

Box List: James G. Sternburg Papers
Entomology, UIUC
ID: 15/8/28

Arrangement:

Series 1: Research-related papers, 1938-1992
Series 2: Course Materials, 1954-1988
Series 3: Publications, 1950-1984

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Series 1: Research-related papers, 1938-1992

This series consists of James Sternburg's professional correspondence, grant applications, and conference papers as well as departmental newsletters. This series also contains Sternburg's research notebooks, a photographic record book on DDT research, and correspondence with Professor Clyde Kearns, who co-authored several of articles on DDT resistance with James Sternburg. This series is arranged alphabetically.

Box 1

1. American Chemical Society Meeting, Atlantic City, paper given, 1956
2. American Chemical Society Meeting, paper given, 1960
3. Arctic butterflies catalog (East Canada, including Newfoundland and Labrador), 1982-1983
4. Biramous appendages, undated
5. Butterflies, Florida, 1982-1984
6. Butterflies, Kentucky, 1982-1989
7. Butterflies, lycaenidae of Eastern North America, 1983
8. Butterflies, Manitoba (including Churchill), undated
9. Butterflies, potential spring collecting in Florida, c. 1982-1984
10. Butterflies, spring collecting, 1978-1990
11. Butterflies, summer collecting, northern locales, 1983
12. Butterflies, Virginia, 1976-1978
13. Campus tree and shrub tour, undated
14. Chadwick, Leigh, 1963-1973
15. Chang, Joseph T., DDT Toxins, 1979-1980
16. Conference on toxic aspects of insecticides, Army Chemical Center, 1960
17. Conference papers and presentations, 1959-1960
18. Corn rootworm pest management circulars, 1974-1975
19. Department centennial symposium, 1976
20. Departmental records, memos, and newsletters, 1969-1977
21. Diapause emergence in promethea, 1983
22. Emergence of promethea graphs and charts, 1969-1972
23. Entomological Society of America, Cincinnati, paper given, 1955
24. Entomology Telenet session outline, 1981

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25. Excerpts for reactivation study, 1963-1964
26. Farris, Marion, 1976-1979
27. Federation proceedings, "DDT-induced Toxins in Insect Blood," 1957
28. Fernando, Henry, 1964-1967
29. General correspondence, 1964-1980
30. General survey of relationships, research notes, undated
31. Gloveri, Euryalis, Columbia, research notebook, 1972-1977
32. Gordon research conference, 1963
33. H.B. Petty, "Internal Morphology," assignment submission, undated
34. "The Hexapod Herold," 1979
35. House fly and roach research notes, 1964
36. Hymenoptera notes, undated
37. Illinois Natural History Survey, 1985-1995
38. Illinois Vegetable Farmer's Letter, no. 4, 1968
39. In vivo recovery, synthesis ChE, 1963
40. Journal submission, "Differential Survival of Artificial Mimics in Urban Versus Rural Habitats and Its Implications for the Theory of Batesian Mimicry," 1980
41. Kearns, Clyde W., 1964-1973
42. Luckmann, William, 1977-1981
43. Malpass, Leslie, 1966
44. Manuscripts and journal submissions, 1987
45. National Science Foundation research grant materials, 1976-1977
46. Nervous system photographs, cockroach, undated
47. Nielson, M.C., 1988-1992
48. North Central Branch of Entomological Society of America, paper given, 1955
49. Notes on Aristolochia swallowtails, undated
50. Notes on DDT research, c. 1960
51. Nymphalidae of Eastern North America (non-boreal), 1978-1981
52. Ogaki, Masahiro and Masuhisa Tsukamoto, 1953
53. Old prelim exams, 1938-1962
54. Photographic record book, Ca⁺⁺, undated
55. Photographic record book on DDT research, lab notes, undated
56. Press release, cecropia moth, 1969
57. Public Health Service grant application, CC00039, 1964
58. Public Health Service grant application, CC00039, renewal for 1965-1968, 1965
59. Public Health Service grant application, CC00039-09, 1967-1968
60. Public Health Service grant application, CC00039, 1968-1971
61. Public Health Service grant, related correspondence, CC00039, 1969-1970
62. Public Health Service grant application, FD 000240, formerly CC00039, 1959-1971
63. Research: Colias, 1954-1956
64. Research grant application, "Neurophysiology of Insects and Action Insecticides," 1971-1974
65. Research notebook, DDT in vitro, undated
66. Research notes on monarch butterflies, undated
67. School of Life Sciences newsletter, University of Illinois at Urbana-Champaign, 1969-1976

