No censors

◆ *"Women can be sexual beings without forsaking other aspects of their identities . . . Suppression of women's sexuality tends to coincide with the suppression of women's equality", writes Nadine Strossen in* Defending Pornography: Free Speech, Sex, and the Fight for Women's Rights *(Abacus, £8·99, ISBN 0 349 10765 3). In answer to the pro-censorship crusade that has swept the US recently, led by feminists Catherine McKinnon and Andrea Dworkin, Strossen suggests that repressing sexual material serves only to aggravate discrimination and violence. Fresh, explicit, strident and an indication of how virulent the pornography debate has become within feminism, this book often seems to be more of a personal attack on McKinnon and Dworkin than an argument against their ideas.*

Ancient killer returns

◆ *In the age of deconstruction,* Living in the Shadow of Death: Tuberculosis and the Social Experience of Illness in American History *by Sheila M. Rothman (John Hopkins University Press, £13, ISBN 0 8018 5186 6) places a different perspective on medicine by studying tuberculosis from the patient's, not the doctor's point of view. The evocative, subjective language illuminates the social history of illness and how it shaped and was shaped by the cultural environment. Particularly instructive for a modern world facing the AIDS epidemic and even the re-emergence of TB itself, the leading cause of death throughout the 19th and 20th centuries.*

A lesson in natural history

Francis Gilbert reviews Insects through the Seasons by Gilbert Waldbauer

YOU sometimes hear in the corridors of academic power the opinion that no study can be justified by the phrase "nothing is known about . . ." In these times of performance indicators, journal impact facts and "purblind pursuit of happiness" through grant applications, we are supposed to concentrate the focused testing of relevant critical hypotheses via the hypothetico-deductive method is what science is supposed to be about—all else is stamp collecting.

Insects through the Seasons is a celebration of everything that is wrong with this view—it is a joyous romp through amazing-but-true natural history stories of what makes insects tick.

The book's 12 chapters are organised in a way that is typical of books on the biology of different taxonomic groups of insects. There are chapters on finding and courting a mate, fertilisation, defence against predators, parasites, feeding, and how insects cope with seasons in temperate habitats. It is a textbook for the general reader, a catalogue of the different strategies employed by insects to boost their chance of transferring their genes into the next generation.

Gilbert Waldbauer's clear prose is full of fascinating detail, and it is a pleasure to read. His enthusiasm for his subject comes through loud and clear, a vital ingredient for interesting readers in what he has to say.

One of the first things you notice as you flick through the book is the surprisingly effective cartoon movie of the page marginalia, a flying cecropia moth beating its wings. The cecropia is clearly Waldbauer's favourite. Having studied this species for many years, he devotes a lot of space to describing its life cycle and behaviour. This is a useful way of introducing the diversity of insect strategies, since he can contrast any one type against the pattern set by the cecropia.

Even for the professional entomologist, there is plenty that may well be new. There are vignettes here to delight any reader, including a great deal from Waldbauer's research naturally. There is the fascinating story of his testing the effectiveness of mimicry by painting the wings of the promethea moth in different patterns. Males of this species mimic a poisonous butterfly species, the pipevine swallowtail, whereas females are not mimetic. The female flies only in the dark, but she calls males to mate by releasing her sex pheromone during the afternoon while she is safely hidden. The male must fly to her in broad daylight, thereby exposing himself to predators. Waldbauer and his colleagues notched up an exceptionally high recapture rate of painted males, vital to a convincing analysis of the effectiveness of colour patterns in deterring attack. Males were painted with either the colour pattern of a palatable butterfly (the tiger swallowtail) or that of the poisonous monarch (and, of course, a control for the effects of the paint). The results showed that mimics really were protected by their warning signals: many more mimics survived. Among those survivors looking like tiger swallowtails there were many that bore the scars of attacks by birds.

My personal favourite is Waldbauer's telling of the complex story of moths, their ear mites, and bat predators. Moths have evolved ears to detect bats and take evasive action, poisonous moths squeak back at bats to warn them off, and there are extraordinary mites that live in and destroy only one of a moth's ears so as not to incapacitate them completely.

There are those who claim science should be directed towards wealth creation, and that it is not worth funding investigations into the basic biology of animals and plants. I would argue the contrary. Without the sort of natural history reported so gleefully by Waldbauer, there is no point in testing any hypotheses. It is the natural history of animals and plants that gives investigations their meaning. Theories and hypotheses come and go—they are illusory, part of a temporary scaffolding of understanding that suffices for the moment. When the new cohort of students of behavioural ecology go through their studies without ever having heard of the "Beau Geste effect", natural history information will remain. □

Brian Kenney/Planet Earth Pictures

Insects through the Seasons *by* Gilbert Waldbauer, *Harvard University Press, £15·95, ISBN 0 674 45488 X*

Francis Gilbert *is a lecturer in ecology at the Department of Life Science, University of Nottingham.*