## INTRODUCTION TO THE BIOLOGY DEPARTMENT – Fall 2009

### Faculty

<table>
<thead>
<tr>
<th>Name:</th>
<th>Office:</th>
<th>Teaching Area(s):</th>
<th>Research Area:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warren Abrahamson</td>
<td>BB308</td>
<td>Population/Community Biology; Conservation Biol.; Plant/Animal Interactions; Plant Systematics</td>
<td>Ecology and evolution of plant-animal relationships</td>
</tr>
<tr>
<td>Morgan Benowitz-Fredericks</td>
<td>BB203A</td>
<td>Introduction to Molecules and Cells; Endocrinology; General Biology II</td>
<td>Endocrinology in birds</td>
</tr>
<tr>
<td>Elizabeth Capaldi Evans</td>
<td>BB207</td>
<td>Animal Behavior; Social Insects; Tropical Ecology; Neuroethology</td>
<td>Neuroethology; social insects biology; behavioral ecology</td>
</tr>
<tr>
<td>Mitchell Chernin</td>
<td>BB202</td>
<td>Genetics; Molecular Biology; General Biology I; Tropical Marine Biology</td>
<td>Regulation of gene expression</td>
</tr>
<tr>
<td>Donald Dearborn</td>
<td>BB303</td>
<td>Genetics; Animal Behavior; Evolution; Ornithology</td>
<td>Behavioral ecology; ornithology; conservation biology</td>
</tr>
<tr>
<td>Ken Field (on leave 2009-2010 year)</td>
<td>BB202B</td>
<td>Introduction to Molecules and Cells; Immunology; Cell Biology; Controversies</td>
<td>Immunology; cancer</td>
</tr>
<tr>
<td>Julie Gates (on leave fall 2009)</td>
<td>BB204</td>
<td>General Biology I; Developmental Biology</td>
<td>Developmental biology of Drosophila</td>
</tr>
<tr>
<td>Mark Haussmann</td>
<td>BB209B</td>
<td>Biology of Aging; Comparative Animal Physiology</td>
<td>Organismal aging and life histories</td>
</tr>
<tr>
<td>Matthew Heintzelman</td>
<td>BB205</td>
<td>Introduction to Molecules and Cells; Cell Biology; Microanatomy</td>
<td>Cytoskeletal architecture and cell motility</td>
</tr>
<tr>
<td>Stephen Jordan</td>
<td>BB310</td>
<td>Pop/Community Biol.; Systematic Biology; Entomology; Invertebrate Biol.</td>
<td>Entomology; systematics of insects</td>
</tr>
<tr>
<td>Lisa Marin</td>
<td>BB209A</td>
<td>Molecular Biology; Biochemical Methods</td>
<td>Neurodevelopmental biology of Drosophila</td>
</tr>
<tr>
<td>Matthew McTammamany</td>
<td>BB311</td>
<td>Population and Community Biology; Limnology; Ecosystem Ecology</td>
<td>Aquatic ecology</td>
</tr>
<tr>
<td>Kathleen Page</td>
<td>BB208</td>
<td>Intro. to Molecules and Cells; Neurophysiology; Intro. to Neuroscience</td>
<td>Cellular physiology and neuroendocrine regulation</td>
</tr>
<tr>
<td>Le Palilulis</td>
<td>BB206</td>
<td>Genetics; Cytogenetics</td>
<td>Chromosome structure and function</td>
</tr>
<tr>
<td>Marie Pizzorno (Dept. Chair)</td>
<td>BB236</td>
<td>Virology; Molecular Biology</td>
<td>Molecular and cellular biology of eukaryotic viruses</td>
</tr>
<tr>
<td>DeeAnn Reeder</td>
<td>BB337</td>
<td>Organismal Biology; Mammalogy; Comp. Physiology; Behavioral Neuroendocrin.</td>
<td>Behavioral neuroendocrinology and ecophysiology of bats</td>
</tr>
<tr>
<td>Mark Spiro (Dept. Associate Chair)</td>
<td>BB302</td>
<td>Organismal Biology; Plant Growth and Development;</td>
<td>Plant developmental biology</td>
</tr>
<tr>
<td>Tristan Stayton</td>
<td>BB305</td>
<td>Organismal Biology; Comparative Vertebrate Anatomy</td>
<td>Ecological morphology of lizards</td>
</tr>
<tr>
<td>Emily Stowe-Evans</td>
<td>BB306</td>
<td>Genetics; Microbiology; Functional Genomics</td>
<td>Molecular genetics of cyanobacteria</td>
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### Support Faculty/Staff