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Box 2

1. SD 3562 lab results, undated
2. Silk moths to by typed, 1992
3. Sisson, Robert F., 1976-1979
4. South Cook County mosquito abatement district of Harvey, Illinois, twenty-seventh annual report, 1981
5. Spawning *Enneacanthus chaetodon*, c. 1981
6. Stannard, Lewis, 1976
7. Sternburg, Charles, 1977
8. Sternburg, James G., research notebook, 1979
9. Sternburg, James G., research notebook, *Hyalophora gloveri*, 1970
10. Sternburg, James G., research notebook, mimicry records of butterflies, 1976-1977
11. Sternburg, James G., research notebook, *Papilio glaucus* p.1, *Papilio* spp., frequency seen p. 90, *Actias luna*, p. 100, 1973-1974
12. Sternburg, James G., research notebook, U.V. Pieridae ultra violet no. 1, 1971
13. Sternburg, James G., the zebra swallowtail, undated
14. Tetraethyl pyrophosphate toxicity, 1964
15. Tetra-isopropyl pyrophosphate preparation, toxicity, 1964
16. Tetramethyl pyrophosphate toxicity, 1964
17. Tetra-n-butyl pyrophosphate preparation, toxicity, 1964
18. Tetra-n-propyl pyrophosphate preparation, toxicity, 1964
19. Translated articles from Botany, undated
20. U.S. Department of Agriculture picture sheets, 1967-1968
21. United States Public Health research grant application, RG-6183, 1958
22. United States Public Health research grant application, RG-6183, 1958-1961
23. United States Public Health research grant application, RG-6183, 1962-1963
24. United States Public Health research grant materials, RG-6183, 1961-1964
25. United States Public Health research grant report, RG-6183, 1961
26. Wilson, Mary, 1975
27. Winteringham, Peter, 1964
28. World Health Organization, DDT-C14 research, 1963-1964

Series 2: Course Materials, 1954-1988

This series includes James Sternburg's teaching materials, handouts, lecture notes, lab instructions, and assignments for entomology courses at the University of Illinois. This series is arranged first by course number and then chronologically. Folders without a course number contain lecture notes, most of which are related to Entomology 410 in the early 1980s. They were therefore all listed after Ent. 410 (1982), original order was maintained regardless of whether they were related to fall or spring semester courses.

29. Examination questions, 1954-1975
30. Entomology 101, pest management, 1978
31. Entomology 101, field trips, 1982
32. Entomology 101, biological control, 1983
33. Entomology 101, plant resistance, 1982-1983
34. Entomology 101, biological control, 1986
35. Entomology 118, history, lecture preparation materials, 1972-1977
36. Entomology 118, lectures 16 and 17, 1973
37. Entomology 118, 1977
38. Entomology 118, attractants and repellants, c. 1977

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39. Entomology 118, lecture notes, 1978-1978
40. Entomology 118, lecture 3 notes, c. 1978-1979
41. Entomology 118, lectures 33-34 notes, c. 1972-1979
42. Entomology 118, lectures 34, 35, 36 notes, c. 1977-1978
43. Entomology 120, cotton, Peru disaster to integrated pest management, undated
44. Entomology 120, cultural control, mechanical and physical, 1984
45. Entomology 120, ecology, 1984
46. Entomology 301, syllabi and lecture schedules, 1973-1983
47. Entomology 312, lecture and lab schedules, 1972-1979
48. Entomology 410, coleoptera lecture notes, 1958
49. Entomology 410/422, lecture schedule, notes, and exams, 1981-1982
50. Entomology 410, fall 1982
51. Entomology 410, intro, c. 1982
52. Entomology 410, ephemeroptera lecture notes, undated
53. Entomology 410, hemiptera, undated

The following 28 folders contain largely undated lecture notes, most relating to Entomology 410.

