

Preface

There are many realms of knowledge and ways of knowing, but there is no minimizing the fact that in modern life, the scientific realm is one of utmost importance.

For students to graduate with a breadth of knowledge, many colleges and universities embrace the tradition of general education, which simply means that a component of a student's degree includes enrichment in areas outside the major. At my own university, this is an entrenched practice, and for non-science students it includes a suite of fascinating science courses to choose from created specifically for this demographic. These courses usually have two over-arching purposes. One is to expose students to the scientific enterprise by teaching major methodologies, principles, and concepts. The other is to impart interesting and relevant science-generated knowledge along the way. Given the mandate of universities and colleges to educate students in a manner that prepares them for life in a modern civilization, it's well accepted that graduates will fare better having achieved some real scientific literacy.

In this tradition, many colleges and universities offer a non-majors course in the biology of sex. Such a course is eminently capable of satisfying the requirements of general-education science. For one thing, although sex can be meaningfully considered outside the scientific realm, ignoring the science of sex must impoverish the end result if understanding is to be achieved. For another, sex is also a particularly apt subject for general education because it is not only inherently captivating but it is almost certain to be directly connected to students' lives, because most people have identities that include their sexuality, and most are sexually active at least at some times in their lives. It's

plain that sex infuses much of life, from the marketplace to the art gallery and countless points in between.

Yet, although many post-secondary institutions offer a non-majors course in the biology of sex, until now there has been no textbook that has tackled the subject for this group of courses. There are more specialized texts that deal with, for example, human reproductive biology. But for an expansive, non-specialist analysis of the subject in textbook form, this is the first of its kind. Our goal was to provide a resource crafted for the non-majors demographic—students who may not have any senior high school math or science but who nonetheless would benefit from the opportunity to take a science course that delivers interesting and relevant material.

To support the manner in which most versions of biology of sex courses are taught, we've taken the comparative approach. This means that although there is human material throughout, including two final chapters that are almost exclusively on the biology of human sex, there is also a great deal of material about other organisms. This is very purposeful, even if the ultimate goal is to better understand human sex and sexuality. A broad survey of sex across the natural world greatly enriches understanding about nature and about sex, and it assists in underscoring which principles approach the status of being universal and which, in contrast, are more idiosyncratic in their variation from organism to organism.

In preparing for this project, we knew from our prior discussions with instructors that the order in which different themes are taught varies from professor to professor. In recognizing the central position of evolutionary thinking in understanding sex, most argue that evolution should come first. We have almost succeeded in doing this, but there are two interceding chapters that follow the introductory chapter. The first (Chapter 2) is an acknowledgment and summary of a foundational concept—the obvious connection between sex and reproduction. The second is a bit more contentious. However, there is strong research that demonstrates that students succeed much better at understanding evolution if they first understand the basics of genetics. We apply that thinking here, covering the genetics of sex in Chapter 3 before we move on in Chapter 4 to evolution and sex.

Sex, including its biological underpinnings and its almost infinite and surprising permutations, is indeed a rich subject. Its study can be a vehicle for teaching scientific principles and for generating excitement about the power of science to illuminate. The sky is the limit, and we hope that instructors who adopt this book will find that this text helps them in that endeavor.

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