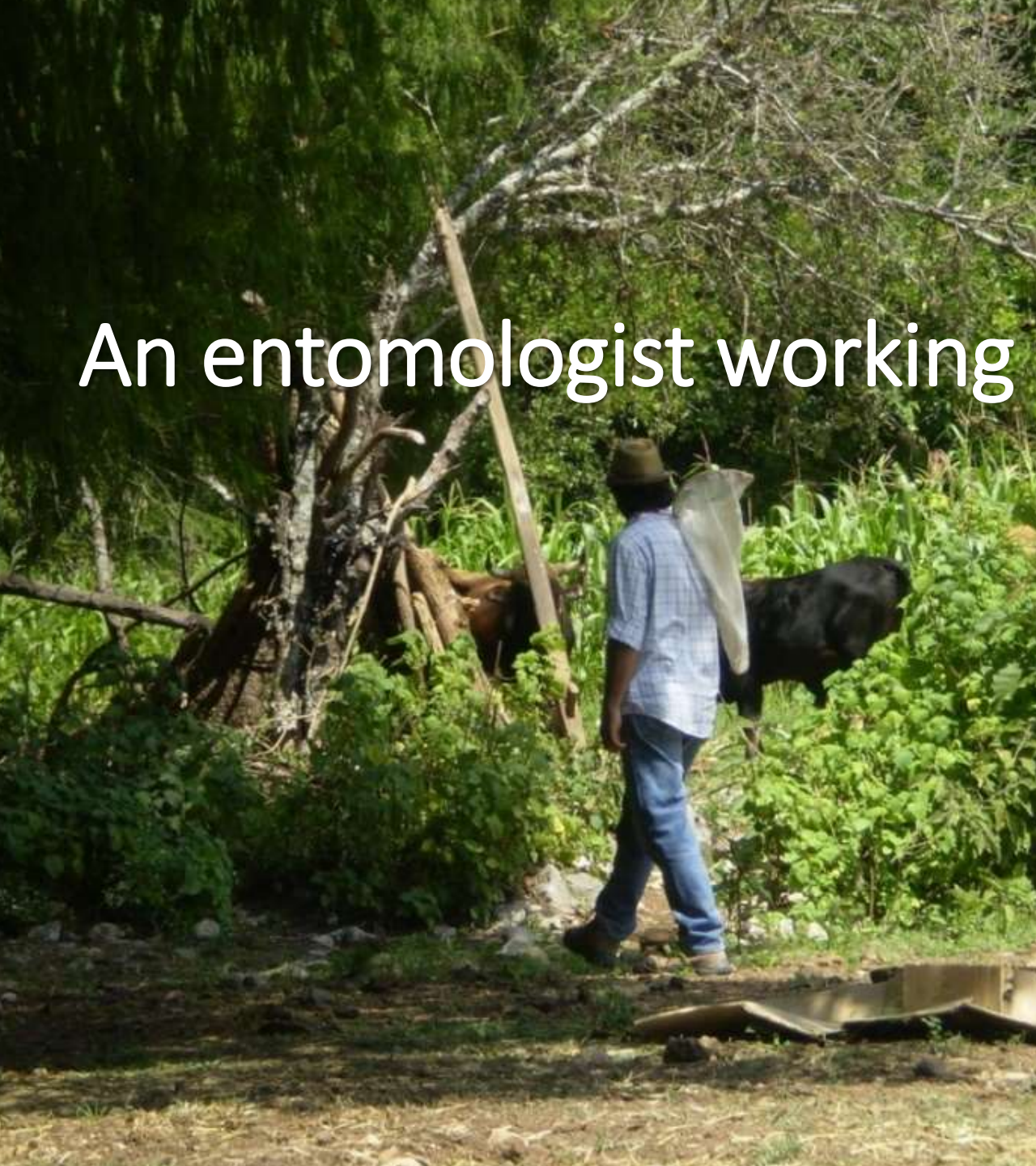
Sebastian Ibarra Jimenez, BSc, MPM, PAg

BC Ministry of Forest Lands Natural Resource Operations and Rural  
Development

Forest Improvement and Research Management Branch



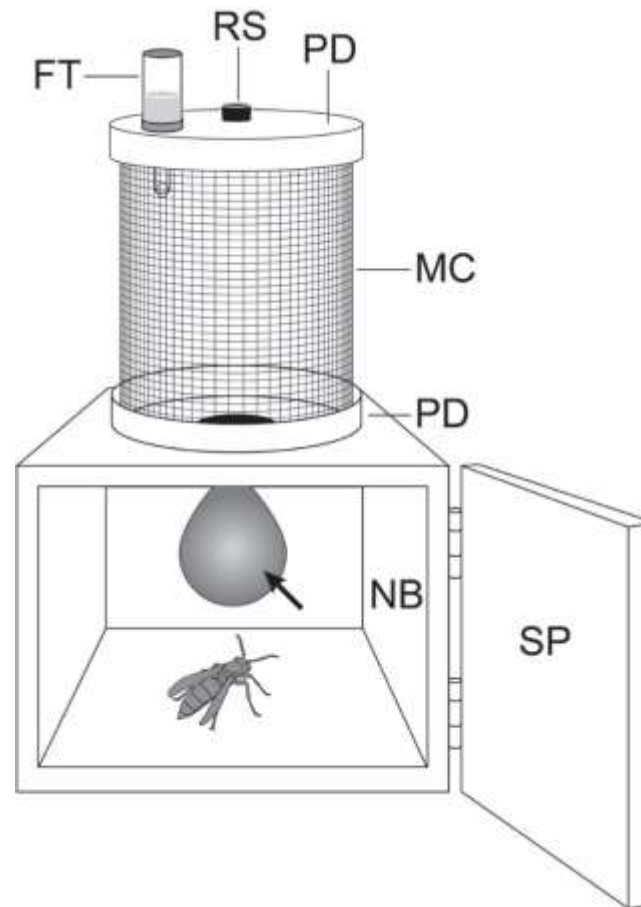
An entomologist working with bees and wasps





