Note to Readers

Dr. Vagn Flyger, Professor Emeritus, University of Maryland, was a recognized authority on tree squirrels. In the late 1970s, he completed a manuscript on a squirrel bibliography he intended to publish. A publisher was never secured and the manuscript set on the shelf. Shortly before his death in 2006, Vagn gave me a number of books and other materials from his personal library. Among those items was his unpublished squirrel bibliography. Although some 40 years have now passed, it seems to me the typescript bibliography may be useful to student and other researchers working on tree squirrels. Vagn was confident that the bibliography was quite complete to 1975.

Vagn was a long-time Board Member of the Urban Wildlife Research Center. Although his manuscript was not officially published by the Center, I think this website is a fitting place to distribute it. If you are interested in squirrels, I hope it is useful to you.

Lowell Adams Columbia, Maryland April, 2015

An annotated bibliography on the tree squirrels (Sciurus and Tamiasciurus)

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Preface

An early version of this bibliography was assembled and distributed in 1951 in the mimeographed Quarterly Report (Vol. 13, No. 4) of the Pennsylvania Cooperative Wildlife Research Unit. This current version has herein been expanded and updated and should serve as a key to the literature on the tree squirrels (*Sciurus* and *Tamiasciurus*).

A concerted effort has been made over the past 25 years to make this bibliography as complete as possible. I have religiously perused Biological Abstracts, Wildlife Review, The Zoological Record, Recent Literature listings of The Journal of Mammalogy, Forestry Abstracts, and others. In addition, the literature citations in papers on squirrels have been combed and three computerized library searches have been made. These references have been carefully checked to make them as accurate as possible.

A large majority of these papers have been read and a portion annotated. Russian references have been both difficult to find and difficult to abstract; for this reason, many of them have been omitted. Most articles on hunting have been excluded because of their lack of scientific value. For purposes of convenience, the contents of the papers have been indexed; abbreviations refer to scientific names of squirrel species.

Work on bibliographies of this type can continue ad infinitum and so a cut-off date of 1975 was established (a few post-1975 references are included). As I plan an updated version in the future, I would be very appreciative if users would send suggestions and notifications of omissions or errors.

I am grateful to Mrs. Norma Gordon and Miss Mildred Donohue of the McKeldin Library, University of Maryland, for their help in locating and finding references, advice on conducting the work, and aid in editing and checking accuracies. Mrs. Barbara Brown typed two complete versions and my wife, Beverly, served as an invaluable general assistant.

Vagn Flyger University of Maryland College Park, MD 20742 December 1977

ABUNDANCE

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Abbott, 1868 (Sc, Sn, Th)
   Abbott, 1885 (Th)
Allen, 1869 (Sc, Sn)
   Allen, 1871 (Sc)
   Anon, 1951 (Sv)
   Bailey, 1932 (Sab)
   Blomquist, 1879 (Sv)
   Goldman, 1928 (Sk)
- Hibbard, 1956 (Sc, Sn)
Hicks, 1938 (Sc, Sn)
   Klugh, 1927 (Th)
   Krull, 1970 (Th)
  Landon, 1941 (Sc, Th) Sm
   Longley, 1963 (Sc, 30)
   Middleton, 1929 (Sv)
Nixon, 1967 (Sc, Sn)
Preno & Labisky, 1971 (Sc, Sn)
   Saunders, 1932 (Sc)
   Spärck, 1936 (Sv)
 Wolf & Roest, 1971 (Sn)
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ACANTHOCEPHELA

Davidson, 1976 (Sc) Perry, 1941 (Sn)

ACARINA

Ah, 1964 (Sv) Lavoipierre, 1964 (TS) Parker, 1968 (Sc) Redington & Jachowski, 1971 (Sc) Redington & Jachowski, 1972 (Sc) Richards, 1950 (Sc) Twigg, 1966 (Sc) Whitaker & Wilson, 1974 (Sc, Sab, Th, Sg, Sn, Td)

ACTIVITY PERIODS

Clarkson & Ferguson, 1969 (Th) Dice, 1921 (Th) Ferron, 1976 (Th) Fox, 1939 (Th) Grodzinski, 1971 (Th) Hall, 1972 (Sk) Hamilton, 1939 (Th) Hediger, 1945 (Sv)

_Hicks, 1942 (Sn) _ Hicks, 1947 (Sn) , Hicks, 1949 (Sn) Hougart, 1974 (Sc) Ingeles, 1947 (Sg) Keith, 1956 (Sab) Keith, 1965 (Sab) Klugh, 1918 (Th) Klugh, 1927 (Th) Kramm, 1973 (Th) Kramm, 1975 (Th) Lampio, 1967 (Sv) McCloskey & Vohs, 1966 (Sn) Middleton, 1930 (Sc) Pulliainen, 1973 (Sv) Smith, 1965 (Td, Th) Smith, 1968 (Td, Th)

AGE DETERMINATION

Allen, 1943 (Sn) Barrier & Barkalow, 1967 (Sc) **Beale**, 1962 (Sn) "Brown & Yeager, 1945 (Sn) Carson, 1961 (Sc, Sn) Davis, 1969 (Th) Caris & Seaknder (1971) Degn, 1973 (Sv) Fisher & Perry, 1970 (Sc) "Hoffman & Kirkpatrick, 1956 (Sn, Sc) Karpukkin & Karpukkina, 1971 (Sv) Kiris, 1937 (Sv) Kirkpatrick & Barnett, 1957 (Sc) Lemnell, 1973 (Sv) Naumov, 1934a (Sv) Petrides, 1951 (Sc) Ratcliff, 1974 (Sk) Sharp, 1958 (Sc) Uhlig, 1955c (Sc)

AGE RATIOS

Allen, 1942 (Sn)
Allen, 1943 (Sn)
Allison, 1953 (Sc)
Bertram & Gault, 1952 (Sc, Sn)
Brown, 1971 (Sab)
Brown & McGuire, 1975 (Sau)
Brown & Yeager, 1945 (Sc)
Chapman, 1938a (Sc)

Colin, 1957 (Sc) Davis & Sealander, 1971 (Th) Degn, 1973 (Sv) > Donohoe, 1961 (Sc, Sn) Donohoe, 1965 (Sc, Sn) Farentinos, 1972 (Sab) Hamilton, 1969 (Sc) Jordan, 1971 (Sn) Keith, 1956 (Sab) Kemp & Keith, 1970 (Th) Kidd, 1955 (TS) Kline, 1965 (Sc, Sn) Layne, 1954b (Th) - Marsh, 1951 (Sc, Sn) McCloskey & Vohs, 1966 (Sn) - Moulton & Thompson, 1971 (Sc, Sn) Naumov, 1934a (Sv) Nixon, 1965 (Sc, Sn) Nixon, et. al., 1974 (Sn) Sanderson, 1954 (TS) Uhlig, 1952 (Sc) Uhlig, 1957 (Sc)

ALBINISM Adams 1973(TH) Allow 1898 Baker, 1951 (Sc) Balcells & Palaus, 1955 (Sv) Baldwin, 1969 (Sc)_Bangs (594(Th)) Barrett-Hamilton, 1910 (Sv) Bartholomew, 1933 (Sc) Baumgartner, 1943b (Sn) Black, 1936 (Sc) Collett, 1907 (Sv) Collett, 1911 (Sv)_ Finch (1970) (Sg) Kemmerer, 1968 (Sc) Klugh, 1927 (Th) Lindsey, et. al, 1969 (Sc) Loftin, 1970 (Sc) McClung, 1951 (Sc) Moore, 1956 (Sn) Parker, 1939 (Sc) Pitt, 1948 (Sc) Read, 1949 (Sc) Schantz, 1929 (Sc) Schreitmüller, 1953 (Sv) Serebrennikov, 1931 (Sv) Strecker, 1928 (Sn) Watt, 1923 (Sc) Wood, 1965 (Th)

ALOPECIA

Emmons, et. al., 1974 (Sc)

ANATOMY: CELLS

Schaefer, 1973 (Sv)

ANATOMY: COMPARATIVE

Bryant, 1945 (TS)

ANATOMY: DIGESTIVE TRACT

Gorgas, 1967 (TS) Howell, 1925 (Sc) Torcea, 1973 (Sv)

ANATOMY: ENDOCRINE SYSTEM

Delost & Guerin, 1962 (Sv) Fayet & Delost, 1963 (Sv) Torcea, 1973 (Sv)

ANATOMY: EYE

Abplanalp, 1970 Abplanalp, 1974 Anderson & Fisher, 1975 (Sg, Sc) Cohen, 1964 (Sc) Cooper & Robson, 1966 (Sc) Cooper & Robson, 1969 (Sc) Gouras, 1964 (Sc) Loew, 1975 (Sc) Merker, 1928 (Sv) van Heyningen, 1973 (Sc) Walls, 1931 (Sc, Sn, Th) West & Dowling, 1975 (Sc)

ANATOMY: GENERAL

Brown & Martan, 1972 (TS) Brown & Yeager, 1945 (Sn) Bugge, 1971 (Sv, Th) Delost, 1965 (Sv) Dobroruka, 1960 (Sv) Figulla, 1933 (TS) Kirkpatrick, 1955 (Sn) Loewenstein, 1938 (Sv) Nadler & Sutton, 1967 (Sn, Sv, Sg, Sab) Quay, 1965 (Th) Smith, 1965 (Th, Td) Smith, 1970 (Th, Td) Voipio & Hissa, 1970 (Sv)

ANATOMY: MOUTH

Schumacher, 1924 (Sv)

ANATOMY : MUSCLE

Arlamowski-Palider & Zablocki, 1972 (Sv) Bohmann, 1939 (Sv) Hoffman & Weyenbergh, 1870 (Sv) Meinertz, 1942 (Sv) Parsons, 1894 (TS)

ANATOMY: NERVOUS SYSTEM

Delost, 1962 (Sv) Diamond, 1970 (Sc) Hall, et. al., 1971 (Sc) Harting, et. al., 1974 (Sc) Iolieva, 1973 (Sv) Kaas, et. al., 1972 (Sc) Kaas, et. al., 1973 (Sc) Kaas, et. al., 1974 (Sc) Killackey, 1973 (Sc) Lane, et. al., 1971 (Sc) Lobko, 1972 (Sv) Mass, 1973 (Sv) Mass, 1976 (Sv) Robson & Hall, 1974 (Sc) Robson & Hall, 1975a (Sc) Robson & Hall, 1975b (Sc) Robson & Hall, 1976 (Sc) Schober & Brauer, 1968 (Sv) Tigges, 1970 (Sc) Woolsey, et. al., 1975 (Sc)

ANATOMY: NOSE

Hill, 1948a (TS) Hill, 1948b (TS) ANATOMY: REPRODUCTIVE TRACT

Allanson, 1933 (Sc) Barnstein & Mossman, 1938 (Th) Bauer & Dusing, 1961 (Sc) Grosz, 1905 (Sv) -Hoffman, 1952 (Sc, Sn) _ Hoffman & Kirkpatrick, 1956 (Sc, Sn) Kirkpatrick, 1955 (Sn) Koller, 1936 (Sc) Krölling, 1921 (Sv) Layne, 1952 (Th) Layne, 1954a (Th) Layne, 1954b (Th) 🗩 Martan, et. al., 1970 (Sc, Sn) -Martan & Brown, 1971 (Sc, Sn) Mossman, 1933a (TS) Mossman, 1940 (TS) Mossman, et. al., 1932 (Sc, Sv, Sn, Th) Mossman, et. al., 1933 (Sc) Mossman, et. al., 1955 (Sc, Sn) Newell & Kirkpatrick, 1968 (Sc) Pousarques, 1893 (Sv) Pudney, 1968 (Sc) Pudney, 1976 (Sc)

ANATOMY: SKELETAL & TEETH

Barrett-Hamilton, 1910 (Sv) Bohmann, 1939 (Sv) Didier, 1952 (Sn, Sv) Emmel, 1938 (Sv) Halse, 1974 (Sv) Hoffman & Weyenbergh, 1870 (Sv) Mozgovoi, 1971a (Sv) Mozgovoi, 1971a (Sv) Nellis, 1969 (Th) Peterka, 1937 (Sn) Sierts, 1950 (Sv) Stoner, 1918 (Sn) Virkki, 1953a (Sv) Virkki, 1953b (Sv) Wade & Gilbert, 1940 (TS)

ANOMALIES

Bowers & Kirkland, 1968 (Sn) Breckenridge, 1947 (Sc) Degn, 1974 (Sv) Dunaway, 1969 (Sc) Emmons, et. al., 1974 (Sc) Goerz & Tubbs, 1967 (Sc)