54. Abdominal appendages lecture notes, undated
55. Abdominal musculature, undated
56. Digestive system, undated
57. Embryology notes, undated
58. Hymenoptera—thorax and legs, undated
59. Integrated pest management, 1988
60. Male reproductive system, undated
61. Mecoptera, undated
62. Megaloptera, neuroptera, undated
63. Morphology key, undated
64. Nervous system, old notes, undated
65. Optic organs, undated
66. Phthiraptera anoplura, undated
67. Phthiraptera mallophaga, undated
68. Psocoptera, undated
69. Sense organs except eyes, undated
70. Thoracic legs, undated
71. Thysanoptera, undated
72. Trichoptera, undated
73. Respiratory system, undated
74. Entomology 410 notes on odonata, undated
75. Prothorax of grasshopper, external, lab exercise, undated
76. Circulatory system and associated cells, undated
77. Isoptera, undated
78. Plecoptera, undated
79. Muscles: abdominal, thoracic, legs, undated
80. Endocrine organs, undated
81. Integument, undated
82. Entomology 410/422, syllabi, lecture schedules, and notes, 1983-1984
83. Entomology 410, fall 1984
84. Entomology 410, fall 1985
85. Entomology 410, fall 1986
86. Entomology 420 lab exercises, undated

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- 87. Entomology 426, undated
- 88. Entomology 490: immature insects, fall 1982
- 89. Entomology 490c., fall 1984
- 90. Entomology 490, lecture schedule, 1987

Series 3: Publications, 1950-1984

This series consists of journal articles and reviews authored and co-authored by James G. Sternburg, organized chronologically.

- 91. Publications, 1950-1959
 - Sternburg, J.G., C.W. Kearns and W.N. Bruce. 1950. Absorption and metabolism of DDT by resistant and susceptible house flies. *J. Econ. Ent.* 43: 214-219.
 - Sternburg, J.G. and C.W. Kearns. 1950. Degradation of DDT by resistant and susceptible strains of house flies. *Annals of the Ent. Soc. Am.* 43: 444-458.
 - Sternburg, J.G. and C.W. Kearns. 1952. Chromatographic separation of DDT and some of its known and possible degradation products. *J. Econ. Ent.* 45: 505-509.
 - Eaton, J.L. and J.G. Sternburg. 1952. Temperature and the action of DDT on the American roach. *J. Econ. Ent.* 45: 484-496.
 - Sternburg, J.G. and C.W. Kearns. 1952. Metabolic fate of DDT when applied to certain naturally tolerant insects. *J. Econ. Ent.* 45: 497-505.
 - Sternburg, J.G. and C.W. Kearns. 1952. The presence of toxins other than DDT in the blood of DDT-poisoned roaches. *Science.* 116: 144-147.
 - Sternburg, J.G., E.B. Vinson, and C.W. Kearns. 1953. Enzymatic dehydrochlorination of DDT by resistant flies. *J. of Econ. Ent.* 46: 513.
 - Sternburg, J.G., C.W. Kearns, H. Moorefield. 1954. DDT-Dehydrochlorinase, an enzyme found in DDT-resistant flies. *Ag. and Food Chem.* 2: 1125-1130.
 - Sternburg, J.G. and C.W. Kearns. 1956. Pentachlorocyclohexene, an intermediate in the metabolism of lindane by house flies. *J. Econ. Ent.* 49: 548-552.
 - Sternburg, J.G. and J. Corrigan. 1959. Rapid collection of insect blood. *J. of Econ. Ent.* 52: 538-539.
 - Sternburg, J.G., S.C. Chang and C.W. Kearns. 1959. The release of a neuroactive agent by the American cockroach after exposure to DDT or electrical stimulation. *J. of Econ. Ent.* 52: 1070-1076.
- 92. Publications, 1960-1969
 - Sternburg, J.G. 1960. Effect of insecticides on neurophysiological activity in insects. *Ag. and Food Chem.* 8: 257-261.
 - Sternburg, J.G. and P. Hewitt. 1962. In vivo protection of cholinesterase against inhibition by TEPP and its methyl homologue by prior treatment with DDT. *J. Ins. Physiol.* 8: 643-663.
 - Sternburg, J.G. 1963. Autointoxication and some stress phenomena. *An. Review of Ent.* 8: 19-38.
- 92. Publications, 1960-1969 (continued)
 - Brady, U.E. and J.G. Sternburg. 1964. Influence of anesthesia on the toxicity of Tepp and SD-3562. *J. of Econ. Ent.* 57: 173-174.
 - W. Brown Hawkins and J.G. Sternburg. 1964. Some chemical characteristics of a DDT-induced neuroactive substance from cockroaches and crayfish. *J. of Econ. Ent.* 57: 241-247.