# Assessing a method for rearing North American yellowjackets

S. IBARRA JIMENEZ<sup>1</sup>, N. T. DERSTINE<sup>1</sup>, and G. GRIES<sup>1</sup>



# Some queens are pickier than others

Species	Nests initiated
<i>Vespula acadica</i>	1/4 (25%)
<i>V. alascensis</i>	5/10 (50%)
<i>V. atropilosa</i>	0/11 (0%)
<i>V. germanica</i>	11/18 (61%)
<i>V. pennsylvanica</i>	4/23 (17%)

( $p=0.0013$ , FET)





## Developing a paired-target apparatus for quantitative testing of nest defense behavior by vespine wasps in response to con- or heterospecific nest defense pheromones

Sean McCann<sup>1</sup>, Onour Moeri<sup>1</sup>, Sebastian Ibarra Jimenez<sup>1</sup>,  
Catherine Scott<sup>1</sup>, Gerhard Gries<sup>1</sup>

Published: 05 May 2016

## Evidence for a Nest Defense Pheromone in Bald-Faced Hornets, *Dolichovespula Maculata*, and Identification of Components

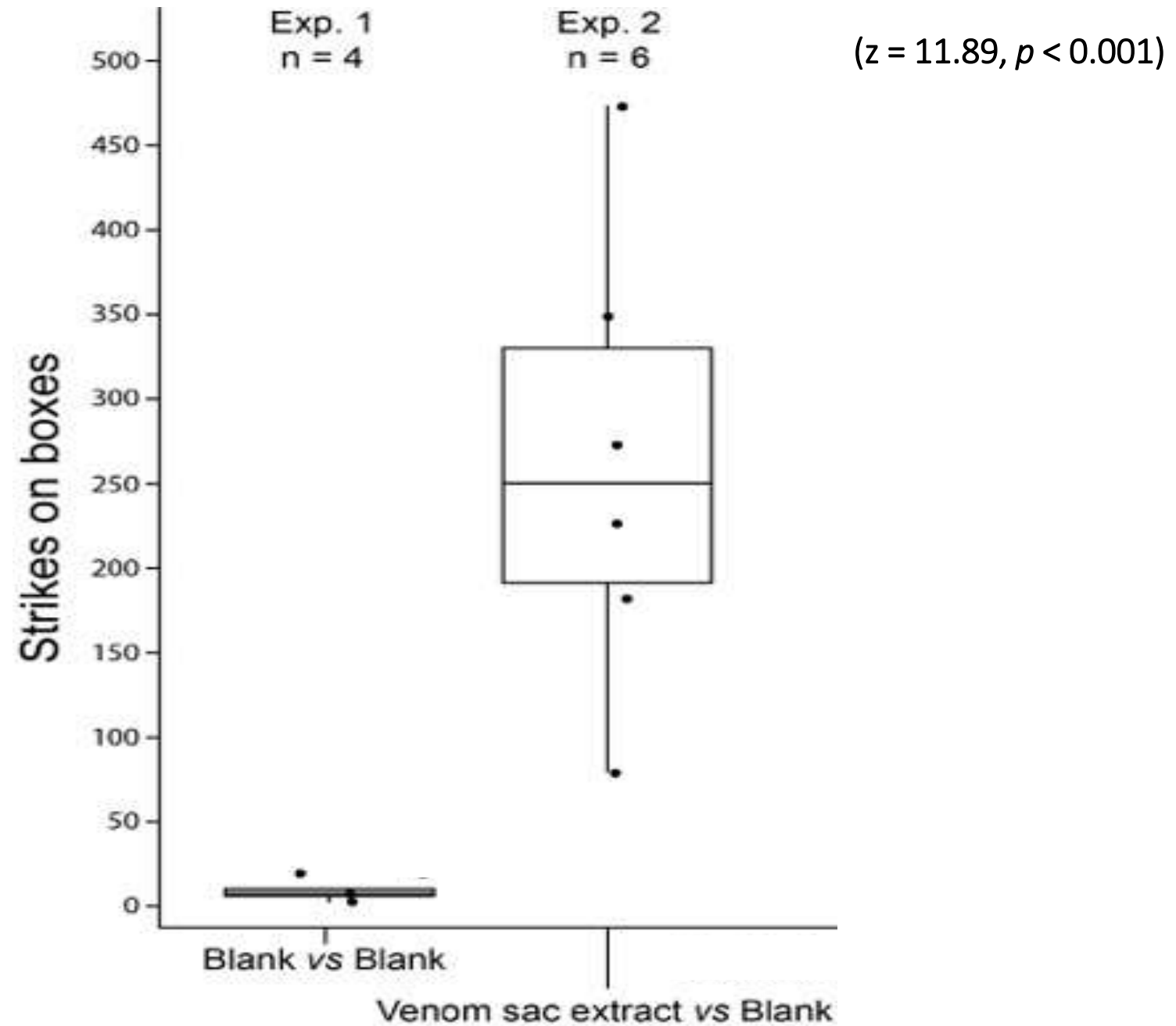
[Sebastian Ibarra Jimenez](#) , [Regine Gries](#), [Huimin Zhai](#), [Nathan Derstine](#), [Sean McCann](#) & [Gerhard Gries](#)

[Journal of Chemical Ecology](#) **42**, 414–424 (2016) | [Cite this article](#)

