OUTBURY

HUGH AVERY FREEMAN (1912 - 2002): REFLECTIONS ON HIS LIFE AND CONTRIBUTIONS TO LEPIDOPTEROLOGY

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Few individuals in recent decades can match Hugh Avery Freeman's contributions to the study of Lepidoptera. Our current knowledge of Mexican bessoperid diversity is based on Freeman's groundbreaking research, as is our knowledge of the butterfly fauna of the lower Rio Grande Valley of Texas. Freeman also created what can be considered a sub-discipline out of the study of the Giant Skippers, or Megathymini. His early publications on the group generated much excitement among his colleagues, and provided the initial stimulus for decades of additional exploration and research. Freeman described 197 new species and subspecies of butterflies (including 4 new forms) and 5 new genera, and authored 131 scientific publications. His collections of Lepidoptera were extensive, and these were important and significant additions to various institutional collections as they were sold or donated. Extensive material from Freeman's collections can be found in the American Museum of Natural History, New York (AMNH), Carnegie Museum of Natural History, Pittsburgh (CMNH), United States National Museum, Washington D.C. (USNM), and Allen Museum, Florida State University (AME in literature, now FSMC). Freeman was an active member of the Lepidopterists' Society, and was well known to all researchers of Hesperidiae and Catoacids (Necotidae), as well as Texas Lepidopterists.

Hugh Avery Freeman was born on October 7th, 1912, in Conway, Faulkner Co., Arkansas. His father, George Allen Freeman, was a Methodist minister who grew up in Vermont. His mother, Stella Freeman, grew up on the Hope Hill Farm in Faulkner County, Arkansas, where Avery (as he was known to his family and friends) spent most of his childhood. George and Stella had two other children, Joy Bates Freeman and Moony Freeman, and adopted a third child out of a Methodist home, Dorothy Freeman. Avery attended North Little Rock High School, and graduated in the class of 1932.

Avery grew up on his parents' farmstead, the Hope Hill Farm. This setting was rich in lepidopteraan species, which caught Avery's attention. At age 15, after reading Gene Stratton-Porter's A Girl of the Limberlost, Lepidoptera became subjects of scientific interest. Between 1927 and 1930, Avery's interest in Lepidoptera was general, although he paid special attention to the Sphingidae (no doubt due to Stratton-Porter's influence), which were the subject of his first entomological publication, an annotated list of the Sphingidae of Arkansas (ref. 1). Avery quickly became fascinated with small butterflies, especially the Lycaenidae, Riodinidae and Hesperidae, and by 1930, Avery's interest in Lepidoptera had become focused on the Hesperidae (but see refs. 26, 28, 32, 33 and 50). Early collecting efforts at the Hope Hill Farm proved to be important, providing new data on the distribution of various species in Arkansas (refs. 18, 33), and type material for two of Avery's new skipper taxa (Polites terrus aequus, ref. 7; Amblypteryx linda, ref. 8).

Avery received his B.A. in biology from Hendrix College (Conway, Arkansas) in 1936 and he was elected to Phi Beta Kappa. He then moved to Texas (Dallas) to attend Southern Methodist University (SMU). There, he earned a M.S. in entomology in 1938, and published a list of the Hesperidae of Dallas County in 1939 (ref. 2). Plans to pursue a Ph.D. in entomology were interrupted by the economic strains of the Depression. In 1938, Avery began teaching biology and chemistry at Lancaster High School (Lancaster, Texas) for 890 a month. Avery found more than a job in Lancaster, and in 1939 married Erna Louise Morris, a native of Lancaster living with her parents at the time. Their happy marriage of 82 years lasted until Avery's passing on February 19th, 2002, and produced three children, Linda Louise Freeman (born 1940; now Linda Stafford), Julia Anne Freeman (born 1945, now Julia Matthews), and Avery Gilbert Freeman (born 1955). Avery was very proud of his family, and named new species and subspecies of skippers after each of his family members: Amblypteryx linda (ref. 8), Lerodea julia (ref. 19), Agathypnis giglberti (ref. 57), Astraptes giglberti (ref. 77), Amblypteryx ernia (ref. 8), Megathymus nauseosus lousiace (ref. 52) and Astraptes lousiace (ref. 77). Louise was a very supportive wife, and spent much time working on Avery's Lepidoptera-related projects "behind the scenes." In addition to collecting specimens from the yard and elsewhere while Avery was teaching (she collected the alotype female of Celanaorthinae stallingi, ref. 21), Louise dispatched many of Avery's reared Megathymini, which would
emerge and expand their wings, almost invariably, while Avery was away teaching.

