

Evolution's Rainbow

by Joan Roughgarden, Ph. D.

Reviewed by Dave Parker

What a rare book – a scholarly work that is easy and fascinating to read!

Evolution's Rainbow is based on research by a wide variety of scientists who studied the evolutionary patterns and mating behaviors of hundreds of species. In the process, they discovered multiple genders and gender behaviors along with integrated and cooperative same-sex and transsexual relationships.

Some say Dr. Roughgarden is trying to turn Darwin's theory of sexual selection on its head. I don't see it that way. Darwin presented and tested his theory based on the information available to him at the time. His sexual selection theory has been at the heart of evolutionary theory ever since – with growing need to classify as “exceptional” those behaviors that do not fit.

Dr. Roughgarden has access to far more information from far more expert sources and species than Darwin did. As a result, she presents a broader theory with Darwin at its base. Her work provides logical explanations for many of the “exceptions” to Darwinian theory.

For example, she found that humans are NOT the only creatures that appear to have sex for fun. She also reports studies that show fecundity of females is increased if the females indulge in extramarital affairs (called Extra-Pair Mating), especially same-sex activities. Further, she discusses evidence that promiscuous females in some species of birds actually appear to *select* which partner's sperm is allowed to fertilize her eggs.

Darwin's theory of sexual selection postulates that the female breeds with the alpha male – the strongest, prettiest, or whatever seems to be the obvious “best” male. Dr. Roughgarden reports numerous studies that show this is not the case – the female selects the male that will fertilize her eggs based on their apparent ability and desire to care and provide for their young. Since procreation requires only fertile eggs and sperm, her partner in procreation need not be her partner in caring for their offspring.

Strange behaviors (by our community standards) abound in nature. There are species where the male is the primary caregiver for the young, species where both parents ignore the young, and communal species where raising the young is a community responsibility. There are species that carry full sexual capabilities of both sexes in the same body, including some that reverse their male and female roles multiple times (100 or more) during a single mating encounter. Finally, same-sex mating behaviors are common throughout the natural world.

Diversity is the natural order. Dr. Roughgarden's book provides hundreds of examples of sexual and gender diversity. Evolution's Rainbow opens doors for new research and new understanding of sexual behavior and its part in evolution. It is a wonderful source for broadening our understanding of ourselves and our world community.