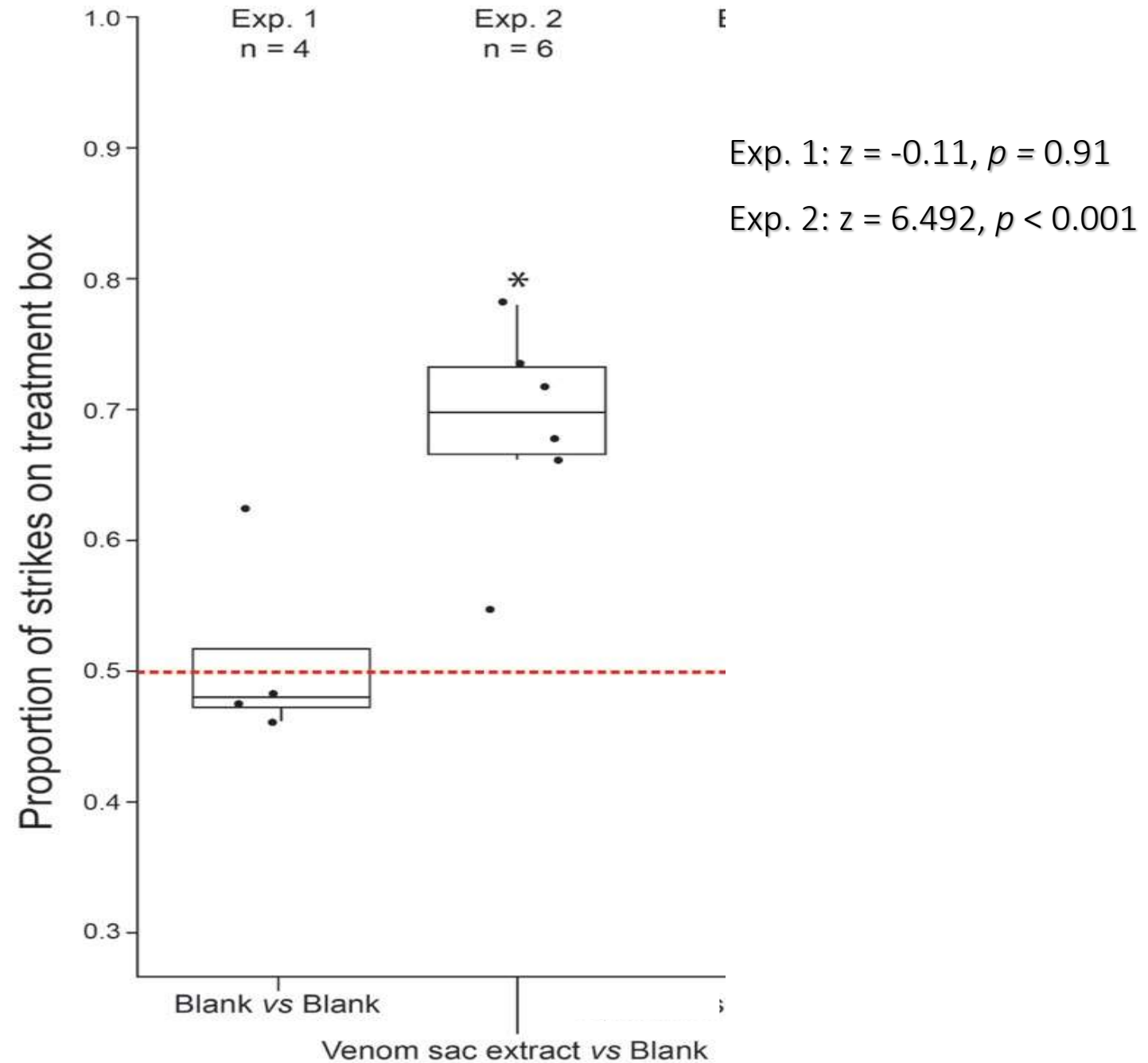
590 Accesses | 12 Citations | 1 Altmetric | [Metrics](#)



# Effect of venom sac extract on attack intensity



# Effect of venom sac extract on attack directionality





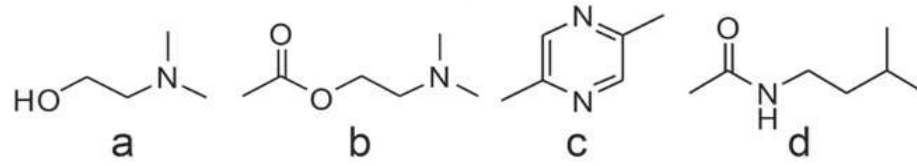
[Southern yellowjacket defense behaviour - YouTube](#)