ANOPLURA

Harkema, 1936 (Sc) Kim, 1966 (Sc, Th)

ANTING

Bagg, 1952 (Sc) Hauser, 1964 (Sc)

ARCHAEOLOGY

Gilmore, 1946 (Sc, Sn)

ASCARIS

Davidson, 1976 (Sc) Schueler, 1973 (Sgt) Tiner, 1951 (TS)

BARK PEELING

Øremmernan 1954 (Sc, Sn) Berwin, 1974 (Sc) Davidson & Adams, 1973 (Sc) Gooden, 1961 (Sc) Longley, 1959 (Sc) Waggoner, 1946 (Sc) Zwahlen, 1975 (Sv)

BEHAVIOR: DEVELOPMENTAL

Anon, 1947 (Sc) Bakken, 1959 (Sc) Hailman, 1960 (Sc) Horwitz (1972) 5c. Layne, 1954b (Th) Lind, 1961 (Sv) Nice, et. al., 1956 (Th) Smith, 1947 (Sc)

BEHAVIOR: FEEDING

Allan, 1935 (Sc) Bailey, 1932 (Sab, Td)

Baker, 1944 (Sc, Sn) Bechthold, 1933 (Sv) Becker, 1934 (Sv) Cahalane, 1930 (Sn) Cahalane, 1942 (Sn) Caton, 1879 (Th) Clarke, 1939 (Th) Cram, 1924 (Th) Degn, 1974 (Sv) Dennis, 1930 (Sc) Dice, 1921 (Th) Dice, 1927 (Sc) Eibl-Eibesfeldt, 1951 (Sv) Eibl-Eibesfeldt, 1957 (Sv) Elliott, 1974 (Th) Geiler, 1956 (Sv) Hall, 1967 (Sk) Hanson & Weigl, 1975 (Th) Hayward, 1940 (Th) Jensen, 1946 (Sv) Keith, 1956 (Sab) Klugh, 1918 (Th) Klugh, 1927 (Th) Little, 1934 (Sg) Lloyd, 1968 (Sc) Long, 1940 (Td) Mailliard, 1931 (Td) Millais, 1905 (Sv) Mollenhauer, 1939 (Th) Moore, 1957 (Sn) Nice, et. al., 1956 (Th) Shaw, 1936 (Th) Smith & Follmer, 1972 (Sn, Sc) Streubel, 1968 (Th) Terres, 1939 (Sc) White, 1789 (Sv) Yeager, 1937 (Th)

BEHAVIOR: GENERAL

Abbott & Belig, 1961 (Th) Allen, 1942 (Sn) Allen, 1943 (Sn) Allen, 1957 (Sc, Sn) Applegate & McCord, 1974 (Sn) Bagg, 1952 (Sc) Bakken, 1944 (Sc, Sn) Bakken, 1959 (Sc) Brown & McGuire, 1975 (Sau) Clarkson & Ferguson, 1972 (Th) Dippner & Armington, 1971 (Th)

Dozier & Hall, 1944 (TS) Ferron, 1974 (Th) Ferron, 1975 (Th) Ferron, 1976 (Th) Fischer, 1877 (Sva) Frank, 1952 (Sv) Gewalt, 1957 (Sv) Harris, 1944b (Th) Hartley, 1930 (Sc) Hatt, 1927 (Sc) Hill, 1942 (Sab, Td) Horwich, 1972 (Sc) Jacobs & Birch, 1975 (Sq) Klugh, 1918 (Th) Klugh, 1927 (Th) Kramm, 1975 (Th) Long, 1940 (Td) McClelland, 1948 (Sc) McCloskey, 1976 (Sn) Millais, 1905 (Sv) Moore, 1957 (Sn) Packard, 1954a (Sn) Rush, 1970 (Th) Sharp, 1959 (Sc) Shaw, 1936 (Th) Smith, 1968 (Th, Td) Stains, 1963 (Sn) Thompson, 1976 (Sc) Tinsley, 1972 (Sn) Vianden, 1952 (Sv) Yoakum, 1902 (TS) Zelley, 1971 (Sn)

BEHAVIOR: INTER-SPECIFIC

Ackerman & Weigl, 1970 (Th, Sc) Anon, 1948b (Sc) Bailey, 1932 (Sab) Bakken, 1952 (Sc, Sn) Boyer, 1943 (Td) Brown & McGuire, 1975 (Sau) Chapman, 1944 (Sc) Engelhart, 1955 (Sv) Hatt, 1943 (16) Henshaw, 1970 (Th) Horwich, 1972 (Sc) Ingram, 1940 (Th) Jackson, 1935 (Th) Kilham, 1958 (Th) Klugh, 1918 (Th) Klugh, 1927 (Th) Moore, 1941 (Sc) Moore, 1968 (Sc, Sn)

Preston, 1948 (Sc, Th) Rathke & Poole, 1974 (Sab) Schaack, 1967 (Sv) Stefanski & Falls, 1972 (Th) Stinetorf, 1969 (TS)

BEHAVIOR: INTRASPECIFIC

Ackerman & Weigl, 1970 (Sc, Th) - Bakken, 1952 (Sc, Sn) Bakken, 1959 (Sc) Horwich, 1972 (Sc) Ross, 1930 (Sg) Smith, 1963 (Th) Taylor, 1968 (Sc)

BEHAVIOR: MATERNAL

Bakken, 1959 (Sc)
Grange, 1928 (Th)
Ispolatov, 1907 (Sv)
Lang, 1925 (Sc, Sn, Sv)
Nixon, et. al., 1968a (Sc)
Packard, 1954a (Sc, Sn)
Russell, 1967 (Sc)
Snyder, 1923 (Sc)
Thompson, 1976a (Sc)
Williams, 1923 (Sc)

BEHAVIOR: NEST BUILDING

Shorten, 1951 (Sc) Veager, 1936 (Sn)

BEHAVIOR: REPRODUCTIVE

Baker, 1944 (Sc, Sn) Bakken, 1959 (Sc)
Brown & Yeager, 1945 (Sn) Farentinos, 1971 (Sab) Ingles, 1947 (Sg) Keith, 1956 (Sab)
Moore, 1968 (Sc, Sn) Shorten, 1951 (Sc) Smith, 1965 (Th, Td) Smith, 1968 (Th, Td)

BEHAVIOR: SOCIAL

- Adams, 1974 (Sn) -Bakken, 1952 (Sc, Sn) Bakken, 1959 (Sc) Burt, 1943 (Th) Clarke, 1939 (Th) Eibl-Eibesfeldt, 1951 (Sv) Farentinos, 1971 (Sab) Flyger, 1954 (Sc) Flyger, 1955 (Sc) Gordon, 1936 (Td) Hamilton, 1939 Horwich, 1972 (Sc) Keith, 1956 (Sab) Kenneth, 1936 (Td) Kilham, 1954b (Th) Layne, 1954b (Th) Mohr, 1965 (Th) - Moore, 1957 (Sn) Pack, 1966 (Sc) Pack, 1967 (Sc) Pack, et. al., 1967 (Sc) Preston, 1948 (Sc, Th) Smith, 1965 (Td) Soper, 1942 (Th) Taylor, 1966 (Sc) Taylor, 1968 (Sc)

BEHAVIOR: TERRITORIAL

Smith, 1965 (Th, Td) Smith, 1968 (Th, Td)

BIOMASS

Grodzinski, 1971 (Th) Mohr, 1965 (Th)

BLOOD CHEMISTRY

Guthrie, et. al., 1966 (Sc) Hoff, et. al., 1976 (Sc) Levin & Flyger, 1973 (Sc, Sn) Skuhomlynov & Sukhomlynova, 1973 (Sv)

BOUNTIES

McClung, 1951 (Sc)

BROWN FAT

Aleksiuk, 1970 (Th) Aleksiuk, 1971 (Th) Rovetto & Ferguson, 1971 (Th)

BURROWING

Hatt, 1943 (Td) Klugh, 1918 (Th) Petrides, 1941 (Th)

CACHING

Bartholomew, 1933 (Sc) Collett, 1907 (Sv) Collett, 1911 (Sv) Finley, 1969 (Th) Gauckler, 1963 (Sv) Gordon, 1936 (Td) Habeck, 1960 (Sc) Hatt, 1943 (Td) Kilham, 1954b (Th) Klugh, 1918 (Th) Klugh, 1927 (Th) Page, 1956 (Sv) Rand, 1933 (Th) Seton, 1921 (Sc) Shaw, 1936 (Th, Td) Yeager, 1937 (Th)

CANNIBALISM

Thompson, 1976 (Sc)

CAPTIVITY

Anon, 1937 (TS) Anon, 1945b (TS) Anon, 1948a (TS) Barrett-Hamilton, 1910 (Sv) Baumgras, 1944 (Sn) Carhart, 1951 (Sn) Crandall, 1964 (Sc, Sn, Sv) Dodwell & Bessant, 1961 Durrell, 1969 (TS) Eibl-Eibesfeldt, 1951 (Sv) Fish & Wildlife Service, 1948 (TS)

Gewalt, 1952 (Sv) Hatt, 1929a (Th) Hatt, 1943 (Th) Kilham, 1953 (Sc) Klugh, 1927 (Th) Lang, 1925 (TS) Lund, 1962 (Sv) Meyer-Oehme, 1956 (Sv) - Moore, 1957 (Sn) Ross, 1930 (Sg. Td) Sanderson & Berry, 1973b (Sc) Shorten, 1951 (Sc) Snediger, 1963 (Sc, Sn, Th) Stachrovsky, 1932 (Sv) Storer, 1922 (Sg) Stott, 1954 (Sn) Svihla, 1930 (Th) -Svihla, 1931b (Sn) Thornburg, 1946 (Sab) White, 1789 (Sv)

CAPTURE

Harrison, 1970 (Gen)

CARRYING CAPACITY

Barkalow & Soots, 1965 (Sc)

CENSUS METHOD

- Baker, 1944 (Sc, Sn)

CESTODES

Cobbold, 1964 (TS) Davidson, 1976 (Sc) Dobrovsky & Harbough, 1934 (Th) Douthitt, 1915 (TS) Freeman, 1954 (TS) Hall, 1911 (Sc) Harkema, 1936 (Sc) Joseph, 1974 (Sc) Oldham, 1961 (Sc) Olexis, 1976 (Sc) Parker, 1968 (Sc) Rankin, 1946 (Sc) Schiller, 1959a, 1959b (Sc) Schwartz, 1928

CHIGGERS

Asanuma, 1957 (Sv) Goodrum, 1940 (Sc)

CHROMOSOMES

Nadler & Sutton, 1967 (Sc, Sn, Sab, Sg, Td) Nadler & Hoffman, 1970 (Th, Td, Sgt, San)

COAT COLOR

Allen, 1869 (Sc) Allen, 1871 (Sc) Allen, 1874 (TS) Allen, 1891 (Th) Anderson, 1940 (Sc) Armstrong, 1975 (Sab) Baille, 1931 (Th) Baldwin, 1969 (Sc) Barrett-Hamilton, 1899 (Sv) Barrett-Hamilton, 1910 (Sv) Barrier, 1967 (Sc) - Baumgartner, 1943b (Sn) Black, 1936 (Sc) Brown, 1965 (Sab) Brown & McGuire, 1975 (Sau) Cambridge, 1895 (Sv) Collett, 1907 (Sv) Creed & Sharp, 1958 (Sc) Dapson, 1963 (Th) Degn, 1974 (Sv) Hatt, 1943 (Td) Horjing, 1956 (Sv) 🛹 🎢 Landon, 1941 (Sc) Lühring, 1928 (Sv) Moore, 1956 (Sn) Morrison-Scott & Bishop, 1952 (Sc) Nelson, 1945 (Th) Parker, 1939 (Sc, Th) Pocock, 1907 (Sv) Ramey, 1973 (Sab) Ramey & Nash, 1976 (Sab) Ruckel, 1962 (Sc) Runge, 1957 (Sv) Saunders, 1932 (Sc) Serebrennikov, 1931 (Sv) Smith, 1965 (Th, Td)

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Smyshlyaev, 1972 (Sv)
Stubbs, 1923 (Sv)
Turner, 1974 (Th)
Voipio, 1957 (Sv)
Voipio, 1969 (Sv)
Voipio & Hissa, 1970 (Sv)
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COCCIDIA