While Avery proved to be an excellent educator, his true passion remained in the study of Lepidoptera. In an effort to build his collection of Texas species, he sought a teaching position in west Texas, having mastered the butterfly fauna of the Dallas area. Between 1941 and 1944, Avery taught biology and chemistry at White Deer High School (White Deer, Carson County, Texas), spending his weekends and holidays collecting all over north and west Texas. During this period, Avery discovered several new taxa of Hesperidiae in Texas (refs. 9, 9) and developed a very strong interest in the Megathymini (ref. 14). It was also during this time Avery developed a strong interest in the Neotropical Hesperidiae, and largely because of this, sought a teaching position in the lower Rio Grande Valley of Texas in 1944.

From 1944 to 1948, Avery taught biology and coached track and football at the Pharr-San Jacinto-Alamo High School (Pharr, Texas). He spent most of his free moments collecting butterflies, especially skippers. During these four years of intensive collecting activities in the valley, Avery contributed a tremendous amount of new information on the butterfly fauna of the region, and reported over two-dozen butterfly species from the United States for the first time (refs. 6, 16, 17, 19, 20, 21, 22, 23, 25, 26, 29, and 33), some of which were new to science. During the period of Avery’s collecting activities in the valley, large areas of native habitat remained, including some dense subtropical forest lining the Rio Grande river, where Avery found several species of shade-loving skipper species for new US records, and even saw (but could not collect) the only blue morpho (probably Morpho peleides Kollar) ever reported north of the Mexican border (ref. 44, also Stallings & Turner 1946). Indeed, since 1948, no single person has contributed such a wealth of new information on the butterflies of south Texas.

In 1948, Avery was offered a job at the Southern Methodist University, and the Freeman’s moved back to the Dallas area. From 1948 to 1951, Avery worked as a biology instructor at SMU. From 1951 to 1955, Avery taught chemistry at Forest Avenue High School in Dallas, and from 1954 to his retirement in 1981, he taught biology and chemistry at Hillcrest High School in Dallas. He was honored as Teacher of the Year at Hillcrest in 1963. During this long teaching career, when not busy with family activities, Avery worked in the evenings, and on rainy weekends, writing up the results of his research on Lepidoptera for publication.

In 1943, Avery published his first paper on Megathythus Scudder (ref. 10), which was followed over the next 23 years by 18 additional publications on the Megathymini, naming 3 genera, 14 species, 7 subspecies, and one form. These publications laid the foundation upon which all subsequent studies on the Giant Skippers (or “Mega”) have been based. The excitement generated in the community of North American lepidopterists by Avery’s early publications on Megas cannot be overstated; lepidopterists were literally leaving their nets in the truck and going into the field with a shovel and knife (Remington 1961). Upon learning of Avery’s techniques for collecting and rearing immature, and reading about the various new species and subspecies he was describing from the southwestern United States and Mexico, the study of Giant Skippers became a serious interest of several lepidopterists, including (among others) Don B. Stallings and family, J. B. Turner and family, Charles L. Remington and family, C. F. Harbison, R. S. Wielgus and family, and Kilian Roever. By the time he started working with Megas, Avery had developed a close relationship with Don Stallings and J. B. Turner, of Caldwell, Kansas, as evidenced by the naming of his first two new Megathymini taxa, in 1943, after Don Stallings’ son, Don B. (Doe) Stallings, Jr. (ref. 10). Indeed, one of the first new butterfly taxa described by Stallings and Turner, Neonympha gemma freemani, was named to honor Avery (Stallings & Turner 1947). While Avery never comanaged scientific papers with the Stallings and Turner clan, they clearly discussed Megas on a frequent basis and kept up a regular and cordial correspondence as evidenced by archived correspondence, at the CMNH. Avery is mentioned and gratefully acknowledged in essentially every paper published by Stallings and Turner and colleagues (see Huber 1990 for a nearly complete list of publications by D. Stallings and coauthors). Avery, the Stallings, and the Turners’ described as separate species the various allopatric populations of Megathythus or (after 1859) Agathymus that they found on different Agave species, when coupled with morphological differences. In 1999, Avery published his last paper on Megas, an exhaustive review of the entire group, where a total of 48 species of Megas were recognized, in 5 genera; 32 of these were Agathymus, and 20 of these Agathymus species were residents of the United States (ref. 76). Shortly afterward, Avery donated his entire collection of Megas to the AMNH (Rindge 1970). In 1977, Roever treated the North American complex of Agathymus taxa as 10 geographically and ecologically variable species, and that arrangement has been generally followed since, despite little or no actual justification for the nomenclatural changes made. The question of relationships between these taxa requires a careful re-
examination, including a phylogeographic study using morphological and molecular character data.