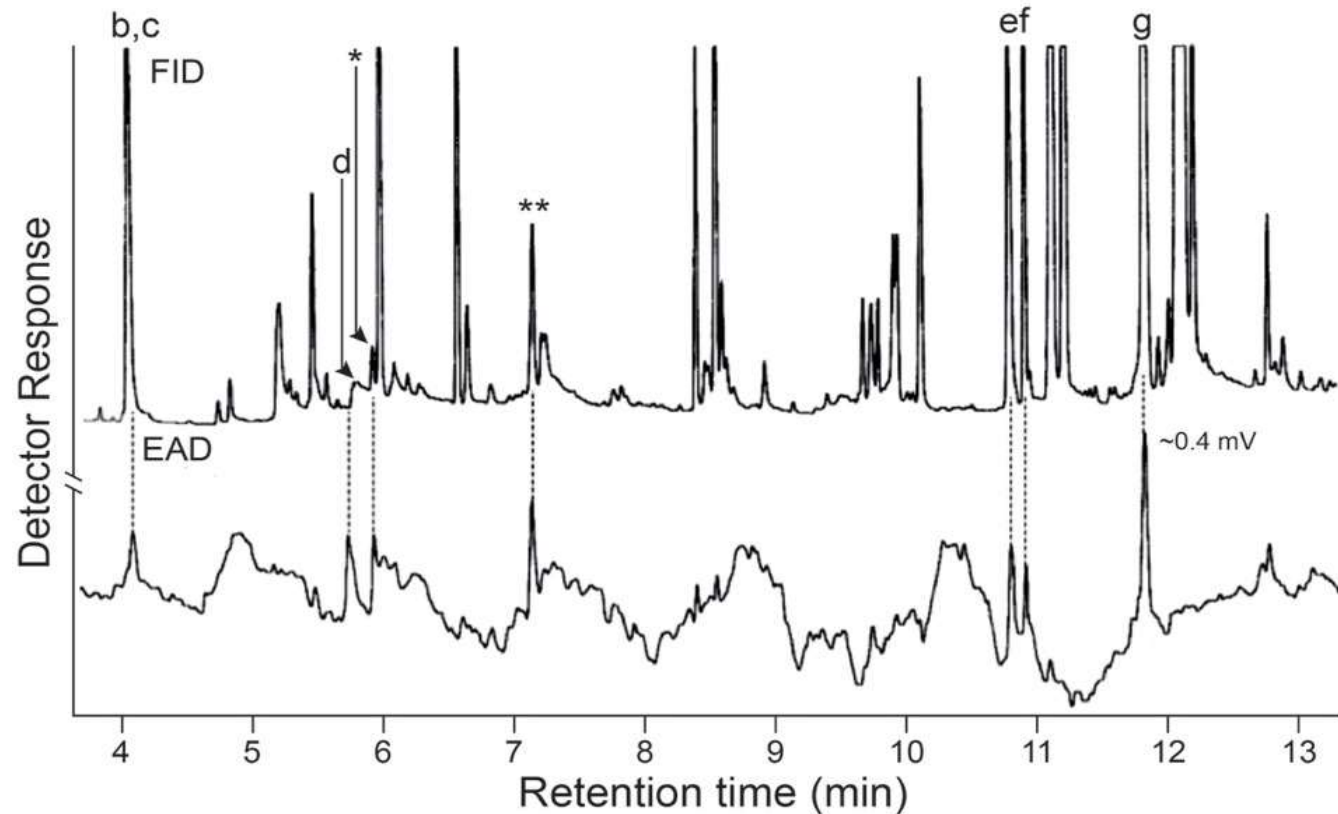
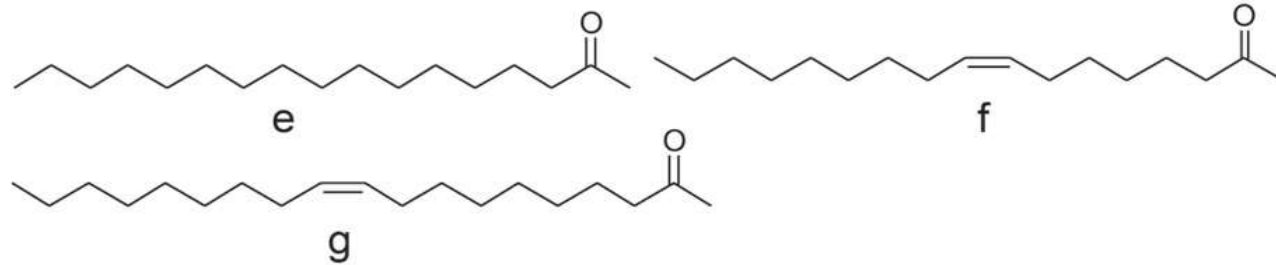