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    Bertram & Gault, 1952 (Sc, Sn)
Davidson, 1976 (Sc)
Dorney, 1962 (Sc)
Dorney, 1963 (Th)
Dorney, 1968 (Sc)
    Dozier & Hall, 1944 (Sn)
Frante, et. al., 1976 (Sg, Td)
Joseph, 1973 (Sv)
Lampio, 1952 (Sv)
    McCloskey & Vohs, 1971 (Sn)
Moffitt, 1931 (Sg)
Nukorbaeva, 1972 (Sv)
Pellerdy, 1954 (Sv)
Prasad, 1960 (Sc)
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COLD ADAPTATION

Ferguson & Folk, 1971 (Th) Rovetto & Ferguson, 1971 (Th)

COLOR PHASES

Farentinos, 1972a (Sab) Kidd, 1954 (Sc, Sn) Shorten, 1951 (Sc) Voipio, 1970 (Sv)

COMMERCIAL VALUE

Finley, 1969 (TS)

COMPETITION

Lustig & Flyger, 1975 (Sc, Sn)
 Robinson & McT. Cowan, 1954 (Td)
 Walker, 1923 (Sn, Th)

CONTROL

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Anon, 1953b (Sc)

Anon, 1955 (Sc)

Cotterell, 1954 (Sc)

Middleton, 1929 (Sc)

Middleton, 1931 (Sc)

Rowe, 1968 (Sc)

Shorten, 1962 (Sc)

Taylor, 1963 (Sc)

Taylor, et. al., 1968 (Sc)

Taylor & Lloyd, 1970 (Sc)

Thompson & Peace, 1962 (Sc, Sv)
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CONTROL MEASURES

Anon, 1941a (TS) Anon, 1945a (TS) Eley, 1967 (TS) Jones, 1949 (TS) Jones, 1961 (TS) Ludeman, 1954 (TS) Rowe, 1973 (TS, Sc) Shorten, 1960 (TS) Squillace, 1953 (TS) Swainson, 1932 (TS) Taylor, 1920 (TS)

COOKING

Givens & Atkeson, 1949 Christiaen (

CUTEREBRA

Allison, 1953 (Sc) Chapman, 1938a (Sc) Colin, 1957 (Sc) Dury, 1898 (Sc) Hamilton, 1969 (Sc) Parker, 1968 (Sc) Seton, 1920 (Sc, Sn, Th) Jacobson et al, 1979 (Sc, Sn)

CYTOGENETICS

 Vorontsov & Liapunova, 1972 (Sc, Sn, Sg, Spe) DAMAGE & NUISANCE

Abbott, 1885 (Sc) Adams, 1955 (Th) -Allen, 1943 (Sn) Anon, 1951 (Sv) Anon, 1952 (TS) Anon, 1953a (Sc) Anon, 1953b (Sc) Anon, 1953d (Sc) Archibald, 1904 (Sv) Bailey, 1932 (Sab) Bailey, 1936 (Sg) Balch, 1942 (Th) Barrett-Hamilton, 1910 (Sc, Sv) Bartholomew, 1933 (Sc) Bowles, 1920 (Sg) Brand, 1951 (Sv) Brenneman, 1954 (Sc) Britton, 1902 (Sc) Britton, 1933 (Sc, Th) Caldwell & Caldwell, 1961 Cheviot, 1930 (Sc) Cheyney, 1929 (Th) Cook, 1954 (Th) Cotterell, 1954 (Sc) Coughlin, 1938 (Sab) Courtier, 1962 (Sc) Curtis, 1952 (Th) Davidson & Adams, 1973 (Sc) Doby & Boisseau-Lebreuil, 1971 (Sv) Dubock, 1975 (Sc) Dubos, 1959 (Sv) Eiberle & Zeigler, 1967 (Sv) Englehard & Bragonier, 1960 (Sc) Fitter, 1939 (Sc) Flyger, 1970 (Sc) Flyger, 1974 (Sc) Fritz, 1932 (Sg) Fritz, 1951 (TS) Goodrum, 1940 (Sc) Goodwin, 1934 (Sc) - Gunderson & Decker, 1942 (Sn) Gunter & Eleuterius, 1971 (Sc) Hart, 1936 (Th) Hatt, 1930 (Th) Hewson, 1953 (Sv) Hill, 1942 (Td, Sab) Himelick, et. al., 1953 (TS) -Himelick & Curl, 1955 (Sc, Sn) -Hoover & Yeager, 1953 (Sn) Hosley, 1928 (Th)

Howard & Wagon, 1951 (TS) Irving, et. al., 1956 (Sc) Irving & Beer, 1963 (Sc) Jones, 1949 (Sc, Sn, Th) Larsen & Schubert, 1970 (Sab) Laughlin, 1945 (Sc) Lavallee & Bard, 1973 (Th) Longley, 1963 (Sc) Lutz, 1956 (Th) MacNamara, 1943 (Th) McCulloch, 1937 (Th) McGuire & Brown, 1973 (Sau) Middleton, 1930 (Sc) Middleton, 1931 (Sc) Millais, 1905 (Sv) Mills, 1938 (Sc, Th) Moffat, 1938 (Sc) Mollenhauer, 1939 (Th) Moore, 1940 (Sg, Td) Morris, 1953 (Sc) Parker, 1949 (Sc) Pearce, 1947 (Sc, Th) Petersen, 1925 (Sv) Pike, 1934 (Th) Portal, 1942 (Sc) Pulling, 1924 (Th) Rasmussen, et. al., 1975 (🗫)(Sa) Reynolds, 1963 (Sab) Roe, 1948 (Th) Rowe, 1952 (Th) Saunders, 1932 (Th) Schantz-Hansen, 1945 (Th) Schmidt, 1964 (Sv) Schmidt, 1973 (Sv) Schmidt & Shearer, 1971 (Th) Schubert, 1953 (TS) Shadbolt, 1933 (Sc) Shearer & Schmidt, 1970 (Th) Shearer & Schmidt, 1971 (Th) Shigo, 1964 (Th) Shorten, 1946 (Sc, Sv) Shorten, 1957 (Sc, Sv) - storten 19596 Silver, 1924 (TS) aldour Smith; 1947 (Th) Squillace, 1953 (TS, Sab) Stevenson, 1938 (TS) Stillinger, 1944 (Th) Storer, 1875 (Th) Tackle, 1957 (Th) Tate, 1868 (Sv) Taylor & Lloyd, 1970 (Sc) Thompson, 1954 (Sc) Thompson, 1962 (Sc)

Topsell, 1967 (Sv) Von Turcek, 1959 (Sv) Waggoner, 1946 (Sc) Watt & StQuintin, 1924 (Sc, Sv) ~Wolf & Roest, 1971 (Sn) ~ Yeager, 1936 (Sn) Zaitsev, 1974 (Sv)

DECLINE

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Anon, 1951 (Sv)
Benham, 1953 (Sv)
Lang, 1950 (Sv)
Lloyd, et. al., 1962 (Sv)
Minckley, 1968 (Mn)(Sa)
Osborne, 1923 (Sc)
Redmond, 1951b (Sc)
Temperley, 1953 (Sv)
Tinsley, 1972 (Sn)
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DEFOLIATION

Deuber, 1934 (Sc)

DEFORMITIES

Layne, 1954b (Th)

DENS & NESTS

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Allen, 1943 (Sn)
Allison, 1953 (Sc)
Anon, 1958 (Sc)
Baumgartner, 1939 (Sn)
Berner & Gysel, 1967 (Sn)
Britnell, 1949 (Sc)
Brown & Yeager, 1945 (Sc)
Butterfield, 1962 (Sc)
Dalke, 1948 (TS)
Dustman, 1950 (Sn)
Gysel, 1961 (Sn)
Spittle, 1952 (Sc)
Turner, 1974 (Th)
Yeager, 1937 (Th)
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DENSITY

Amin, 1974 (Sc)

Barnes & Duncan, 1954 (Sc) Bartholomew, 1933 (Sc, Sv) Brown, 1971 (Sab) Brown & McGuire, 1975 (Sau) Brown & Yeager, 1945 (Sc, Sn) -Dennett & Kidd, 1960 (Sc, Sn) Dolbeer, 1973 (Th) "Goodrum, 1937a (Sc, Sn) Goodrum, 1935b (Sc, Sn) Grulich, et. al., 1967 (Sv) Irving & Beer, 1963 (Sc) Kemp & Keith, 1970 (Th) Layne, 1954 (Th) Montgomery, et. al., 1975 (Sc) - Moore, 1957 (Sn) - Moran, 1953 (Sn) Moulton & Thompson, 1971 (Sc) Nixon, et. al., 1974 (Sn) Payne, 1976 (Th) Sanderson & Berry, 1973 (Sc) Smith, 1968 (Th) - Texas, 1945 (Sn) Zirul & Fuller, 1970 (Th) DESCRIPTION 19 91 Allen, 1869 (Th) Allen, 1898 (Th, Td) Allen, 1902 (Sns) -Allen, 1942 (Sk, Sn) Alston, 1878 (Spu) Alvarez & Avina, 1963 (Sne, Spo, Sau, Sap) Anderson, 1941 (Th) museum and Anthony, 1928 (Gen) Bailey, 1932 (Sab) - Barkalow, 1954 (Sn) Barkalow, 1956 (Sn) Barrett-Hamilton, 1910 (Sv) Collett, 1911 (Sv) - Dozier & Hall, 1944 (Sn) Fischer, 1877 (Sva) Goldman, 1928 (Sk) Hall, 1946 (Td) Heinz & Storch, 1971 (San) -Kidd, 1954 (Sc, Sn) Lyon, 1936 (Sc, Sn) Middleton, 1930 (Sc) Millais, 1905 (Sv) - Moore, 1956 (Sn) - Moore, 1957 (Sn) Musser, 1967 (Sau)

Ramey & Nash, 1976 (Sab) Shorten, 1951 (Sc) Thornburg, 1946 (Sab) Toschi 1965(Su)

DEVELOPMENT

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Allen, 1942 (Sn)
Brown & Yeager, 1945 (Sc)
Eibl-Eibesfeldt, 1951 (Sv)
Fiserius, 1892 (Sv)
Frank, 1952 (Sv)
Hamilton, 1939 (Th)
Hoffman & Kirkpatrick, 1956 (Sc,
Sn)
Karpukhin & Karpuhkhina, 1972
(Sv)
Nixon, et. al., 1968a (Sc)
Svihla, 1930 (Th)
Svihla, 1931 (Sn)
Uhlig, 1955c (Sc)
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DIE-OFF

Ingles, 1947 (Sg)

DISEASE: BACTERIA

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Anon, 1947 (Td)
  Burroughs, et. al., 1945 (TS)
- Cleere & Mollohan, 1968 (Sn)
🖌 Davis, et. al., 1970 (Sc, Sn,
     Sv, Th)
Diesch, et. al., 1967 (Sn)
  Francis, 1934 (TS)
  Francis, 1937 (TS)
  Jellison & Parker, 1944 (TS)
Kirkwood, 1931 (Sn)
_ McKeever, et. al., 1958 (Sn)
  Morgan, 1949 (TS)
  Nakamura, 1950 (Sv)
  Olin, 1934 (Sv)
  Olin, 1942 (Sv)
  Oosting, 1939 (TS)
Shotts, et. al., 1975 (Sc, Sn)
  Surkov, et. al., 1972 (Sv)
  White, et. al., 1975 (Sc)
  Wobeser, 1969 (Sc)
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DISEASE: FUNGI

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Chernousova & Putiato, 1957 (Sv)
Davis, et. al., 1970 (Sv, TS)
Delamater, 1939 (TS)
Dowding, 1947 (Th)
Dvorak, 1965 (Th)
English, 1969 (Sc)
Horter, 1963 (Sv)
Lewis, et. al., 1975 (Sc)
Sauer, 1966 (Sc)
Shigo, 1964 (Th)
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DISEASE: GENERAL

Allen, 1938 (Sn)
Allen, 1942 (Sn)
Anon, 1951 (Sv)
Brown & Yeager, 1945 (Sn)
England, 1936 (Sc)
Lang, 1950 (Sv)
Middleton, 1929 (Sv)
Watt & StQuintin, 1924 (Sv)
Webb, 1970 (Sc)

DISEASE: PARASITES

Allen, 1942 (Sn) Goodrum, 1940 (Sc)

DISEASE: TETANUS

Wobeser, 1969 (Sc)