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- Eaton, J.L. and J.G. Sternburg. 1964. Temperature and the action of DDT on the nervous system of *Periplaneta americana* (L.). *J. Ins. Physiol.* 10: 471-485.
 - Brady, U.E. and J.G. Sternburg. 1966. Recovery of cholinesterase activity in organophosphate treated insects. *J. Insect Physiol.* 12: 1171-1185.
 - Brady, U.E. and J.G. Sternburg. 1966. Studies on in vivo cholinesterase inhibition and poisoning symptoms in houseflies. *J. Ins. Physiol.* 13: 369-379.
 - Waldbauer, G.P. and J.G. Sternburg. 1967. Host plants and the locations of the baggy and compact cocoons of *Hyalophora cecropia* (Lepidoptera: Saturniidae). *Annals of Ent. Soc. of Am.* 60: 97-101.
 - Waldbauer, G.P. and J.G. Sternburg. 1967. Differential predation on cocoons of *Hyalophora cecropia* (Lepidoptera: Saturniidae) spun on shrubs and trees. *Ecol.* 48: 312-315.
 - Eaton, J.L. and J.G. Sternburg. 1967. Temperature effects on nerve activity in DDT-treated American cockroaches. *J. of Econ. Ent.* 60: 1358-1364.
 - Eaton, J.L. and J.G. Sternburg. 1967. Uptake of DDT by the American cockroach central nervous system. *J. Econ. Ent.* 60: 1669-1703.
 - Waldbauer, G.P. and J.G. Sternburg. 1969. Bimodal emergence of adult cecropia moths under natural conditions. *Ann. Ent. Soc. Am.* 62: 1422-1429.
93. Publications, 1970-1979
- Waldbauer, G.P., J.G. Sternburg, W.G. George and A.G. Scarbrough. 1970. Hairy and downy woodpecker attacks on cocoons of urban *Hyalophora cecropia* (L.) and other saturniids. *Ann. Ent. Soc. Amer.* 63: 1366-1369.
 - Flattum, R.F. and J.G. Sternburg. 1970. Release of a synaptically active material by nicotine in the central nervous system of the American cockroach. *J. of Econ. Ent.* 63: 67-70.
 - Flattum, R.F. and J.G. Sternburg. 1970. Action of nicotine on neural synaptic transmission in the American cockroach. *J. of Econ. Ent.* 63: 62-67.
 - Scarbrough, A.G., G.P. Waldbauer and J.G. Sternburg. 1970. A method for associating cocoons and marked last-stage larvae. *Ann. Ent. Soc. Am.* 63: 1481.
 - Dirks, T.F. and J.G. Sternburg. 1972. Male reproductive system of three species of polistes (hymenoptera: vespidae). *Int. J. Insect Morphol. & Embryol.* 1: 315-320.
 - Scarbrough, A.G., G.P. Waldbauer and J.G. Sternburg. 1972. Response to cecropia cocoons of *Mus musculus* and two species of *peromyscus*. *Oecologia.* 10: 137-144.
 - Dirks, T.F. and J.G. Sternburg. 1972. Non-immunochemical complexing between hymenopteran venoms and rabbit sera. *Toxicon.* 10: 381-384.
 - Waldbauer, G.P. and J.G. Sternburg. 1973. Polymorphic termination of diapause by cecropia: genetic and geographical aspects. *Biol. Bull.* 145: 627-641.
93. Publications, 1970-1979 (continued)
- Willis, J.H., G.P. Waldbauer and J.G. Sternburg. 1974. The initiation of development by the early and late emerging morphs of cecropia. *Ent. Exp. & Appl.* 17: 219-222.
 - Waldbauer, G.P., P.W. Price and J.G. Sternburg. 1976. Aristapedia in a hymenopteran parasitoid. *Ent. News* 87: 98-100.
 - Waldbauer, G.P. and J.G. Sternburg. 1976. Emergence of *Hyalophora cecropia* (Saturniidae) blocked by seeds in the cocoon valve. *J. Lepid. Soc.* 30: 131-132.

