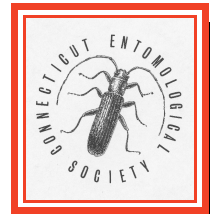


476TH MEETING
Minutes of the
**Connecticut Entomological
Society**
15 January, 2010



Biology Physics Building, University of Connecticut, Storrs
Pre-meeting pizza and beverages were enjoyed by the attendees, 6:30-7:25 p.m.

Business Meeting

Meeting was called to order by President Roberta Engel at 7:30 p.m.; 16 members and 4 guests were present.

Reports: The minutes of the 475th meeting were read by Secretary Munstermann. Treasurer Cowles announced that the balances remained unchanged save an increase in \$30 in the checking account. Reports were approved as read.

Old Business: The fossil hunt scheduled for 6 December was cancelled due to weather. Dave Wagner recommended that this be rescheduled; President Engel replied that plans for a fossil hunt are being made for early spring.

New Business: None

Exhibits:

--Raul Ferreira – (a) presented a Schmidt box of approximately 50 specimens of the Hymenoptera family Mutillidae, mostly collected in Connecticut, Rhode Island and Massachusetts.

(b) book: Browne, J. (2007) *Darwin's Origin of the Species: a biography*. Atlantic Monthly Press, New York. 174 p.

(c) book: (2005) *Darwin Compendium* (Brian Regal, ed.) consisting of 4 of Darwin's publications--*Voyage of the Beagle*, *Origin of the Species*, *Descent of Man*, *Selection in Relation to Sex ... and animals*, plus the autobiography.

Announcements: President Engel called for suggestions for speakers for the Annual Meeting in April; former CES president, Jadranka Rota, will speak in February.

Evening Presentation: President Engel introduced Prof. Kent Wells, currently departmental chair of Ecology and Evolutionary Biology, University of Connecticut. He did his doctorate in Cornell and postdoctoral at the Smithsonian's Barro Colorado Island in Panama; he has been a professor at U. Conn. since 1977. His talk was titled: *Beetles, Bees, and Butterflies: Charles Darwin and the Study of Insects*.

Dr. Wells introduced his topic with a video clip of Darwin in his garden describing plants and insects that were present. It came from a Nova series titled *Darwin's Darkest Hour*—a movie about Darwin's interest in beetles. In the 150 years since publication of *Origin of Species*, many books have been published about Darwin's evolutionary concepts, including one by Jeanne and Charles Remington and the latest (200) from Yale University Press titled *Bugs and the Victorians* by John E. Clark.

Before Darwin, work on Coleoptera was strictly descriptive and these and other insects were often used as examples to support a variety of theological precepts. A few examples follow:

--William Paley, 1839, *Natural Theology* presented the watchmaker argument for the existence of god. Darwin looked carefully at his examples (elaborate insect structures, silk glands, respiratory mechanisms) and used them to refute Paley's theological deductions.

--Kirby and Spence, *Introduction to Entomology*, used examples of "specially created structures and behavior" as examples of god's creation of animals.

--Rev. William Kirby: *Creation of Animals* cited protective coloration, the perfect hexagonal cells in bee honeycombs, and the nests of ants as features and behavioral instincts representing god-given characteristics (since obviously these creatures cannot think).

--This kind of natural theology persisted at Oxford until 1893 when a change in deans (Westwood to Poulton) resulted in a radical Oxfordian shift in views to Darwinism.

Darwin was born and lived in Shrewsbury, his father was Robert Darwin, his grandfather Erasmus. Erasmus was a poet, physician, and inventor--with radical ideas about biology. His father wanted him to become first a physician, then a preacher. However the former period at Edinbrough and then at Cambridge, he was always collecting, mostly beetles, with his cousin William Darwin Fox. Darwin's Cambridge mentor, T.S.Henslow, botanist, encouraged Darwin and recommended him for a berth on the Beagle at the age of 21.

After returning, he spent the next 20 years at his home in Kent. One example Darwin used in the *Origin of Species* was the beetle fauna of the Island of Madeira--200 of the 500 beetle species found there are wingless. Because of winds, flying (winged) individuals can be blown to see ... natural selection for no wings.

Although Darwin did not place a major focus on insects in his published works, he continued to use examples and do experimental work with them. For example the horns of scarab beetles are only in males, and *Chiasognathus granti* jaws may be sexual ornamentation for female attraction. He looked at the interactions between ants and their tending of aphids, he experimented with the necessity of plant pollination by bees, and observed that the honey comb cells of the "humble bee" were not regular. He studied slave-making in ants--indicated that this was not reason for humans to emulate the behavior. His student, John Lubbock, described how the hairs of bee legs were modified to carry pollen.

Darwin and then Alfred Wallace wrote extensively on adaptive coloration (and mentioned stalk-eyed flies) in the context of sexual selection. The Darwinist, Edward Poulton, who succeeded Westwood at Oxford, converted his laboratories into a center for study of adaptive coloration. In 1863 Henry Bates descriptions earned the mimicry phenomenon the name batesian mimicry.

The advent of Mendelism in the 1900s led to a confrontation of the natural selectionists by the mutationists. Punnett wrote a book on mimicry that opposed the role of natural selection and ascribed the phenomenon to sudden mutations. These conflicts were resolved by the appearance of the "modern synthesis" of the 1940s.

Questions

1. What was Charles Darwin's relationship with his grandfather Erasmus? None direct. Erasmus died in 1902, 7 years before Darwin was born. Erasmus was a Lamarckian and considered by his peers as "too French".

2. Interesting book noted: *One Beetle Too Many: the extraordinary adventures of Charles Darwin* by Kathryn Lasky.

3. What about the barnacles? Darwin's barnacle work is still read today. He collected all of them on the voyage of the Beagle--that work was the equivalent of his PhD thesis. Although, he never lived near the ocean, he continued to receive barnacle specimens from his colleagues.

4. Family? Son Francis--became a botanist. George, a geophysicist; Henrietta was sickly and edited her father's books. A granddaughter, Nora Barlow edited the autobiography and a great great grandson wrote a book on the Scopes Monkey Trial. The family continues to write about Charles Darwin.

The meeting was adjourned following Dr. Kent's presentation.

Respectfully submitted,

Leonard E. Munstermann, CES secretary