DISEASE: VIRUSES

Capel-Edwards, 1971 (Sc) Cappucci, et. al., 1972 (Sn) Davis, et. al., 1970 (Sc, Sg) Hoff, et. al., 1971 (Th) Kilham, 1954 (Sc) Kilham, et. al., 1953 (Sc) Kozuch, et. al., 1967 (Sv) Masterson, et. al., 1971 (Sc, Sn, Th) McLean, 1963 (Th) McLean, et. al., 1968 (Th) McLean, et. al., 1969 (Th) Moulton & Thompson, 1971 (Sc, Sn) Pantuwatana, et. al., 1972 (Sc) Smetana, et. al., 1966 (Sv) Vizoso, 1969 (Sv) Vizoso, et. al., 1964 (Sc, Sv) Vizoso & Hay, 1964 (Sc, Sv) White, et. al., 1975 (Sc)

DISTRIBUTION: AUSTRALIA ,454, Barrett, 1955 (Sc)

DISTRIBUTION: GENERAL

Abbott, 1868 (Sc, Sn, Th) Allen, 1869 (Sc, Sn) Allen, 1874 (TS) Allen, 1898 (Th, Td, TS) Allen, 1899 (Sn, Th, Sap, Sar, Sab, Sg, Td, Gen) Allen, 1902 (Sns) Allen, 1942 (Sn, Sk) Allen, 1943 (Sn) Alverez & Avina, 1963 (Sap, Sne, Sau, Spo) Anderson, 1940 (Sc, Th) Anderson, 1941 (Th) Anderson, 1962 (Sco) Anon, 1951b (Sng) Anthony, 1928 (Gen) Armstrong, 1972 (Sn, Th, Sab) - Bailey, 1923 (Sc, Sn, Th) Bailey, 1932 (Sar, Sab, Td) Bailey, 1936 (Th, Sg, Td) Bailey, 1936 (Th, Sg, Td) Bailey, 1946 (Th, Sc) Bailey, 1974 (Sc) Baker, 1951a (Th) Baker, 1951b (Sau) - Baker, 1956 (Sn, Sal) Barkalow, 1956 (Sn) Barrett-Hamilton, 1910 (Sc, Sv) Benham, 1953 (Sc, Sv) - Besadny, 1957 (Sn, Sc) Black, 1936 (Sc) - Blair, 1939 (Sc, Sn) Brown, 1965 (Sab) Brown, 1969 (Sau) Brown & McGuire, 1969 (Sau) Büchner, 1889 (Sv) Calinescu, 1958 (Sv) Collett, 1911 (Sv)

Corell & Marti, 1967 (Sv) Cotterell, 1954 (Sc) Cranbrook & Payne, 1965 (Sc, Sv) Davidson, 1968 (Sv) Davis, 1939 (Th) - De Vos, 1964 (Sc, Sn) Dice, 1921 (Th) - Dozier & Hall, 1944 (Sn) Durrant & Nelson, 1947 (Sab) Durrant & Hansen, 1954 (Th) - Engels, 1933 (Sc, Sn, TS) Evermann & Butler, 1894 (TS) Findley, 1960 (Sn) Goldman, 1928 (Sk) _ Goldman & Jackson, 1939 (Sc, Sn, Th) - Goodwin, 1932 (Sn) Hahn, 1909 (TS) Hall, 1946 (Td) 🗩 Hall & Kelson, 1952 (Sc, Sn, Sva) Hall & Kelson, 1959 (TS) - Hamilton, 1943 (Sc, Sn, Th) Hamilton, 1957 (Sn) Harper, 1932 (Th) Harris, 1947 (Sva) Harrison, 1922 (Sc) Hatt, 1930 (Sc) Hatt, 1959 (San) Haymond, 1870 (TS) Hazelwood, 1953 (Sc, Sv) Hewson, 1953 (Sv) - Hibbard, 1933 (Sc, Sn) - Hibbard, 1956 (Sc, Sn) -Hicks, 1938 (Sc, Sn) Hill, 1942 (Sab, Td) Hoffman & Kirkpatrick, 1959 (TS) Hoffmann, et. al., 1969 (Sc, Sn) Hooper, 1973 (Sc) Hoover & Yeager, 1953 (Sn) _Howell, 1919 (Sn) Howell, 1929 (Th) Howell, 1936 (Tre) Ingles, 1965 (Sc, Sn, Sg, Th, Td) Jackson, 1940 (Sc) Johnson, 1954 (Sg) "Jones, 1964 (Sn) Keith, 1956 (Sab) Keith, 1965 (Sab) Kellogg, 1937 (TS) -Kidd, 1954 (Sc, Sn) - Kolstoe, 1968 (Sn)

- Komarek, 1938 (Sc, Sn, Th) Köppen, 1882 (Sv) Ligon, 1927 (Sar, Sab, Td) Lloyd, et. al., 1962 (Sc, Sv) Long, 1970 (TS) Longhurst, 1940 (Sg) Lynch & Folk, 1968 (Th) Lyon, 1934 (Th) - Lyon, 1936 (Sc, Sn, Th, TS) - Mansueti, 1953 (Sn) Marshall, 1941 (Sn) - Martin & Preston, 1970 (Sn) <u>Maynard</u>, 1883 (Sc, Sn) McLean, 1926 (Sq) McPherson, 1971 (Sva) Michael, 1940 (Sg) Moffat, 1927 (Sv) - Moffat, 1938 (Sv, Sn) - Moore, 1946 (Sc, Sn) - Moore, 1954 (Sn) -Moore, 1956 (Sn) Morris, 1948 (Sc, Th) Mortenson, 1965 (Sv) Mozgovoi, 1971b (Sv) _ Mumford, 1969 (Sc, Sn, Th) Mursaloglu, 1973 (Sv) Musser, 1967 (Sau) -Necker & Hatfield, 1941 (Sc, Sn, Th) Nelson, 1890 (Sc, Sn, Th) Odum, 1949 (Sc, Th) Osgood, 1939 (Sc, Th) Paridiso, 1969 (TS) Parker, 1939 (Sc, Th) Patton, 1939 (Sc, Th) Paul & Quay, 1963 Pickens, 1928 (Sn, Sc) Poole, 1932 (TS) -Poole, 1944 (Sn) Pournelle, 1950 (Sn) Preble, 1942 (Sc, Sn, Th) Preston, 1948 (Sn) Racey, 1936 (Th) Ramey, 1971 (Sab) Rano, 1933 (Sc, Th) Richardson, 1954 (Sg) Richmond, 1949 (TS) Rhoades, 1903 (Sc, Sn, Th) _ Ruckel, 1963 (Sn, Sc) Saunders, 1932 (Sc, Sn, Th) Schultz, 1957 (Sc, Sn) Sherman, 1937 (Th) Sidororowicz, 1971 (Sv)

Soper, 1923 (Sc) Soper, 1942 (Th) Soper, 1946 (Sc, Th) Sowerby, 1921 (Sv) Spalding, 1966 (Sc, Sv) Spärck, 1936 (Sv) Squires, 1924 (Sc) Squires, 1946 (Sc) __Stone, 1907 (Sc, Sn, Th) Strecker, 1928 (Sc, Sn) Stubbs, 1923 (Sc) Swarth, 1921 (Th) Tate, 1868 (Sv) Taylor, 1947 (TS) Taylor, 1974 (Sn) - Taylor & Flyger, 1974 (Sn) Texas, 1946 (Sc, Sn) Thornburg, 1946 (Sab) Tufts, 1973 (Sc) - Turner, 1974 (Sn, Th) Van Rossem, 1936 (Sap) - Welter & Solberger, 1938 (Sn) Welter & Solberger, 1939 (Sc) Wharton, 1968 (Th) - Wolf & Roest, 1971 (Sn) - Wrigley, 1974 (Sc, Sn) - Wrigley, et. al., 1973 (Sc, Sn) - Yeager, 1959 (Sn) -Yocum, 1950 (Sn)

DISTRIBUTION: GREAT BRITAIN

Anon, 1930 (Sc) Anon, 1951 (Sv) Austin & Rolfe, 1938 (Sc) Barrett-Hamilton, 1910 (Sc, Sv) Bartholomew, 1933 (Sc) Benham, 1953 (Sc, Sv) Boothby, 1952 (Sc) Bowles, 1951 (Sc) Brown, 1881 (Sv) Colquhoun, 1951 (Sc) Corbet, 1974 (Sc) Cranbrook & Payn, 1965 (Sc) Day, 1948 (Sc) Dubock, 1975 (Sc) Fitter, 1939 (Sc, Sv) Fordham, 1952 (Sc) Grimshaw, 1931 (Sc) Harrell, 1951 (Sc) Harris, 1974 (Sc, Sv) Hazelwood, 1951 (Sc)

Herringshaw & Gosney, 1974 (Sc, Sv) Lang, 1948 (Sc, Sv) Lang, 1950 (Sc, Sv) Lloyd, 1962 (Sc, Sv) Middleton, 1931 (Sc) Middleton, 1932 (Sc) Middleton, 1935 (Sc) Millais, 1905 (Sv) Parsons & Middleton, 1937 (Sc) Pepperd, 1953 (Sc) Ritchie, 1923 (Sc) Robinson, 1974 (Sc, Sv) Shorten, 1946a (Sc, Sv) Shorten, 1946b (Sc, Sv) Shorten, 1953 (Sc, Sv) Shorten, 1957 (Sc, Sv) Taylor, 1968 (Sc) Temperley, 1951 (Sc) Temperley, 1953 (Sc) Thompson, 1954 (Sc) Watt, 1923a (Sc) Watt, 1923b (Sc) Watt, 1923c (Sc) Watt, 1926 (Sc) Watt & StQuintin, 1924 (Sc, Sv) Wildash, 1949 (Sc)

DISTRIBUTION: SOUTH AFRICA

Bartholomew, 1933 (Sc) Bigalke, 1937 (Sc) Davis, 1950 (Sc) Fitzsimons, 1920 (Sc)

ECOLOGY

Chapman, 1938a (Sc) - Chesemore, 1975 (Sc, Sn) Davidson, 1968 (Sv) Egorov, 1961 (Sv) Hall, 1967 (Sk) Mozgovoi, 1971 (Sv) Musser, 1967 (Sau) - Parker, 1952 (Sn) Ruckel, 1964 (Sc) Smith, 1965 (Th, Td) Smith, 1967 (Th) Wood, 1967 (Th) ECONOMIC IMPORTANCE

Anon, 1950 (TS) - Chesemore, 1975 (Sc, Sn) Collett, 1911 (Sv) Dice, 1921 (Th) Finley, 1969 (Th) Grinnell, 1935 (TS) Hofman, 1923 (Sg) Ingles, 1947 (Sg) Lavender & Engstrom, 1956 (Th) Millais, 1905 (Sv) Olmstead, 1937 (TS) Wagg, 1964 (Th) Yeager, 1937 (Th)

EIMERIA

Duncan, 1973 (Sc)
Joseph, 1972a (Sc)
Joseph, 1972b (Sc)
Joseph, 1972 c (Sc)
Joseph, 1973 (Sc, Sn)
Joseph, 1975 (Sn)
Knipling & Becker, 1935 (Sn)
Lampio, 1945 (Sv)
Lee & Dorney, 1971 (Sc, Th)
Mahrt & Soo-jeet Chai, 1970 (Th)
Middleton, 1932 (Sc)

EMASCULATION

Hoover, 1936 (Sc, Th) Jackson, 1935 (Sc) Klugh, 1927 (Th)

EMBRYO COUNTS

- Hoover, 1954 (Sn) Jones & Genoways, 1971 (Sr**4**53)

EMIGRATION (MIGRATION)

Anthony, 1934 (Sc) Bentz, 1943 (Sc) Calinescu, 1958 (Sv) Chambers, 1969 (Sc, Th) Cole, 1922 (Th) - 15 -

Collett, 1911 (Sv) Creed & Sharp, 1958 (Sc) DeVos, 1964 (Sc) Edminister, 1934 (Sc) Flyger, 1969 (Sc) Formosov, 1935 (Sv) Formosov, 1936 (Sv) Fryxell, 1926 (Sc) Goodrum, 1938b (Sc) Goodwin, 1934 (Sc) Hamilton, 1953 (Sc) Hamilton, 1957 (Sc) Hooper, 1973 (Sc) Hoover, 1936 (Sc) Jackson, 1921 (Sc) Jackson, 1935 (Sc) Jensen, 1923 (Sv) Kalius, 1909 (Sv) Kiris, 1958 (Sv) Klugh, 1927 (Th) Lampio, 1952 (Sv) Lampio, 1957 (Sv) Larson, 1962 (Sc) Lyon, 1936 (Sc) - Miller, 1950 (Sc, Sn) Minser, 1973 (Sc) Moore, 1942 (Sc) Osgood, 1939 (Sc) Parker, 1971 (Sc) Pulliainen, 1973 (Sv) Reilly, 1969 (Sc) ____Renken, 1970 (Sc, Sn) Schaanning, 1915 (Sv) Schorger, 1947 (Sc, Sn) - Schorger, 1949 (Sc, Sn) Seton, 1920 (Sc) Shepherd, 1952 (Sc) Voipio, 1969 (Sv) Wohlgemuth, 1968 (Sc) Wunz, 1969 (Sc)

