

FORENSIC ENTOMOLOGY

A Fly for the Prosecution: How Evidence Helps Solve Crimes. By M. Lee Goff. 2000. Harvard University Press (79 Garden St., Cambridge, MA 02138). 216 pp. Paperback \$22.95.



Forensic entomology, the subject of this book, is a specialized branch of entomology that studies the insects and other arthropods that inhabit an exposed, decaying human body. The author, a practicing forensic entomologist, describes the particular species and life form (i.e. maggots and other larvae, pupae, and adult) of these organisms as well as details concerning the body, such as appearance, extent of decay, and nature of the wounds. For these reasons, this book is not for everybody. Those interested in forensics and special areas of entomology, however, will find it fascinating.

Shortly after death an exposed (unprotected) animal body becomes a miniature ecosystem complete with a succession of various inhabitants, most of which are insects and other arthropods. By studying the decay process along with the insects associated with this process, forensic entomologists have developed an idea of how the body decays and the particular insects that inhabit the body at various stages in this process. Most of the insects are involved with the breakdown of the body tissues, while others are predators feeding upon the larvae and adults of the species that feed on the tissues and products of decay.

Forensic entomology has become an important part of the processes involved in gathering evidence in cases of accidental death or homicide. The primary role of forensic entomology is to determine the time of death. Based upon the presence or absence of various insect or other arthropod species, an estimate for the period of time since death, or post mortem period, can be made. The author describes numerous such cases in which he has been involved. He also discusses topics such as experiments with animal carcasses used to simulate the decay of human remains, studies on the effects of drugs and other factors on the rate of decay, and how the information gathered by the forensic entomologist is used in legal proceedings.

The book contains information on the biology of many of the insect species described as well as pen and ink drawings of certain species. No graphic photographs are found in the book and the author has done a good job of dealing with subject matter that

may be unpleasant or unsettling to many.

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NATURAL HISTORY

The Nearsighted Naturalist. By Ann Haymond Zwinger. 1998. The University of Arizona Press (Tucson, AZ 85721). 293 pp. Paperback \$19.95.

Driftwood Valley: A Woman Naturalist in the Northern Wilderness. By Theodora C. Stanwell-Fletcher. 1999 reissue. Oregon State University Press (101 Waldo Hall, Corvallis, OR 97331-6407). 338 pp. Paperback \$17.95.

Waiting for Aphrodite: Journeys into the Time before Bones. By Sue Hubbell. 1999. Houghton Mifflin Co. (222 Berkeley St., Boston, MA 02116). 242 pp. Hardback \$24.



Natural history writing that includes the author's personal perspective or contains autobiographical accounts offers an added richness and dimension to our understanding and appreciation of biology. Each of these authors succeeds in offering the reader a fresh opportunity to come to know a place and its organisms. A theme that connects these books is each author's passion for the experience of her subject. Being in a place, seeing and touching the organisms, and doing research fuel the exuberance that inspires the writing.

Ann Zwinger claims she began as a fairly timid, home-centered housewife who metamorphosed into an adventuresome naturalist. She suggests that her physical nearsightedness may have led to the up-close observation of nature evident in her writing. In one of the essays, she states that writing of the type she does must be scientific in its accuracy but literary in its intent, providing an accurate conduit between the lay and scientific worlds. As for the hard work in the field, laboratory and library that obviously precedes Ms. Zwinger's writing, she states that it is the life blood of natural history writing. "If you ain't been there, seen it, done it, you cannot write about it."

This sentiment is echoed by Dr. Stanwell-Fletcher in **Driftwood Valley**, a reissue of the 1946 nature classic, "Yet the fact that we lived in the wilderness just as the Indians did, subsisted on it almost entirely, used the same modes of traveling and camping in all seasons, perhaps afforded us the rather different type of insight into their char-

acters as a whole." Sue Hubbell also shows us that close observation and immersions into the world of invertebrates provides a pathway to evaluate our vertebrate bias and demonstrates through her essays that "When we learn something about the way invertebrates live, they become familiar to us and we develop charity and friendliness toward them."

Many of Ms. Zwinger's essays in the present volume were previously published in journals and magazines, so it is good to find them collected here where they are more readily available. The following are some favorites from the present work: "Every Valley Shall Be Exalted," not only for its gorgeous title, but also for the beautiful word pictures of Canyonlands National Park; "The Eagle's Fate and Mine are One," again for an evocative title and descriptions of Idaho's Snake River Birds of Prey Natural Area; "A Cave With a View," a most interesting essay about Isla Mas a Tierra in the Juan Fernandez Islands off Chile where Alexander Selkirk spent five years as a lonely castaway, and became the model for Defoe's Robinson Crusoe; "Birds in the Bush," about a visit to a New Zealand island sanctuary; and "Last Look at Long River," about a cruise through the Three Gorges of the Yangtze River, an area soon to be flooded by the world's largest dam.

The Nearsighted Naturalist is a good-looking volume, illustrated with Ms. Zwinger's pleasing illustrations of wildflowers, insects, shells and marine invertebrates. If we can be a bit nit picky, we would say that the book would be improved by the identification of the drawings, and by the addition of maps. There was one essay about a protected southwest valley, "A'aly Waipia," in which the reader was never told in which state the valley could be found.

Dr. Stanwell-Fletcher goes to the wilderness of British Columbia to extend the understanding of what species live there, their season cycles, migrations and how they behave. She was one of the first women to receive a Ph.D. from Cornell in the new science of ecology. She and her husband lived for three years on mile-long Lake Tetana in the Driftwood Valley wilderness of remote north-central British Columbia during the years before WWII when the Province had not yet fallen prey to run-away logging. The couple observed and catalogued plants and animals of the region, collecting for the Provincial Museum in Victoria. They lived a genuine wilderness adventure, building their own log cabin on Lake