Throughout Avery’s career as a teacher from 1938 to 1961, he spent his summers collecting extensively over Arkansas, Texas, New Mexico, Arizona, and Mexico (e.g., ref. 44). He made 34 collecting trips to Mexico, mostly funded by grants from the Carnegie Institute, United States National Science Foundation, American Philosophical Society and the National Geographic Society. During these travels, Avery amassed what is undoubtedly the largest and most complete and important single collection of Mexican Hesperididae ever assembled. He made frequent trips to the Hotel Cowanodo, south of Ciudad Valles, San Luis Potosí, to play golf and collect butterflies around the golf course that was literally carved out of the jungle. These trips clearly had a lasting impression on Avery, for he named a new skipper, Poanes benito, after Benito Reyes, one of his favorite caddies at Hotel Cowanodo (ref. 96), and named several other new species after various close friends in Ciudad Valles (refs. 77, 84, 93, 96). Avery published 27 papers dealing primarily with Mexican Hesperididae, in which he described 60 new species, one new subspecies, and two new genera. Between 1949 and about 1960, Avery was the only researcher seriously studying the Mexican fauna of Hesperididae. He purchased hundreds of specimens from Eduardo C. Wellnig, and named a new species, Thoem wellning, after his long-time friend and fellow collector (ref. 74).

During this period, Avery also acquired Mexican skipper specimens from various other individuals, naming new species after each of them, including Robert Wind, Peter Hultbl, Don Stallings, Tariaco Escalante, Kent Wilson, and Wilbur McAlpine.

In 1950, Avery sent reprints of his papers on Mexican Hesperididae to Kikumaro Okano, of Mishima City, Japan. This act served as an introduction to the study of Mexican Hesperididae for Japanese readers, once Okano (1981, 1982) published summaries of Freeman’s research and descriptions. Okano’s 1981 paper included a listing of all Mexican skipper species known at that time, from literature reports, listing bibliographic citations and type localities for essentially all included species. Freeman’s name appears on almost every page of this report. Okano’s 1982 paper was dedicated almost entirely to Freeman’s publications, as it reproduced (in English) the original descriptions of 61 of Avery’s new skipper species described from Mexico, as well as copies of the illustrations of genitalia provided in Avery’s original publications.

Avery was a charter member of The Lepidopterists’ Society, and was a regional coordinator of the Annual Season Summary for 32 consecutive years, from 1951 to 1983 (Stanford 2001, 2002). No Season Summaries were published from 1953 to 1958, but an unpublished report for 1954 was found in Avery’s files (archived at the CMNH), with reports by himself (from Texas), William Howse (from Kansas), Don B. Stallings (from Kansas and Texas), J. R. Turner (Texas), W. J. Reinthal (Texas) and Lowell Hubricht (Texas). A copy of Avery’s unpublished 1953 report may exist in C. L. Remington’s files (records were contributed by William Howse and Edward Wellnig, at least); it is unknown if Avery prepared reports between 1955 and 1958. Avery contributed records to the Season Summaries every year the reports appeared between 1947 and 1986 (a total of 43 years), as well as during 1953 and 1954 (at least) when no Summaries appeared. He served on the editorial committee of the News from 1939 to at least 1977, was a member-at-large of the Executive Council from 1962-1964, was the Society’s 1st Vice President in 1971, and Vice President in 1972 (Kendall 1977).