ENEMIES

Klugh, 1927 (Th)

EPIZOOTIC

Davis, 1950 (Sc)

EVOLUTION & RELATIONSHIPS

Black, 1963 (TS) Black, 1972 (TS) Bryant, 1945 (TS) Bugge, 1971 (TS) Gerber & Birney, 1968 (TS) Gorgas, 1967 (TS) Hight, et. al., 1974 (TS) Moore, 1959 (TS) Moore, 1961 (TS) Smith, 1970 (TS)

FECAL PELLETS

- Webb, 1940 (Sn)

FEEDING

Bailey, 1932 (Sab) Grinnell, 1935 (TS) Hatt, 1943 (Td)

FIBROMA

Colin, 1957 (Sc) Goodwin, 1934 (Sc) Herman & Reilly, 1955 (Sc) Hirth, et. al., 1969 (Sc) Kilham, 1954a (Sc) Kilham, 1955 (Sc) Kilham, 1959 (Sc) Kilham, et. al., 1953 (Sc) King, et. al., 1972 (Sc) Kirschstein, et. al., 1978 (Sc) Levine, 1934 (Sc) Sauer, 1966 (Sc) Shivley, et. al., 1972 (Sc) Simon & Bullard, 1973 (Sc)

FLEAS

Allison, 1953 (Sc) Amin, 1975 (Sc) - Coffman & Balsbaugh, 1971 (Sn) - Dozier & Hall, 1944 (Sn) Hatt, 1943 (Td) - Hudson, et. al., 1971 (Sn) Kyles, 197**2** (Sc) Kyles, 1973 (Sc) - Svihla, 1931 (Sn) Twigg, 1966 (Sc)

FOLK LORE & STORIES

Barrett-Hamilton, 1910 (Sv) Linnaeus, 1745 (Sv) Millais, 1905 (Sv) Orbach, 1961 (Sv) Potter, 1972 (Sv) Topsell, 1967 (Sv)

FOOD

Allen, 1942 (Sn) Allen & McGinley, 1947 (Gen) Bailey, 1923 (Sc) Bailey, 1932 (Sab, Td) Bailey, 1936 (Th, Td, Sg) Balch, 1942 (Th) Baranyay, 1968 (Th) Barber, 1953 (Sc) Barber, 1954 (Sc, Sn) Barrett-Hamilton, 1910 (Sv) Benham, 1953 (Sc) Blair, 1935 (Sc) Boulware, 1941 (Sn) Brand, 1951 (Sv) Brenneman, 1954 (Sc) Brink & Dean, 1966 (Th) Britton, 1902 (Sc) Britton, 1933 (Sc, Th) Brooks, 1922 (Sc) Brown & McGuire, 1975 (Sau) Brown & Yeager, 1945 (Sn) Bryant, 1927 (Th) - Bugbee & Riegel, 1945 (Sn) Buller, 1920 (Th) Burns, et. al., 1954 (Sc, Gen) Burton, 1930 (Th) - Cahalane, 1942 (Sn) Caldwell & Caldwell, 1961 (Sc) Carlson, 1940 (Sc) Chapman, 1944 (Sc) Cheyney, 1929 (Th) Christisen & Korschgen, 1955 (Gen) Clarke, 1939 (Th) Collett, 1907 (Sv)

Collett, 1911 (Sv) Collins, 1961 (Gen) Cook, 1954 (Th) Coventry, 1940 (Th) Cram, 1924 (Th) Creutz, 1953 (Sv) Dalke, 1953 (Sc) Dambach, 1942 (Sc) Danilov, 1941 (Sv) Davis, 1907 (TS) Davis, 1950 (Sc) Davison, 1964 (Sc) - Dozier & Hall, 1944 (Sn) Dudderaa, 1967 (Sc) Eibl-Eibesfeldt, 1951 (Sv) Elliott, 1974 (Th) Ferner, 1974 (Th, Sab) Finley, 1969 (Th) Fitter, 1939 (Sc) Formosov, 1933 (Sv) - Fouch, 1962 (Sn) Fox, 1939 (Th) Fritz, 1932 (Sg) - Gates & Gates, 1975 (Sn) Gauckler, 1963 (Sv) Geiler, 1949 (Sv) Geiler, 1956 (Sv) Gentry, 1873 (Th) - Goodrum, 1938 (Sc, Sn) Goodrum, 1940 (Sc) Goodrum, 1959 (Gen) - Goodrum, et. al., 1971 (Sn, Sc) Granit, 1906 (Sv) Grodzinski, 1971 (Th) Grodzinski & Sawickakapusta, 1970 (Sv) Gunter & Eleuterius, 1971 (Sc) Gysel, 1956 (Gen) Hall, 1967 (Sk) Hamilton, 1934 (Th) Hamilton, 1939 (Th) Hamilton, 1943 (Sc) Harris, 1944 (Th) Hart, 1936 (Th) Harwood, 1943 (Sc) Hatt, 1930 (Th) Hatt, 1943 (Td) -Havera, et. al., 1976 (Sn) Hawkins, 1937 (TS) Hill, 1942 (Sab, Td) Himelick, et. al., 1953 (TS) Hinde, 1934 (Sv) Hoffmeister & Goodpaster, 1954 (Sar)

- Hoover & Yeager, 1953 (Sn) Ingles, 1947 (Sg) Janzen, 1971 (Sva) Jensen, 1923 (Sv) Jensen, 1946 (Sv) Jensen, 1948 (Sv) Judd, 1955 (Sc) Keith, 1956 (Sab) Keith, 1965 (Sab) Kilham, 1958 (Th) ..., 1318 (Th) Klugh, 1927 (Th) Jukawarek Komarek (1922 Lampio, 1952 (Sv) Lampio, 1967 (Sv) Larson & Schubert, 1971 (Sab) Layne & Woolfenden, 1958 (Sc) - Linduska, 1942 (Sn, Th) Little, 1934 (Sg) Long, 1940 (Td) Lutz, 1956 (Th) Lyon, 1936 (Th) MacNamara, 1943 (Th) Mailliard, 1931 (Td) McClelland, 1948 (Th) McGuire, 1973 (Sau) Middleton, 1930 (Sc) Middleton, 1931 (Sc) Millais, 1905 (Sv) Millar, 1970 (Th) Miller, 1914 (Sc) Moffat, 1923a (Sv) Moffat, 1927 (Sv) Mollenhauer, 1939 (Th) Montgomery, 1972 (Sc) Montgomery, et. al., 1973 (Sc) Montgomery, et. al., 1975 (Sc) Moore, 1940 (Sg) - Moore, 1957 (Sn) Nichols, 1927 (Sc) Nichols, 1958 (Sc) Nixon, 1970 (Sc) - Nixon, et. al., 1968c(Sc, Sn) -Nixon & Donohoe, 1968 (Sc, Sn) Ofcarik, et. al., 1973 (Sr) Oldham, 1936 (Sc) Pack, et. al., 1967 (Sc) Page, 1956 (Sv) Patton, 1977 (Sab) Patton, 1974a (Sab) Patton & Green, 1970 (Sab) Petrides, 1944 (Sc) Petrides, et. al., 1953 (Gen)

Pfützenreiter, 1958 (Sv) Pournelle, 1950 (Sc) Pulliainen, 1973 (Sv) Pulling, 1924 (Th) Rand, 1933 (Th) Rassmussen, 1941 (Sk) Rassmussen, et. al., 1975 (Th, Bynolds 1965 Sab) (Sab) Ratcliff, et. al., 1975 (Sk) Robinson & McT. Cowan, 1954 (Sc) Ross, 1930 (Sg) Schmidt & Shearer, 1971 (Th) Shadle, 1940 (TS) Shearer & Schmidt, 1970 (Th) Shearer & Schmidt, 1971 (Th) Shigo, 1964 (Th) Short, 1976 (TS) - Short & Duke, 1971 (Sc, Sn) Shorten, 1951 (Sc) Shorten & Courtier, 1955 (Sc) Smiley, 1972 (Sc) Smith, 1965 (Th, Td) Smith, 1968 (Th, Td) Smith, 1970 (Th) Smith & Aldous, 1947 (Th) -Smith & Follmer, 1972 (Sc, Sn) Snediger, 1963 (Th) Stienecker, 1977 (Sg) Stienecker & Browning, 1970 (Sg) Storer, 1875 (Th) Styan, 1946 (TS) Sviridenko, 1971 (Sv) Terres, 1939 (Sc) Thornburg, 1946 (Sab) Turner, 1974 (Th) Uhlig & Wilson, 1952 (Sc) Von Turcek, 1959 (Sv) Warren, 1932 (Td) Watts, 1945 (Sc) Wemer, 1904 (Sv) Wharton, 1968 (Th) - Whitaker, 1939 (Sn) Woods, 1941 (Sc) Yeager, 1937 (Th) -Yeager, 1959 (Sn) Zwahlen, 1975 (Sv)

FOOD HABITS

Abbott & Belig, 1961 (Th) -Baker, 1944 (Sc, Sn) -Baumgartner, 1939 (Sn)

- Baumgartner, 1940c (Sn) -Baumgartner & Martin, 1939 (Sn) - Baumgras, 1944 (Sn) Beckwith, 1957 (Sc) Blackford, 1946 (Th) Bowles, 1920 (Sg) Butterfield, 1962 (Sc) Colin, 1957 (Sc) - Cypert & Webster, 1948 (Sn) Davidson, 1964 (Sc) -Gibb, 1959 (Sv) - Goodrum, 1937 (Sc, Sn) Hornung, 1952 (Sv) Howard, 1935 (Th) Kemp & Keith, 1970 (Th) Layne, 1954b (Th) McFarland, 1947 (Th) Moore, 1943 (Sc) .streubel 1968 Newton, 1865 (Sv) Smith, 1968 (Th) Smith, 1970 (Th) Stephenson, 1974 (Sab) Vartio, 1946 (Sv) - Wolf & Roest, 1971 (Sn)

FOOD STORAGE

Jensen, 1923 (Sv) Warren, 1932 (Td)

FOSSIL SPECIES

Bryant, 1945 (Sc) Camp & Vanderhoof, 1940 (Sc) Cushing, 1945 (Sc) Dawson, 1961 (Sc) Dechaseaux, 1943 (Sc) Degerbø1, 1933 (Sc) - Gazin 1932 Dehm, 1950 (Sc) Forsyth, 1893 (Sc) - Kowalski 1967 Gilmore, 1946 (Sc) Hay, 1921 (Sc) Lavocat, 1956 (Sc) Major, 1893 (TS) Parris, 1969 (TS) Storch, et. al., 1973 (Sv) Sulimski, 1964 (Sc)

FUR

Lampio, 1957 (Sv) Voipio, 1952 (Sv) Voipio, 1970b (Sv)

GENERAL ACCOUNT

- Allen, 1943 (Sn) Barkalow & Shorten, 1973 (Sc) - Brown & Yeager, 1945 (Sc, Sn) Forestry Commission, 1953 (TS) Goodrum, 1961 (Sc) Hall, 1967 (Sab) Hall, 1973 (Sab) Lee, 1976 (Th) - Madson, 1964 (Sc, Sn) Palmer, 1954 (TS) Rasmussen, 1972 (Sab) Seagears, 1950 (Th) Seton, 1922 (Sc) -Seton, 1928 (Sc, Sn, Th, Sg, Sap, Td, Sab, Sar, Sv) Shorten, 1954 (Sc, Sv) Shorten, 1962 (TS) Uhlig, 1955d (Sc) Uhlig, 1956 (Sc) Whitaker, 1967 (TS) Wingard & Studholm, 1967 (Sc)

GENETICS

Baldwin, 1969 (Sc) Kang & Yung, 1963 (Sv) Santiago & Rake, 1973 (Sc) Voipio, 1969 (Sv) Voipio, 1970a (Sv)

GEOGRAPHIC VARIATION

Sidorowicz, 1958 (Sv) Sidorowicz, 1961 (Sv)

GESTATION

Ferron & Prescott, 1977 (Th)