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- Waldbauer, G.P. and J.G. Sternburg. 1976. Saturniid moths as mimics: an alternative interpretation of attempts to demonstrate mimetic advantage in nature. *Evolution* 29: 650-658.
 - Sternburg, J.G. and G.P. Waldbauer. 1978. Phenological adaptations in diapause by cecropia from different latitudes. *Ent. Exp. & Appl.* 23: 48-54.
 - Waldbauer, G.P., J.G. Sternburg and C.T. Maier. 1977. Phenological relationships of wasps, bumblebees, their mimics, and insectivorous birds in an Illinois sand area. *Ecology* 58: 583-591.
 - Sternburg, J.G., G.P. Waldbauer, and M.R. Jeffords. 1977. Batesian mimicry: selective advantage of color pattern. *Science* 195: 681-683.
 - Scarbrough, A.G., J.G. Sternburg, and G.P. Waldbauer. 1977. Selection of the cocoon spinning site by the larvae of *Hyalophora cecropia* (saturniidae). *J. of the Lepidop. Soc.* 31: 153-166.
 - Waldbauer, G.P. and J.G. Sternburg. 1978. The bimodal termination of diapause in the laboratory by *Hyalophora cecropia*. *Ent. Exp. & Appl.* 23: 121-130.
 - Waldbauer, G.P. and J.G. Sternburg. 1978. Phenological adaptations in diapause termination by cecropia from different latitudes. *Ent. Exp. & Appl.* 23: 48-54.
 - Waldbauer, G.P., J.G. Sternburg and G.R. Wilson. 1978. The effect of injections of Beta-ecdysone on the bimodal emergence of *Hyalophora cecropia*. *J. Insect Physiol.* 24: 623-627.
 - Waldbauer, G.P. and J.G. Sternburg. 1979. Inbreeding depression and a behavioral mechanism for its avoidance in *Hyalophora cecropia*. *Amer. Midland Nat.* 102: 204-208.
 - Woodward, W.E. and J.G. Sternburg. 1979. Effects of DDT on labellar receptors in two DDT-resistant and two DDT-susceptible strains of house flies. *Pesticide Biochem. & Physiol.* 10: 287-298.
 - Woodward, W.E. and J.G. Sternburg. 1979. Synergism of DDT effects by DMC on labellar receptors of resistant and susceptible house flies. *Pesticide Biochem. & Physiol.* 10: 299-305.
 - Jeffords, M.R., J.G. Sternburg and G.P. Waldbauer. 1979. Batesian mimicry: field demonstration of the survival value of pipevine swallowtail and monarch color patterns. *Evolution* 33: 275-286.
 - Tichenor, L.H., D.S. Seigler, and J.G. Sternburg. Instrumentation note—an apparatus for the bioassay of certain plant-chemical-insect interactions. *Bioscience* 29: 364-365.
94. Publications, 1980-1984
- Sternburg, J.G., G.P. Waldbauer, and A.G. Scarbrough. 1981. Distribution of cecropia moth (saturniidae) in central Illinois: a study in urban ecology. *J. Lepidop. Soc.* 35: 304-320.
 - Brown, D.D., R.L. Metcalf, J.G. Sternburg, and J.R. Coats. 1981. Structure-activity relationships of DDT-type analogs based on in vivo toxicity to the sensory nerves of the cockroach *Periplaneta Americana* L. *Pesticide Biochem. And Physiol.* 15: 43-57.
 - Waldbauer, G.P. and J.G. Sternburg. 1982. Cocoons of *Callosamia promethea* (saturniidae): adaptive significance of differences in mode of attachment to the host tree. *J. of Lepidop. Soc.* 36: 192-199.
 - Waldbauer, G.P. and J.G. Sternburg. 1982. A mutant blue cecropia larva. *Ent. Exp. & Appl.* 15: 250-251.

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- Waldbauer, G.P. and J.G. Sternburg. 1984. Diapause and emergence patterns in univoltine and bivoltine populations of promethean (lepidoptera: saturniidae). Great Lakes Ent. 155-161.

Processing Notes:

Secondary literature, duplicates, and intro-level course materials and lecture notes were weeded. Pages were removed from those research notebooks that were largely empty and placed in folders. Folder titles added by archivists are indicated by []. Processed by Olivia Hagedorn, under the supervision of Susanne Belovari.