# GC-EAD and GC-MS Analyses of VSE

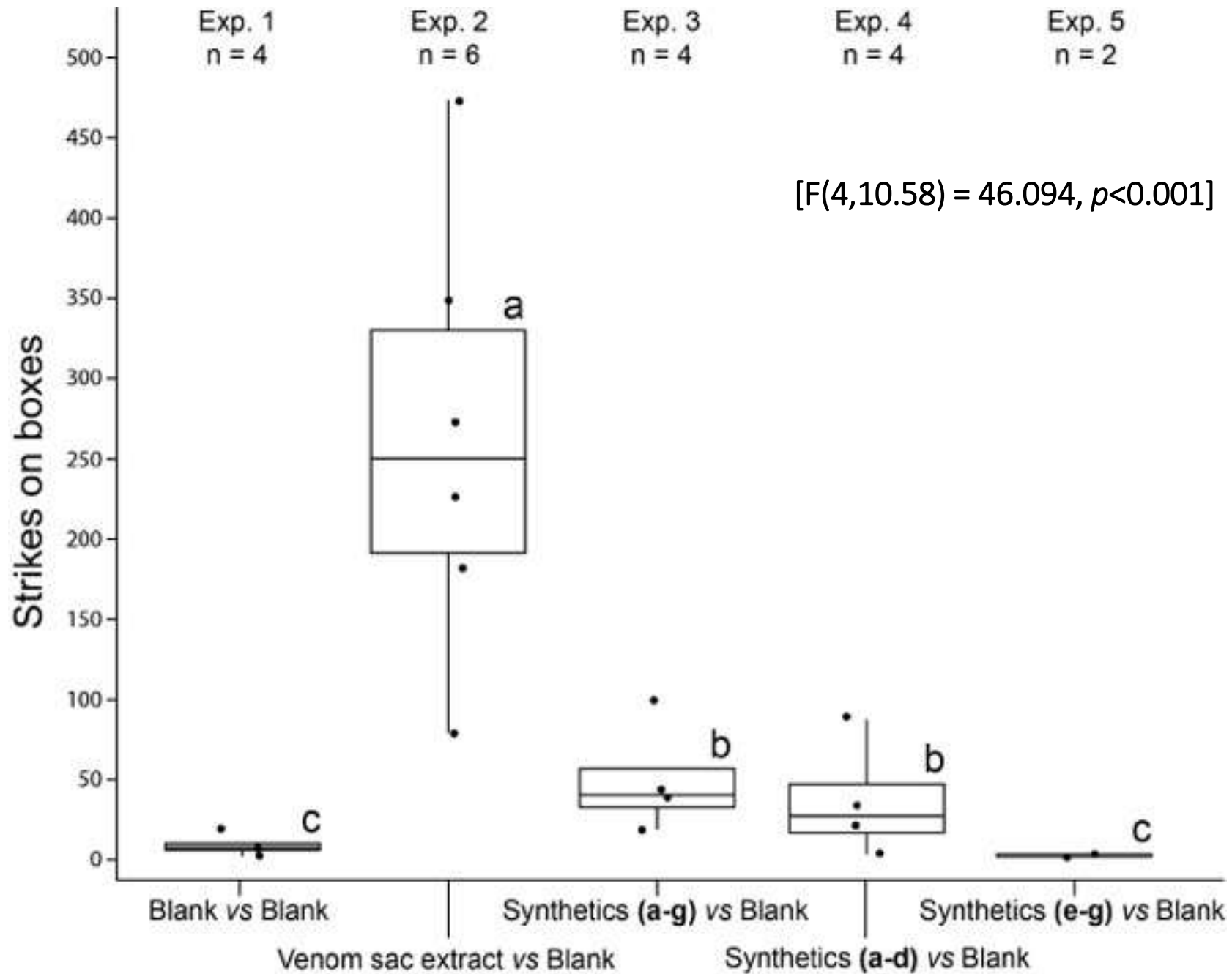
Nitrogen containing compounds



Ketones

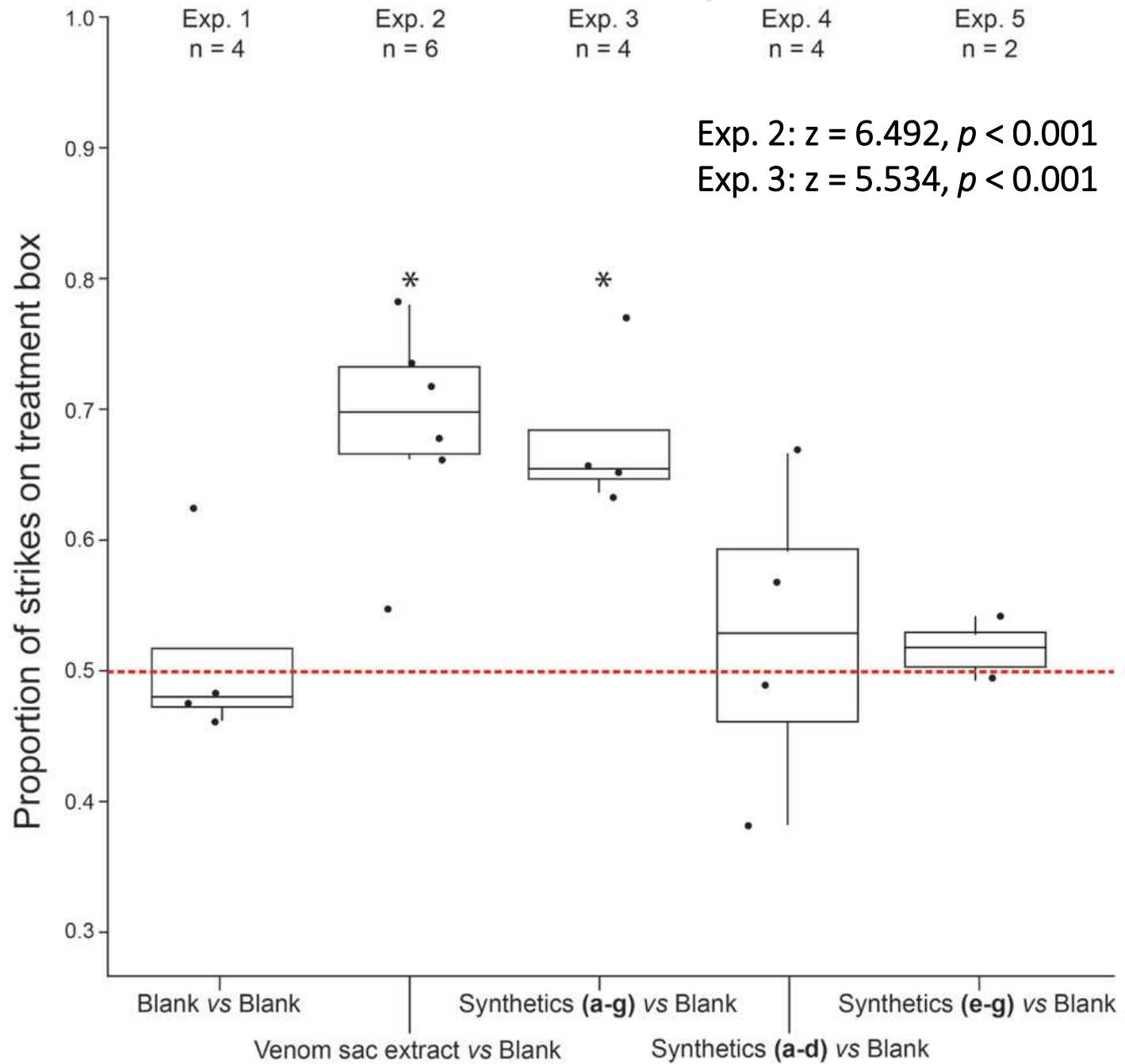


# Effect of test stimuli on attack intensity





# Effect of test stimuli on attack directionality



Always interested in food science





How does yeast end up in fruit or must?





# Role of social wasps in *Saccharomyces cerevisiae* ecology and evolution

Irene Stefanini<sup>a,1</sup>, Leonardo Dapporto<sup>b,c,1</sup>, Jean-Luc Legras<sup>d,e,f</sup>, Antonio Calabretta<sup>a,b</sup>, Monica Di Paola<sup>g</sup>, Carlotta De Filippo<sup>h</sup>, Roberto Viola<sup>h</sup>, Paolo Capretti<sup>c</sup>, Mario Polsinelli<sup>b</sup>, Stefano Turillazzi<sup>b,i</sup>, and Duccio Cavalieri<sup>a,h,2</sup>

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- *S. cerevisiae*, and other yeasts, isolated from the gut of European wasps
- First evidence of seasonal cycle of brewer's yeast outside of human made environments





# Social wasps are a *Saccharomyces* mating nest

Irene Stefanini<sup>a,1</sup>, Leonardo Dapporto<sup>b,1</sup>, Luisa Berná<sup>c</sup>, Mario Polsinelli<sup>d</sup>, Stefano Turillazzi<sup>d,e</sup>, and Duccio Cavalieri<sup>a,d,2</sup>

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Edited by Jeffrey P. Townsend, Yale University, New Haven, CT, and accepted by the Editorial Board December 9, 2015 (received for review August 18, 2015)

The reproductive ecology of *Saccharomyces cerevisiae* is still largely unknown. Recent evidence of interspecific hybridization, high levels of gene flow, and evidence that yeast should germinate into viable cells and mate with cells from other strains, rather than self diploidizing (14).