GROWTH

Allen, 1942 (Sn) _Coggin, 1973 (Sc) Layne, 1954b (Th)
Moore, 1957 (Sn) Shorten, 1951 (Sc) Uhlig, 1955c (Sc)

HABITAT

Allen, 1869 (Sc) - Allen, 1871 (Sn) - Allen, 1943 (Sn) - Allen, 1952 (Sc, Sn) - Allen, 1957 (Sc, Sn) Allison, 1953 (Sc) Armstrong, 1972 (Th, Sn, Sab) Bailey, 1932 (Sab, Td, Sar) Bailey, 1936 (Th) - Baker, 1944 (Sc, Sn) __ Baumgartner, 1943 (Sn) Benham, 1953 (Sc, Sv) - Besnadny, 1957 (Sn, Sc) - Black, 1936 (Sn) Blair, 1935 (Sc) - Blair, 1939 (Sc, Sn) Brown & McGuire, 1975 (Sau) Burnett & Dickerman, 1956 (Th) Davidson, 1968 (Sv) Dice, 1921 (Th) - Dozier & Hall, 1944 (Sn) Ferner, 1974 (Th, Sab) Ffolliott & Patton, 1975 (Sab) Fitter, 1939 (Sc) Gashwiler, 1970 (Td) Gill, et. al., 1975 (Sc) Goldman, 1928 (Sk) - Goodrum, 1937a (Sc, Sn) - Goodrum, 1937b (Sc, Sn) Goodrum, 1938b (Sc) Goodrum, 1940 (Sc) Hall, 1946 (Td) Hall, 1967 (Sk) Harper, 1932 (Th) Hatt, 1943 (Td) - Hibbard, 1933 (Sc, Sn) - Hibbard, 1956 (Sc, Sn) Hill, 1942 (Td, Sab) - Hoffmann, et. al., 1969 (Sn) Hoffmeister & Goodpaster, 1954 (Sar) - Hoover & Yeager, 1953 (Sn)

Jones & Genoways, 1971 (Sr, Sde) Keith, 1956 (Sab) - Kidd, 1954 (Sc, Sn) <u> Kidd</u>, 1955 (Sn) Klugh, 1927 (Th) Komarek & Komarek, 1938 (Sc, Th) Krull, 1970 (Th) Long, 1940 (Td) - Marshall, 1941 (Sn) - Martin & Preston, 1970 (Sn) - Maynard, 1883 (Sc, Sn) Middleton, 1930 (Sv) Middleton, 1931 (Sc) - Moore, 1946 (Sc, Sn) - Moore, 1956 (Sn) - Moore, 1957 (Sn) __ Nelson, 1890 (Sn) Odum, 1949 (Sc, Th) Patton, 1974 (Sab) Patton, 1977, (Sab) Paul & Quay, 1963 (Sc, Th) Petrides, 1942 (Th, Sc) Pournelle, 1950 (Sc) - Preno & Labisky, 1971 (Sc, Sn) Preston, 1948 (Sc, Th) Pulliainen, 1973 (Sv) Rasmussen, 1941 (Sk) Ratcliff, et. al., 1975 (Sk) Redmond, 1949 (Sc) --- Rhoads, 1903 (Sn) Robinson & McT. Cowan, 1954 (Sc) Robinson, 1974 (Sv, Sc) Ruckel, 1963 (Sn, Sc) - Schultz, 1957 (Sc, Sn) Shorten, 1946 (Sc, Sv) Smith, 1970 (Th) Soper, 1942 (Th) Soper, 1946 (Sc, Th) Stone, 1907 (Sc) - Taylor, 1974 (Sn) Texas, 1945 (Sn, Sc) - Tinsley, 1972 (Sn) -Turner, 1974 (Th, Sn) -Wingard, 1950 (Sn) -Wolf & Roest, 1971 (Sn)

HABITS

 Allen, 1942 (Sn)
 Allen, 1957 (Sc, Sn) Bailey, 1932 (Td) Bailey, 1936 (Sg, Td)

HAIRS

Barrier & Barkalow, 1967 (Sc) Spiers, 1973 (Sc)

HANDLING TECHNIQUES

Allison, 1953 (Sc) Barkalow & Soots, 1965 (Sc) Barry, 1972 (Sc) Syr Baumgartner, 1940 (Sn) Fitzwater, 1943 (Sc) Patton, et. al., 1976 (Sab)

HARVEST

- Allen, 1942 (Sn) - Allen, 1943 (Sn) Allison, 1953 (Sc) Atkeson & Heflin, 1947 (Sc) Atkeson & Heflin, 1948 (Sc) - Baumgartner, 1937 (Sn) Baumgartner, 1939c (TS) - Baumgartner, 1940 (Sn) Beckwith, 1957 (Sc) - Bennett & Kidd, 1960 (Sn) - Besadny, 1957 (Sc, Sn) Brown & Yeager, 1945 (Sc) Carson, 1957 (Sc) Chapman, 1938a (Sc) - Christisen, 1971 (Sc, Sn) Degn, 1974 (Sv) - Dennett, 1960 (Sc, Sn) - Donohoe, 1965 (Sc, Sn) Eichhorn, 1962 (Sc) - Friley, 1955 (Sn) Gilfillan, 1956 (Sc) Hicks, 1938 (Sc, Sn) Jordan, 1971 (Sn) Kemp & Keith, 1970 (Th) - Kidd, 1955 (TS, Sc, Sn) Lampio, 1952 (Sv) Longley, 1963 (Sc, Sn) - Martinson, 1963 (Sc, Sn) McCloskey & Vohs, 1966 (Sn) McClung, 1951 (Sc) Moran, 1952 (Sc) Moran, 1953c (Sc) - Nixon, 1962 (Sc, Sn) - Nixon, et. al., 1974 (Sn) Peterly & Fouch, 1959 (Sn)

Preno & Labisky, 1971 (Sc, Sn)
 Queal & Houch, 1967 (Sn)
 Redmond, 1953 (Sc)
 Sampson, 1970 (TS)
 Sheffield & Barkalow, 1970 (Sc)
 Uhlig, 1952 (Sc)
 Uhlig & Wilson, 1950 (Sc)
 Yeager, 1959 (Sn)

HEAVY METALS

Kleinert & Degurse, 1972 (Sc, Th) McKinnon, 1976

HEMATOLOGY

Chan, et. al., 1976 (Sc) Guthrie, et. al., 1966 (Sc) Guthrie, et. al, 1967 (Sc) Hall, 1965 (Sc) Hoff, et. al., 1975 (Sc) Hoff, et. al., 1976 (Sc) Musacchia, et. al., 1955 (Th) Shaefer, et. al., 1973 (Sv) Sukhomlynov, et. al., 1973 (Sv) - Youatt, et. al., 1961 (Th, Sn)

HEPATOZOON

Davidson, 1976 (Sc) Davidson & Caplin, 1976 (Sc) Dorney & Todd, 1959 (Sc) Hendricks, 1972 (Sc) Hendricks, 1975 (Sc) Hendricks & Fayer, 1975 (Sc) Herman & Price, 1955 (Sc) Parker, 1968 (Sc) Redington & Jachowski, 1971 (Sc) Redington & Jachowski, 1972 (Sc) Weidanz & Hyland, 1958 (Sc)

HISTOLOGY

Nadler & Sutton, 1962 (Td) Vorob'eva, 1972 (Sv) HOME RANGE

- Adams, 1973 (Sn) - Adams, 1974 (Sn) - Adams, 1976 (Sn) Cordes & Barkalow, 1973 (Sc) Davis, 1969 (Th) Doebel, 1967 (Sc) Doebel & McGinnes, 1974 (Sc) Flyger, 1960 (Sc) Ingles, 1947 (Sg) Hall, 1972 (Sk) - Hoover & Yeager, 1953 (Sn) Keith, 1956 (Sab) Keith, 1965 (Sab) Layne, 1954b (Th) Mohr, 1965 (Th) Nikitina, 1972 (Sv) Patton, 1975 (Sab) Robinson & McT. Cowan, 1954 (Sc) Taylor, 1966 (Sc)

HOMING

Hamilton, 1939 (Th) Hungerford & Wilder, 1941 (Sc) Roecker, 1951 (Sc)

HUNTING: GENERAL

Allen, 1948b (Sc) - Allen, 1957 (Sc, Sn) Anon, 1950 (TS) Anon, 1950a (Sc) Atkeson, 1958 (Sc) Atkeson & Hulse, 1952 (Sc) Bauer, 1951 (Sc) - Besadny, 1957 (Sn, Sc) - Brown, 1945 (Sn) --- Bushong, 1961 (Sc, Sn) Christisen, 1954 (Sc) Davis, 1976 (Sc) - Duck, 1951 (Sn) Eley, 1967 (Sc) Evans, 1950 (TS) Felling, 1964 (Sc) Gooch, 1972 (TS) - Goodrum, 1937b (Sc, Sn) - Goodrum, 1938 (Sc, Sn) Hamilton, 1949 (TS) Hamilton, 1969 (Sc)

- Hicks, 1938 (Sc, Sn) - Hoover & Yeager, 1953 (Sn) Kidd, 1955 (TS) Kidd, 1958 (TS) Lloyd, 1927 (Sc) Longley, 1959 (Sc) - Martinson, 1963 (Sc, Sn) McClung, 1951 (Sc) Mooney, 1968 (Sc) Mosby, 1969 (Sc) Pack, 1970 (Sc) Pass, 1971 (Sc) Pass, 1972 (Sc) - Queal & Houch, 1967 (Sn) Redmond, 1951 (Sc) Redmond, 1953 (Sc) Ruckel, 1963 (Sc) -Rutledge, 1921 (Sn) Sanderson, 1954 (TS) Simpson, 1967 (Sc) Taylor & Lloyd, 1970 (Sc) Tye, 1969 (Sc) Uhlig, 1949 (Sc) Uhlig, 1952 (Sc) Uhlig, 1956 (Sc) Uhlig, 1957 (Sc) Wylie, 1968 (Sc) Yeager, 1954 (Sc)

HUNTING PRESSURE

Colin, 1957 (Sc) Egorov, 1961 (Sv) Nixon, et. al., 1975 (Sc) Uhlig & Wilson, 1950 (Sc)

HUNTING REGULATIONS

Lampio, 1953

HUNTING SUCCESS

Allen, 1947a (Sc) Allen, 1948 (Sc) Bertram, 1952 (Sc) Boyd, 1966 (Sc) Chapman, 1937 (Sc) Colin, 1957 (Sc) Duffy, 1961 (Sc) - Fouch, 1969 (Sn) Hicks, 1938 (Sc) — Jordan, 1971 (Sn) Kline, 1965 (Sc) Moran, 1952 (Sc) Preno & Labisky, 1971 (Sc) Redmond, 1954 (Sc) Schultz, 1957 (Sc)

HYBRIDS

Ridgeway, 1940 (Sc, Sv)

IMMUNOLOGY

- Gerber & Birney, 1968 (Sn) Wild, 1965 (Sc) Wild, 1971 (Sc)

INJURY

Hamilton, 1928 (Sv)

INTERSPECIFIC COMPETITION

Middleton, 1930 (Sv) Payne, 1940 (Sg)

INTRODUCTION

Barrett, 1955 (Sc) Barrett-Hamilton, 1910 (Sc) Barrington, 1880 (Sv) Brown & McGuire, 1969 (Sau) Clark, 1958 (Th) Clegg, 1970 (Sv) Degn, 1974 (Sv) Dubos, 1959 (Sv) Fitter, 1939 (Sc) Fitzsimons, 1920 (Sc) Flahaut, 1941 (Sc) French, 1950 (Sc) Gorshkov, 1963 (Sv) Hoffmeister & Goodpaster, 1954 (Sc) - Hoover & Yeager, 1953 (Sn) - Ingles, 1965 (Sc, Sn) - Jones, 1964 (Sn) -Lloyd, 1925 (Sn)

- Marshall, 1941 (Sn) Middleton, 1929 (Sv) Middleton, 1930 (Sc) Millais, 1905 (Sv) Minckley, 1968 (Sab) Moffat, 1938 (Sc, Sv) Payne, 1976 (Th) Robinson & McT. Gowan (Sc) -Saunders, 1932 (Sn) Shadbolt, 1933 (Sc) -Texas, 1945 (Sn) _ Turner, 1974 (Sn) Waggoner, 1946 (Sc) Watt, 1923 (Sc) - Wolf & Roest, 1971 (Sn) **Young**, 1908 (Sn)