<table>
<thead>
<tr>
<th>Name:</th>
<th>Office:</th>
<th>Teaching Area:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karin Knisely</td>
<td>BB110A</td>
<td>Intro to Molecules and Cells Labs, Organismal Biology Labs</td>
</tr>
<tr>
<td>Joseph Moore</td>
<td>BB013G</td>
<td>Introduction to Microscopy</td>
</tr>
<tr>
<td>Kate Toner</td>
<td>BB115B</td>
<td>General Biology I and II Labs</td>
</tr>
<tr>
<td>Karen Shrawder (Academic assistant)</td>
<td>BB203B</td>
<td>Coordinates departmental office, information about pre-elective poll.</td>
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</table>
THE REQUIREMENTS FOR THE B.S. DEGREE IN BIOLOGY:

Major Requirements -
Nine (9) courses in biology: The core sequence of BIOL 205 (Introduction to Molecules and Cells), BIOL 206 (Organismal Biology), BIOL 207 (Genetics), and BIOL 208 (Population and Community Biology) + five (5) additional biology courses at the 300-level.

At least one (1) course of the 300-level electives must be in each of the following three (3) organizational areas of biology: Area I – Molecules/Cells; Area II – Organismal; Area III – Ecological/Evolutionary. Two of these courses from different areas must be a laboratory or field course. BIOL 399 – Undergraduate Research may count for one of these courses.

Major Related Requirements –
CHEM 211 & 212 Organic Chemistry I and II
PHYS 211 & 212 Classical and Modern Physics I and II
MATH 201 Calculus I
MATH 216 Statistics I

Major-Related Areas –
Two additional courses in a major related area are also required. Chemistry 221 (Inorganic) and Chemistry 231 (Analytical) fulfill the pre-med requirement in inorganic chemistry. Other courses that fulfill the major related area requirement include:

CHEM 340 CHEM 351 CHEM 352 CSCI 203 CSCI 204 GEOL 103
GEOL 104 GEOL 106 GEOL 205 GEOL 213 GEOL 305 GEOL 310
MATH 202 MATH 211 MATH 217 PHIL 220 PHIL 272 PHYS 221
PSYC 250 PSYC 349 ANBE 266

Biology Electives by Organizational Area – (L) = usually taught with a lab, * = sometimes taught with a lab

AREA I – Molecules/Cells
BIOL 302 Microbiology (L)
BIOL 322 Physiological Mech.
BIOL 323 Microanatomy (L)
BIOL 324 Neurophysiology
BIOL 326 Cytogenetics (L)
BIOL 327 Molecular Biology (L)
BIOL 328 Endocrinology*
BIOL 331 Functional Genomics
BIOL 340 Biochemical Methods (L)
BIOL 343 Neural Plasticity
BIOL 347 Virology
BIOL 348 Immunology (L)
BIOL 352 Cell Biology (L)
BIOL 365 Intro. to Microscopy (L)

AREA II – Organismal
BIOL 303 Behav. Neuroendocrin.
BIOL 312 Vertebrate Anatomy (L)
BIOL 313 Mammalogy (L)
BIOL 316 Plant Growth &
Development (L)
BIOL 318 Comparative Physiol.*
BIOL 339 Developmental Biol. (L)
BIOL 342 Neuroethology
BIOL 346 Environ. Physiology
BIOL 357 Ornithology (L)
BIOL 358 Invertebrate Zoology (L)
BIOL 359 General Entomology (L)

AREA III – Ecological/Evolutionary
BIOL 315 Natural Hist. Vertebrates*
BIOL 321 Behavioral Ecology
BIOL 330 Plant Systematics (L)
BIOL 334 Limnology (L)
BIOL 341 Organic Evolution
BIOL 353 Ecosystem Ecology
BIOL 354 Tropical Ecology
BIOL 355 Social Insects (L)
BIOL 356 Plant/Animal Interactions (L)
BIOL 361 Systematic Biology
BIOL 370 Primate Behav. & Ecology (L)
BIOL 415 Conservation Biology

Additional Important Information:
• BA degree only requires four (4) 300-level Biology electives and does NOT require physics or two courses in the major-related areas.
• The Pre-Health Professions Advisor is Alison Patterson (alison.patterson@bucknell.edu). Her office is located in the Career Development Center, 103 Botany Building, 7-3886.
• NOTE: Several weeks before course registration each semester, the Biology Department carries out a pre-elective poll to fairly slot students into biology electives. You will NOT be allowed to register for a 300-level course if you do not participate in the poll. Watch your email or campus mailbox for information about this important process.