- *S. cerevisiae* and other yeasts undergo through sexual reproduction in the gut of wasps
- Sexual reproduction leads to genetic diversity





Would wasps in BC carry brewer's yeast?

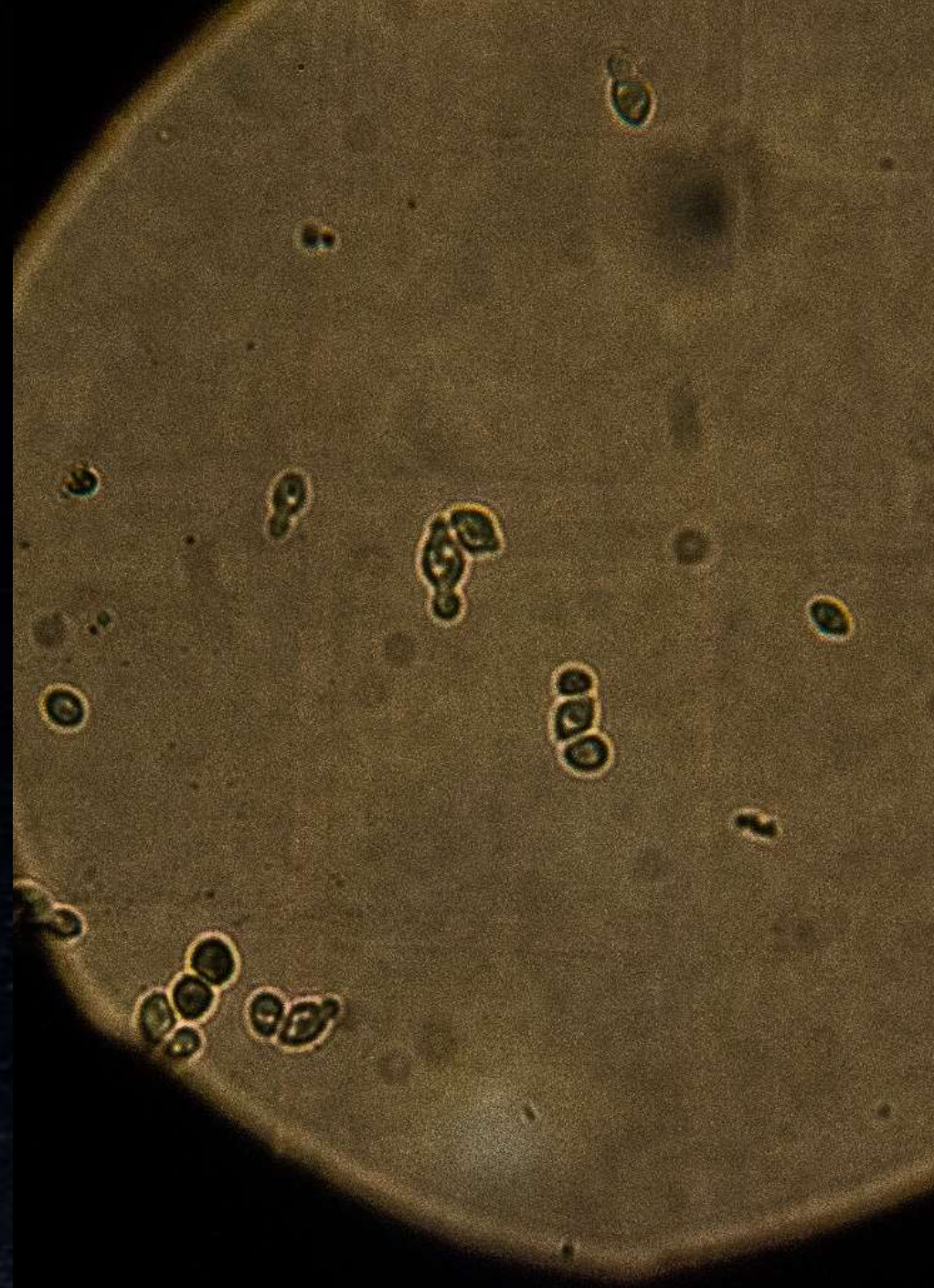
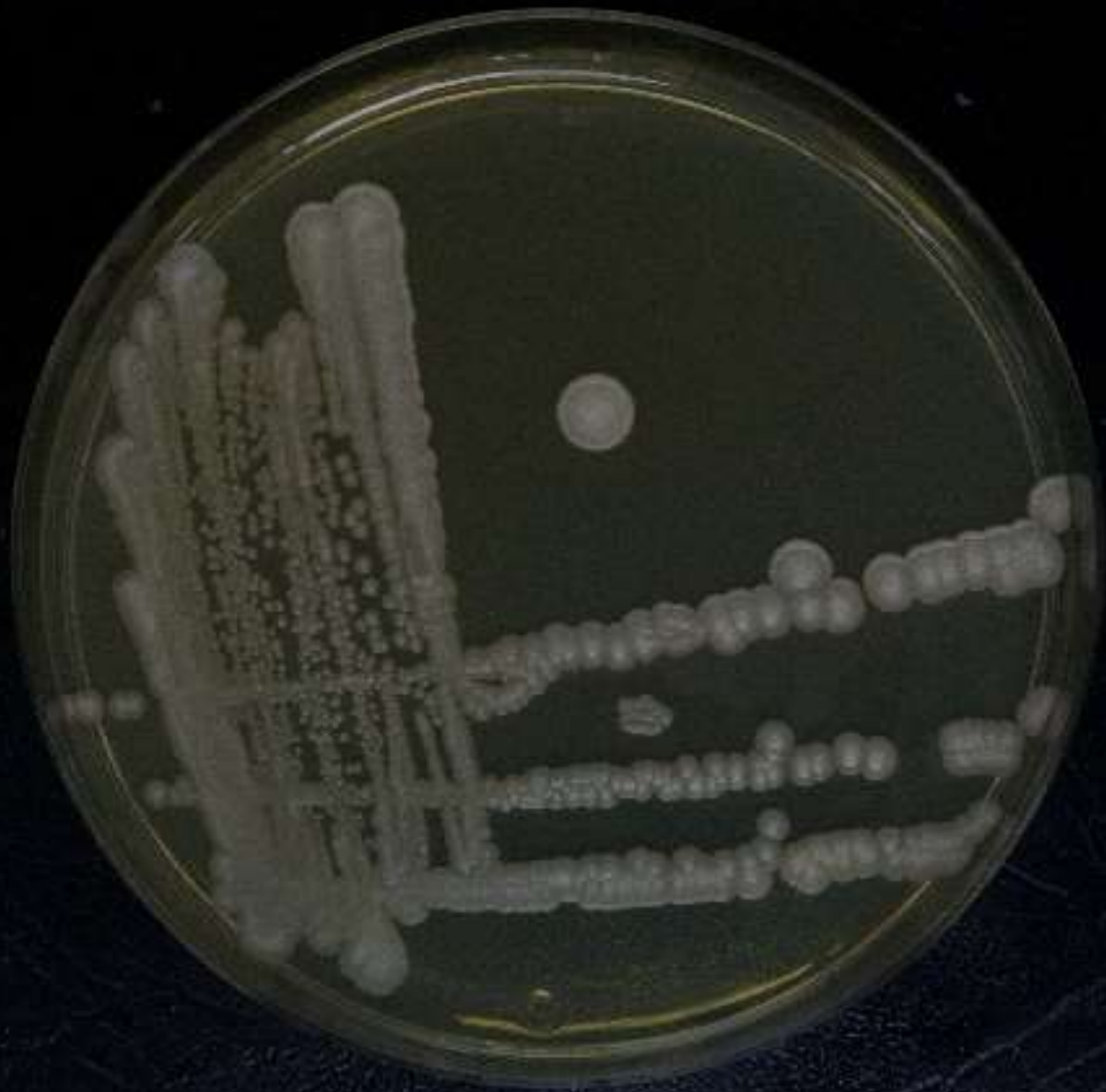