LICE

Dozier & Hall, 1944 (Sn) Hatt, 1943 (Td) Parker, 1968 (Sc) Parker & Holliman, 1972 (Sc)

LIFE HISTORY

Goodrum, 1940 (Sc) Hatt, 1929 (Th)

LIFE TABLES

Barkalow, et. al., 1970

LITTER SIZE

Allen, 1943 (Sn) Allison, 1953 (Sc) Barkalow, 1967 (Sc)
Baumgartner, 1940c (Sn)
Bertram & Gault, 1952 (Sc, Sn) Berwin, 1974 (Sc)
Brown & Bellrose, 1943 (Sn) Brown & McGuire, 1975 (Sau)
Brown & Yeager, 1945 (Sn) Colin, 1957 (Sc) Collett, 1907 (Sv) Collett, 1911 (Sv) Davis, 1969 (Th) Dolbeer, 1973 (Th)

Ferron & Prescott, 1977 (Th) Goodrum, 1940 (Sc) Hamilton, 1939 (Th) Hediger, 1945 (Sv) -Hesselschwerdt, 1942 (Sn) Hibbard, 1935 (Sc) _Hoover, 1954 (Sn) Kemp & Keith, 1970 (Th) Lange, 1920 (Sc) -Longley, 1963 (Sc, Sn) - Lustig & Flyger, 1975 (Sn) - Lustig & Flyger, 1976 (Sn) Mayfield, 1948 (Th) - McCloskey, 1969 (Sn) - McCloskey & Vohs, 1966 (Sn) - McCloskey & Vohs, 1971 (Sn) Millar, 1970 (Th) Newell & Kirkpatrick, 1968 (Sc) Redmond, 1953 (Sc) - (Serry 1948 (Sc) Robinson & McT. Gowan $(Sc)^{\vee}$ Shorten, 1951 (Sc) Thornburg, 1946 (Sab) - Yeager, 1936 (Sn)

- Yeager, 1959 (Sn)

LOCOMOTION

Clark, 1931 (Sc) - Cottam, 1941 (Sn)

LONGEVITY

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Barkalow & Soots, 1975 (Sc)
Barret-Hamilton, 1910 (Sc, Sv)
Bigalke, 1939 (Sc)
Crandall, 1964 (Sc, Sn, Sv)
Farentinos, 1972 (Sab)
Fouch, 1958 (Sn)
Greene, 1950 (Sn)
Klugh, 1927 (Th)
Layne, 1954b (Th)
Linduska, 1947 (Sn)
Mitchell, 1911 (Sc)
Roecker, 1951 (Sc)
Ross, 1930 (Sg)
Uhlig, 1956 (Sc)
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MANAGEMENT

- Allen, 1940 (Sn)

-Allen, 1943 (Sn) - Allen, 1952 (Sc, Sn) Allison, 1953 (Sc) Anon, 1944 (Sc) Anon, 1949 (Sc) Anon, 1950b (Sc) Bailey, 1964 (Sc) Baker, 1943 (Sc) - Baker, 1944 (Sc, Sn) Barber, 1953 (Sc) Barkalow & Soots, 1965 (Sc) - Baumgartner, 1939a (Sn) Baumgartner, 1939b (Sn) -Baumgartner, 1940c (Sn) - Brown, 1971 (Sn) Brown & Yeager, 1945 (Sc) Burger, 1969 (Sc) Burns, et. al., 1954 (Sc) Chapman, 1938a (Sc) Chapman, 1942 (Sc) Christisen, 1954 (Sc) Christisen, 1964 (Sc) Christisen & Korschgen, 1955 (Sc) Colin & Kyle, 1958 (Sc) Edminster, 1937 (Sc) Fields, 1966 (TS) - Goodrum, 1938a (Sc, Sn) Goodrum, 1938b (Sc) Goodrum, 1940 (Sc) Handley, 1945 (Sc) - Hartman, 1940 (Sn) - Hesselschwerdt, 1942 (Sn) - Himelick & Curl, 1955 (Sc, Sn) Ingles, 1947 (Sg) Johnson, et. al., 1964 (Sc) - Jones, 1949 (Sc, Sn, Th) Keith, 1956 (Sab) Krugman & Echols, 1963 (TS) Lampio, 1952 (Sv) Lampio, 1953 (Sv) Lampio, 1957 (Sv) Lee, 1972 (Sc) Lewis, 1962 (Sc) - Ludeman, 1953 (Sc, Sn, Th) - Lustig & Flyger, 1975 (Sn) - McCloskey & Vohs, 1966 (Sn) Moran, 1953c (Sc) Nixon, 1965 (Sc) - Nixon & Donohoe, 1968 (Sc, Sn) Ohio, 1955 (Sc) Patton, 1975 (Sab) Redmond, 1954 (Sc)

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Rudasill, 1958 (Sc)
  Sanderson, 1975 (Sc)
  Shearer & Schmidt, 1970 (Th)
  Shearer & Schmidt, 1971 (Th)
  Shipley, 1941 (Sc)
  Soots, 1964 (Sc)
  Stuart, 1926 (Sc)
                         1946
  Tackle, 1957 (Th)
- Terrill & Crawford (Sn)
  Trippensee, 1948 (Sc)
  Uhlig, 1952 (Sc)
  Uhlig, 1954 (Sc)
  Uhlig, 1956 (Sc)
  Uhlig, 1959 (Sc)
  Zimmerman, 1939 (Sc)
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MANGE

Allen, 1938 (Sn)
 Allen, 1943 (Sn)
 Chapman, 1938a (Sc)
 Keith, 1965 (Sab)
 Payne, 1940 (Sg)
 Ross, 1930 (Sg)

MAST

 Allen, 1948 (Sc, Sn) Downs, 1944, TS) Downs & McQuilkin, 1944 (TS)
 Fouch, 1962 (Sn) Irving & Beer, 1963 (Sc)
 Kline, 1965 (Sc, Sn)

MARKING for research

Allen, 1943 (Sn) Allison, 1953 (Sc)
Baumgartner, 1940 (Sn)
Beal, 1967 (Sc, Sn) Brown & McGuire, 1975 (Sau)
Cooley, 1948 (Sn) Creed, 1956 (Sc)
Dennett & Kidd, 1960 (Sc, Sn) Fitzwater, 1943 (Sc)
Hadow, 1972 (Sn, Sab)
Linduska, 1942 (Sn)
Longley, 1963 (Sc, Sn)
Moran, 1953 (Sn) Patton, et. al., 1976 (Sab) Taylor, et. al., (Sc) Trippensee, 1941 (TS) Wood, 1976 (Sc)

MEASUREMENTS

Allen, 1871 (Sc)
Amin, 1974 (Sc, Sn)
Baker, 1944 (Sc, Sn)
Baumgartner, 1940c (Sn)
Collett, 1907 (Sv)
Crase, 1973 (Sg)
Dozier & Hall (Sn)
Hamilton, 1939 (Th)
Hill, 1942 (Sab, Td)
Keith, 1965 (Sab)
Komarek & Komarek, 1938 (Sc, Th)
Kramm, et. al., 1975 (Th)
Longley, 1963 (Sc, Sn)
Middleton, 1930 (Sc)
Millais, 1905 (Sv)

- Moore, 1956 (Sn) Uhlig, 1955b (Sc) Toschi,1865 (Sv)

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MELANISM
   Allen 1898 (Th)
  Badger, 1949 (Sv)
  Baker, 1973 (Sc)
  Bailey, 1932 (Sab)
  Barrett-Hamilton, 1910 (Sv)
- Baumgartner, 1943b (Sn)
  Bedford, 1950 (Sv)
  Black, 1936 (Sc)
  Breckenridge, 1947 (Sc)
  Carr, 1949 (Sv)
  Carr, 1950 (Sv)
  Collett, 1907 (Sv)
  Collett, 1911 (Sv)
  Crase, 1973 (Sg)
  Creed & Sharp, 1958 (Sc)
  Degn, 1974 (Sv)
  DeVos, 1964 (Sc)
  Farentinos, 1972 (Sab)
  Fordham, 1946 (Sc)
- Fordham, 1950 (Sn)
  Fordham, 1952 (Sc)
  Keith, 1956 (Sab)
- Kidd, 1954 (Sn, Sc)
  Klugh, 1927 (Th)
  Kolstoe, 1968 (Sc)
  Kritz, 1962 (Sc)
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Loewis, 1884 (Sv) Loewis, 1885 (Sv) Longley, 1963 (Sc) McClung, 1951 (Sc) Mengel & Jenkinson, 1971 (Th) Morris, 1948 (Sc) Munro, 1929 (Sc) Oldham, 1937 (Sc) Parker, 1939 (Sc) Ramey & Nash, 1971 (Sab) Rhoads, 1903 (Sc) Robinson & McT. Gowan, 1954 (Sc) Runge, 1957 (Sv) Schreitmüller, 1953 (Sv) Shorten, 1945 (Sc) Soper, 1923 (Sc) - Strecker, 1928 (Sn) Stubbs, 1923 (Sv) True, 1894 (Sab) Van der Byl, 1949 (Sv) Wildash, 1950 (Sc) Zawidska, 1958 (Sv)

METABOLISM

Gysel, 1971 (Sc)

MILK

Nixon & Harper, 1972 (Sc)

MITES

Allison, 1953 (Sỹ) Berwin, 1974 (Sc) Hendricks & Fayer, 1973 (Sc) Moffitt, 1931 (Sg)

MORTALITY

Abbott, 1958 (Sc) — Allen, 1942 (Sn) — Allen, 1943 (Sn) Atkeson & Hulse, 1952 (Sc) — Baumgartner, 1940c (Sn) Berwin, 1974 (Sc) Carthew, 1938 (Th) Chambers, 1969 (Sc) Davidson, 1976 (Sc) Davis & Sealander, 1971 (Th) Evenden, 1971 (Sc) Gerber, 1950 (Sv) Goodrum, 1940 (Sc) - Haugen, 1944 (Sn) Keith, 1965 (Sab) Kemp & Keith, 1970 (Th) Layne, 1954b (Th) - Longley, 1963 (Sc, Sn) MacNamara, 1962 (Sc) Mosby, 1969 (Sc) - Nixon, et. al., 1974 (Sn) Oxley, et. al., 1974 (Sc) Shepherd, 1952 (Sc) Uhlig, 1957 (Sc)

MOULT

Barrier, 1967 (Sc) - Baumgartner, 1943b (Sn) Cambridge, 1895 (Sv) Collett, 1907 (Sv) Collett, 1911 (Sv) Hamilton, 1939 (Th) Harris, 1944 (Th) Jones & Genoways, 1971 (Sri) Keith, 1956 (Sab) Keith, 1965 (Sab) Kuiper, 1929 (Sf) Lühring, 1928 (Sv) Millais, 1905 (Sv) <u>Moore</u>, 1957 (Sn) Nelson, 1945 (Th) Nyholm, 1961 (Sv) Pocock, 1907 (Sv) Sharp, 1958 (Sc) Shorten, 1956 (Sc) Shorten & Courtier, 1955 (Sc) Svihla, 1931a (Th)

MOVEMENTS (DISPERSION)

Allen, 1943 (Sn)
Baumgartner, 1938 (Sn)
Baumgartner, 1940 (Sn)
Baumgartner, 1943a (Sn)
Baumgartner, 1943b (Sn)
Bennett & Kidd, 1960 (Sn)
Brown & Yeager, 1945 (Sc)
Cordes & Barkalow, 1973 (Sc)
Farentinos, 1972 (Sab)
Flyger, 1955 (Sc)
Flyger, 1960 (Sc)

Jordan, 1971 (Sn)
 Kemp & Keith, 1970 (Th)
 Longley, 1963 (Sc, Sn)
 Moore, 1961 (TS)
 Mosby, 1969 (Sc)
 Oxley, et. al., 1974 (Sc)
 Ramey, 1973 (Sab)
 Roecker, 1951 (Sc)
 Shorten & Courtier, 1955 (Sc)
 Taylor, et. al., 1971 (Sc)
 Wilson, 1967 (Sc)

NEMATODA

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Bayliss, 1939 (TS)
Canavan, 1929 (TS)
Davidson, 1975 (Sc)
Davidson, 1976 (Sc)
Dozier & Hall, 1944 (Sn)
Harkema, 1936 (Sc)
Lichtenfels, 1971 (Sg)
Lucker, 1943 (Sc)
Morgan, 1941 (TS)
Oldham, 1961 (Sc)
Parker, 1968 (Sc)
Parker & Hollimon, 1971 (Sc)
Reiber & Byrd, 1942 (TS)
Tiner, 1953 (Sn, Sc)
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NEST INHABITANTS