From an early age, Avery was a prolific correspondent. He was never bashful about seeking determinations on his collected material from experts, for example J. F. G. Clarke, Ernest L. Bell, Arthur W. Lindsey, R. C. Williams, W. H. Evans, E. Murray-Aaron and F. M. Brown for his early studies. Ernest Bell, of the AMNH, was an especially important mentor to Avery, a fact evident by the name Avery chose for the first undescribed species of skipper he discovered and named in 1941: Amphicryptes bell (ref. 5). A large percentage of Avery’s collections were built through specimen exchanges with his many friends and colleagues; indeed his collections were more diverse than most institutional collections. Some, but certainly not all, of the individuals who corresponded with Avery about Hesperididae, or provided specimens of Hesperididae for Avery’s collections (either directly or indirectly) include the following: Arthur C. Allyn, Paul H. Arnaud, Jr., Andrew Atkins, George T. Austin, James Baker, David L. Baus, Dean Berry, T. B. Blevins, James P. Brock, Auburn E. Brower, Otto Buechholz, John M. Burns, John V. Callion, Sergio Carvillo, Steven J. Cary, Franklin H. Chernock, F. E. Church, Dale Clark, William Conen, Ken Davenport, Jack Dennis, Philip J. DeVries, E. A. Dodge, Julian P. Donahue, Cyril F. dos Passos, Malcolm Douglas, John C. Downey, Joseph F. Doyle, III, Bastiaan M. Drees, T. M. Dunkle, James Donald Eliff, Tariaco Escalante, Clifford D. Ferris, R. J. Fitch, Don P. Frohlich, Victor H. & Albert C. Frederick, Alina Garcia, A. Garcia, H. A. Gibbon, Carl W. Gottschalk, Nancy Greig, Lionel Paul Grey, John E. Hafernik, F. Hainbuch, Charles P. Hafstrom, Cluret Harp, Victor Helmbold, E. Herroz, John R. Heppner, Carlos C. Hoffmann, William H. Howe, H. A. Howland, 

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Avery worked closely with Roy O. Kendall of San Antonio, Texas, for several years, researching the Papilionidae and Hesperidae of Texas. The two of them published a list of Texas butterflies together in 1963 (ref. 51), and exchanged much correspondence on the Texas fauna. Avery agreed to prepare genitalia drawings of all Texas Hesperidae for Roy Kendall’s massive project on the butterflies of Texas, which were completed in 1986, however, these drawings have not yet been published.


While Avery’s passion with Catocala was intense, it was not permanent, since the relationship he formed with John Kenmer would eventually lead him back into the study of Mexican skippers. After several years of collecting in North America, mostly Texas and Florida, Kenmer started making collecting trips into Mexico, and by 1987, had located several very productive sites in Oaxaca State. At one of these sites, ca. 5 miles north of Oaxaca City on Hwy. 175, Kenmer found an unusual suite of skippers that proved to be of major interest to Avery. Among this lot were several species of Peruna Evans, including two undescribed species. After reviewing this material, Avery “officially” returned to studying skippers, initiated a large project revisiting the genus Peruna, and started borrowing all the holotypes and other Peruna specimens that he could locate. A short time later, Avery donated his entire collection of Catocala to the AMNH. In 1990, Avery named the first of these two new species Peruna kenmerti (ref. 100), after his good friend and colleague. This not only provided additional stimulation to fuel Kenmer’s collecting efforts, but also irreversibly cemented Avery’s return to skipper study. While Avery only described a total of 4 new taxa discovered by Kenmer, he initially identified and spread many other new skipper taxa discovered by Kenmer before forwarding these to his colleagues for subsequent description (e.g. Burns 1992b, 1994, Steinhauser 1991, 1996, Steinhauser & Warren 2002), though not all of these have yet been formally described. Avery was an inspiration to
Kenner, and Kenner was an inspiration to Avery—threw made a perfect team. While Kenner was selling specimens to various collectors to cover the costs of his collecting activities, he never charged Avery a cent for all the skippers he gave him to Kenner, obtaining species determinations and knowledge of his new discoveries was compensation enough. Through material donated to Avery by Kenner, Jim Brock, Michael J. Smith and Douglas D. Mullens, Avery also returned to the study of one of his long-time favorite genera, Amblycirtres (refs. 5, 8, 54), and described two new taxa of Amblycirtres initially discovered by Brock (refs. 109, 110).

