

An Unlikely Career Path in Genetics -- David Heckel

- BA in Biology & Mathematics, University of Rochester
- PhD in Biology, Stanford University
- Assistant Professor, Dept. Zoology, Clemson University
- Fulbright Fellow, CSIRO & ANU
- Senior Lecturer, Dept Genetics, University of Melbourne
- Director, Max Planck Institute for Chemical Ecology, Jena, Germany

Undergraduate Genetics

- Bad: My Genetics lecturer was the worst in the University
- Good: Mathematical models of population genetics

PhD studies at Stanford



Anolis lizards of the Caribbean (fun!)
Biochemistry; short courses on molecular cloning

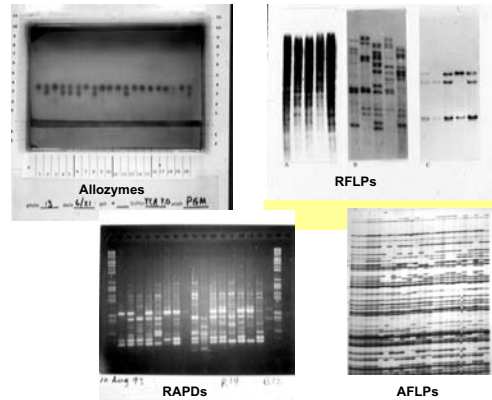
Early Research at Clemson



Eastern Red-spotted Newt
Interest in insecticide resistance

Heliothis virescens
tobacco budworm

Polyphagous, multivoltine, vagile
Cotton pest in Americas
Insecticide resistance in the field
--DDT, OPs, carbamates, pyrethroids
Resistance in lab strains
--spinosad, Bt
YHD2 strain: > 10,000-fold resistant to
Cry1Ac toxin of *Bacillus thuringiensis*



Helicoverpa armigera
cotton bollworm

Polyphagous, multivoltine, vagile
Pest of cotton & other crops in
Australia, Asia, Africa
Chemical insecticide resistance
in the field



Genetic approaches to studying
Plant-Insect Interactions in
Lepidoptera



Max Planck Institute for Chemical Ecology, Jena, Germany
www.ice.mpg.de

Unlikely Career Advice

- seeds of interest may be planted early; and germinate after a long dormancy
- being in the right place at the wrong time can come in handy later
- a really good idea is worth lots of investment
- new technologies mean new opportunities
- great opportunities mean hard choices