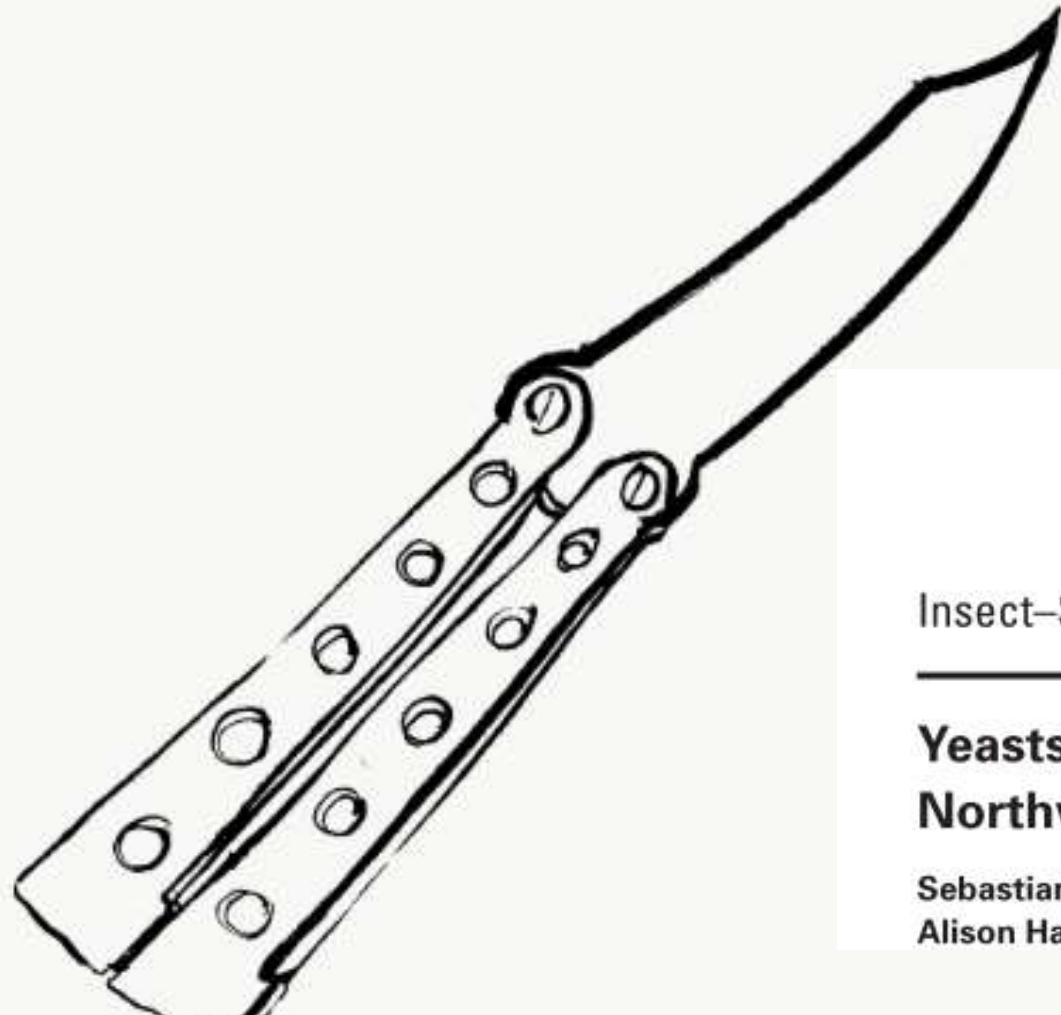
BUZZKILL

← Uncomfortable Silence

EXPERIMENTAL ALE FERMENTED WITH  
BRETTANOMYCES & WILD YEAST  
ISOLATED FROM THE GUTS OF WASPS  
5.5%

Dilettante →

FIRST BREWED: JUNE 2016



*Environmental Entomology*, 2017, 1–9

doi: 10.1093/ee/nvw173

Research

Insect–Symbiont Interactions

## Yeasts Harbored by Vespine Wasps in the Pacific Northwest

Sebastian Ibarra Jimenez,\* Cassandra Carroll,\* Tamara Babcock, Nathan Derstine, Alison Hadwin, Margo Moore,<sup>1</sup> and Gerhard Gries





PEI













agronomy



Article

## Occurrence and Management of PSII-Inhibitor-Resistant *Chenopodium album* L. in Atlantic Canadian Potato Production

Andrew McKenzie-Gopsill <sup>1,\*</sup> , Gavin Graham <sup>2</sup>, Martin Laforest <sup>3</sup> , Sebastian Ibarra <sup>4</sup>, Sheldon Hann <sup>5</sup> and Cameron Wagg <sup>5</sup>



To finally come home



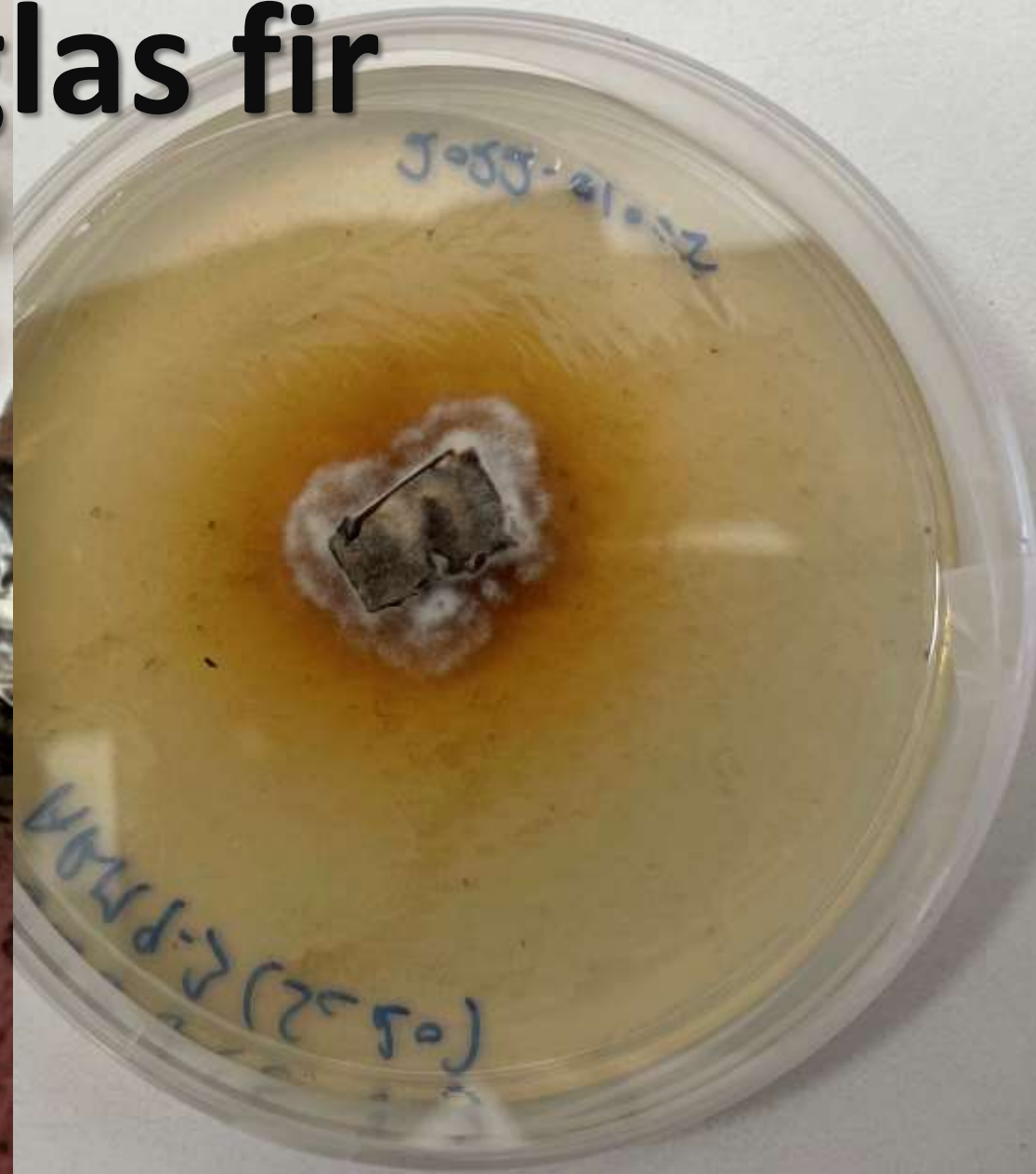




**White pine weevil in spruce**



# Armillaria in Douglas fir





# Dothistroma in Lodgepole pine







**Western gall rust in pines (Ply & Pli)**





**Whitebark and white pine blister rust**



# Current activates

A landscape photograph showing a dirt road winding through a forested valley. In the foreground, there is a large pile of cut logs and branches on the right side of the road. The background features rolling hills and mountains covered in dense forest, with a cloudy sky above.

Updating Kalamalka research station lab  
Literature reviews  
Inoculation protocols development