Illegal collecting eventually caught up with Kenner, once the U.S. Fish and Wildlife Service learned that his Mexican material was being collected and sold without necessary permits. On August 14, 1991, Special Agents for the Fish and Wildlife Service arrived at Avery’s home and confiscated all 1796 Mexican specimens collected by Kenner in Avery’s possession. These specimens were subsequently deposited in the CMNH in April, 1996. This event ended the collaboration that Avery and Kenner had developed, and dealt a devastating blow to both of them, although they maintained a regular correspondence until Avery’s passing.

For Avery, the loss of Kenner’s collaboration was indeed discouraging, but he was still being inundated with skipper specimens for determination. From August 1989 until 1998, Avery determined large lots of specimens for the CMNH, at the request of Dr. John Rawlins, Curator of Invertebrates. Between August 1989 and January 1998, Avery determined over 7000 specimens of Hesperidae for the CMNH, and in recognition of his contributions, he was appointed as Research Associate in 1991. Most specimens of Neartic and Neotropical skippers in the CMNH bear Avery’s determinations label. The CMNH material kept Avery busy dissecting, determining, labeling, listing and writing; without having to leave Garland. Avery returned the last batch of specimens to the CMNH in 1998, when, due to failing health, he felt he was no longer able to work with the material.

In conclusion, Avery Freeman contributed to the study of Lepidoptera in every possible manner. He collected and reused scientific specimens now available to future generations in museums. Avery furthered the science by publishing new methods for collecting and rearing skippers. He wrote prolifically about new faunas and species. He also inspired a new generation of skipper workers through his work and correspondence. An active member of the Lepidopterists’ Society, Avery embodied fully the enthusiasm of the amateur and the careful work of the professional. He will be missed, but will never forgetted for all his contributions.

Collections
Megathyridae: Collection of 2235 specimens to AMNH before August 1976; see Bridle (1976).

Mexican Hesperidida: Entire collection of several thousand specimens mailed to AMNH in March, arrived at AMNH in April, 1951, completely curated into AMNH collections by August 1951 (ref. 104). Material acquired after about 1977, mostly from John Kenner, deposited at the FSAMC (at least 56 specimens), CMNH (roughly 1900 specimens deposited by August 1956) and USNM (at least 225 specimens, including several from north of Mexico).

North American Hesperidida: Several thousand specimens to A. Warren in June 1996; the remaining several thousand to the CMNH in 2000.

Lyceridae and Biodiades: Donated 1453 specimens of Mexican Lyceridae and Biodiades to CMNH before November, 1972, on several occasions: 1st and 2nd lots in August 1963, 5th lot in September 1966, 4th lot in January 1979, 4th lot in December 1979. Donated all remaining 1453 adult and immatur specimens, including complete holdings of North American taxa, to the CMNH on December 31, 1972. Lots of donated specimens were compiled by H. K. Church for each lot and sent to Freeman; these are archived at the CMNH.

Catocala: Donated 2675 specimens to AMNH in November, 1960, entirely curated into AMNH collection by November 1972 (ref. 111).

Avery also donated various Hesperididae specimens to Michigan State University (in November 1965), the USNM (at least 225 specimens on various occasions including April 1988, May 1988, September 1989, December 1988, September 1990, December 1990, February 1990, June 1991, January 1992, February 1992, July 1992 and various holotypes (as stated in their original descriptions), and other specimens to the FSAMC. As noted in ref. 7, Freeman holotypes that were said to have been deposited in the USNM in ref. 77 are actually at the AMNH.

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