- Coffman & Balsbaugh, 1971 (Sn) Davis, 1952 (Sc) _____ Kyles 1970(Sc) Neill, 1952 (Sc) Sp:ff/e 1952 (Sc) Tuigg 1966 (Sc) NESTING

Allen, 1942 (Sk) Barnes & Duncan, 1954 (Sc) Brown & Twigg, 1965 (Sc) Burger, 1969 (Sc) Doebel, 1967 (Sc) Fogle & Fogle, 1959 (TS) Frank, 1948 (Sc, Th)

NESTS

Allen, 1942 (Sn)
 Baker, 1944 (Sc, Sn)
 Barkalow & Soots, 1965 (Sc)

Barrett-Hamilton, 1910 (Sv) Bartholomew, 1933 (Sc) Baumgartner, 1938 (Sn) -Baumgartner, 1943 (Sn) - Boulware, 1941 (Sn) - Brown & Bellrose, 1943 (Sc, Sn) Brown & McGuire, 1975 (Sau) Chapman, 1938a (Sc) Collett, 1911 (Sv) Davis, 1950 (Sc) Dice, 1921 (Th) 🗕 Dozier & Hall, 1944 (Sn) Farentinos, 1972 (Sab) Fellenberg, 1964 (Sv) Fischer, 1957 (Sv) Fitzwater & Frank, 1944 (Sc) Flyger & Cooper, 1967 (Sc) Hamilton, 1939 (Th) Hatt, 1943 (Td) - Hesselschwerdt, 1942 (Sn) Keith, 1956 (Sab) Klugh, 1927 (Th) Ingles, 1947 (Sq) Lange, 1920 (Sc) Layne, 1954b (Th) Long, 1940 (Td) - Longley, 1963 (Sc, Sn) -Lustig & Flyger, 1975 (Sn) Mayfield, 1948 (Th) Merriam, 1950 (Sg) Meyer, 1874 (Sv) Millais, 1905 (Sv) -Moore, 1957 (Sn) Patton, 1975 (Sab) Pournelle, 1950 (Sc) Pulliainen, 1973 (Sv) Redmond, 1951 (Sc) ____ Rothwell 1979 (Th) Racey, 1936 (Th) - Sherman, 1926 (Sn) Spittle, 1952 (Sc) - Stoddard, 1920 (Sn) Storer, 1922 (Sg) Thornburg, 1946 (Sab) Tittensor, 1970 (Sc, Sv) Twigg, 1966 (Sc) Uhlig, 1956b (Sc)

NEUROPHYSIOLOGY

Guillery & Kaas, 1974a (Sc) Guillery & Kaas, 1974b (Sc)

NUTRITION

- Baumgras, 1944 (Sn) Brink & Dean, 1966 (Th) Danilov, 1938 (Sv) Ofcarcik & Burns, 1971 (Gen) Pulliainen, 1973 (Sv) Smith, 1968 (Th) Smith, 1968 (Th, Td)

ODDITIES

Anon, 1925 (Sc)

ODOR

Soper, 1942 (Th)

PARASITES: BLOOD

Allison, 1949 (Sc) Atkeson & Givens, 1951 (Sc) - Baker, 1944 (Sc, Sn) Bartholomew, 1933 (Sc) Bell & Chalgren, 1943 (Sc, Th) - Bertram & Gault, 1952 (Sc, Sn) Brand, 1951 (Sv) Brennen, 1946 (Th) Brown & McGuire, 1975 (Sau) Brown & Yeager, 1945 (Sc) - Chandler, 1947 (Sc, Sn) Chapman, 1936 (TS) Chapman, 1938a (Sc) Clark, 1959 (Sc) - Dansby & Shoemaker, 1971 (Sc, Sn) Davis, 1950 (Sc) Goodrum, 1940 (Sc) - Graham & Uhrich, 1943 (Sn) Grulich, et. al., 1967 (Sv) Ingles, 1947 (Sg) Katz, 1939 (Sc, TS) Keith, 1965 (Sab) Kyles, 1970 (Sc) Mehl, 1971 (Sv) Middleton, 1930 (Sc) - Moore, 1957 (Sn) Parker, 1968 (Sc) Parker & Holliman, 1971 (Sc) Webb, 1970 (Sc)

PARASITES: INTERNAL

Allison, 1948 (Sc) - Baker, 1944 (Sc, Sn) Baylis, 1934 (TS) Brown & Yeager, 1945 (Sc) Cameron, 1932 (Sc) Cass, 1939 (TS) -Chandler, 1942 (Sc, Sn) Chandler & Rausch, 1946 (TS) Chapman, 1936 (TS) Chapman, 1938a (Sc) Clark, 1959 (Sc) Cobold, 1876 (TS) Coles, 1914 (TS) Davidson, 1976 (Sc) Dobrovsky & Harbough, 1934 (Th) Dorney, 1969 (Th) - Graham & Uhrich, 1943 (Sn) Hall, 1911 (Sc) - Harwood & Cooke, 1949 (Sn) Katz, 1939 (Sc, TS) Linzey & Linzey, 1973 (Sc) Lubimov, et. al., 1935 (Sv) Mahrt & Chai, 1972 (Th) Middleton, 1930 (Sv) -Moore, 1957 (Sn) Parker, 1968 (Sc) Parker & Holliman, 1971 (Sc) 🛶 Rausch, 1946 (Sn) - Rausch & Tiner, 1948 (Sc, Sn, Th) Thompson, 1934 (TS) Thompson, 1935 (TS) Turner, 1974 (Th) - Uhlrich & Graham, 1941 (Sn) Webb, 1970 (Sc) Yamashita, 1964 (Sv)

PARASITISM (GENERAL)

Davis & Anderson, 1971

PELAGE

Keith, 1956 (Sab) -- Longley, 1963 (Sc, Sn) Nyholm, 1961 (Sv) Sharp, 1958 (Sc)

PETS

Carhart, 1951 (Sn)
 Crane, 1936 (Sv)
 DeGraff, 1946 (Sc)
 Fairbairn, 1971 (Sc)
 Fairbairn, 1973 (Sc)
 Harris, 1944 (Th)
 Harwood, 1943 (Sc)
 Kenly, 1934 (Sc)
 Lund, 1962 (Sv)
 Storer, 1922 (Sg)
 Svihla, 1931 (Sn)
 Swalm, 1948 (Sc)
 Tyrrell, 1943 (Sc)

PHYSICAL CHARACTERISTICS

Guthrie, et. al., 1967 (Sc) Patton, et. al., 1976 (Sab, Sk)

PHYSIOLOGY: GENERAL

Aleksuik, 1970 (Th) Aleksuik, 1971 (Th) Bakko, 1973 (Sc, Th) Bolls & Perfect, 1972 (Sc) Cooper & Robson, 1969 (Sc) Delost, 1965 (Sv) Dippner & Armington, 1971 (Th) Edson, 1936 (Td) Faleschini & Whittier, 1975 (TS) Ferguson & Folk, 1971 (Th) Gouras, 1964 (Sc) Grodzinski, 1971a (Th) Grodzinski, 1971b (Th) Guthrie, 1955 (Sc) Guthrie, 1965 (Sc) Guthrie, et. al., 1967 (Sc) Hall, 1965 (Sc) Hoff, et. al., 1976 (Sc) - Levin & Flyger, 1971 (Sn) - Levin & Flyger, 1973 (Sc, Sn) Ludwick, et. al., 1969 (Sc) Montgomery, 1973 (Sc) Montgomery, et. al., 1975 (Sc) --- Short & Duke, 1971 (Sc, Sn) Voipio, 1972 (Sv) Whitten & Faleschini, 1972 (TS) Wild, 1974 (Sc) Wunder & Morrison, 1974 (Th)

Zwahlen, 1975 (Sv)

PHYSIOLOGY: BIOCHEMISTRY

Flyger & Levin, 1977 (Sn)
 Levin & Flyger, 1971 (Sn)
 Levin & Flyger, 1973 (Sn)
 Whitstance, et. al., 1971 (Sc)

PHYSIOLOGY: EYE

Arden & Silver, 1962 (Sc) Arden & Tansley, 1955 (Sc) Ball & Gershtein, 1966 (Sv) Dippner, 1974 (Th) Dippner & Armington, 1971 (Th) Dodt, 1962 (Sv) Green & Dowling, 1975 (Sc) Jacobs & Birch, 1975 (Sc) Jacobs & Birch, 1975 (Sc) Silver, 1966 (Sc) Silver, 1975 (Sc) Tansley, et. al., 1961 (Sc) Weale, 1955 (Sc)

PHYSIOLOGY: REPRODUCTIVE

Hoffman & Kirkpatrick, 1959 (Sc) Mellace, 1973 (Sc) Pudney & Lacy, 1977 (Sc) Woitkewitsch, 1945 (Sv)

PIE-BALD

Klugh, 1927 (Th)

PLAGUE Clure & Molishan 1968 (Sm) - Hudson, et. al., 1971 (Sn) - Kartman, 1970 (Sn)

Rouche 1971 / Sm

POPULATION DYNAMICS

- Adams, 1973 (Sn) - Adams, 1974 (Sn) - Allen, 1943 (Sn) - Allen, 1952 (Sc, Sn) Barkalow, et. al., 1970 (Sc) Brink & Dean, 1966 (Th) Davis, 1969 (Th)
Donohoe, 1965 (Sc, Sn)
Egorov, 1959 (Sv) Jones, 1970 (Sc)
Kemp & Keith, 1970 (Th)
Koshko & Lissilzin, 1937 (Sv)
Mosby, 1969 (Sc)
Nixon & McLain, 1969 (Sc, Sn)
Thompson, 1976 (Sc)
Uhlig, 1957 (Sc)
Voipio, 1969 (Sv)
Wood, 1967 (Th)

- Allen, 1943 (Sn) Baker, 1944 (Sc) - Baumgartner, 1938 (Sn)
- Bennett & Kidd, 1960 (Sn)
- Bertram & Gault, 1952 (Sc, Sn) Colquhoun, 1942 (Sc)
- Dennett & Kidd, 1960 (Sc, Sn) Dice, 1941 (TS)
 Flyger, 1959 (Sc)
 Friley, 1952 (Sn)
 Friley, 1955 (Sn)
 Goodrum, 1937b (Sc, Sn)
- ____Hicks, 1949 (Sn)
- Hoover & Yeager, 1953 (Sn)
- Hunt, 1950 (Sn) Keith, 1956 (Sab) Keith, 1965 (Sab) Kemp & Keith, 1970 (Th)
- Marshall, 1967 (Sc)
- Mosby, 1969 (Sc)
- Nixon & Edwards, 1964 (Sc)
 Nixon, et. al., 1967 (Sc, Sn)
 Park, et. al., 1971 (Sc)
 Perry, 1974 (Sc)
 Rasmussen, et. al., 1975 (Sab)
- Rhodes, 1971 (Sn) Shorten & Courtier, 1955 (Sc) Teplov, 1952 (Sv) Uhlig, 1956b (Sc)

POPULATION FLUCTUATIONS

- Allen, 1943 (Sn)

Allison, 1953 (Sc) Anon, 1946a (Sc) - Baker, 1944 (Sc, Sn) Barkalow & Soots, 1965 (Sc) Bartholomew, 1933 (Sv) Berwin, 1974 (Sc) Chapman, 1938a (Sc) Collett, 1907 (Sv) Collett, 1911 (Sv) Craddock, 1951 (Sv) Fitter, 1939 (Sv) Formosov, 1933 (Sv) - Fouch, 1962 (Sn) Goodrum, 1938b (Sc) Goodrum, 1940 (Sc) - Goodrum, 1966 (Sc, Sn) Hamilton, 1939 (Th) Hansen & Schiodte, 1892 (Sv) Hewson, 1953 (Sv) Keith, 1956 (Sab) Keith, 1965 (Sab) Kemp, 1970 (Th) Lampio, 1967 (Sv) Middleton, 1930 (Sc, Sv) Middleton, 1932 (Sc) Mikheeva, 1973 (Sv) Minser, 1973 (Sc) Moffat, 1938 (Sv) Odum, 1949 (Th) Soper, 1923 (Sc)

POPULATIONS

- Allen, 1938 (Sn) - Allen, 1942 (Sn) Barnes & Duncan, 1954 (Sc) -Baumgartner, 1940c (Sn) Cansdale, 1951 (Sc) Colquhoun, 1942 (Sc) Cordes & Barkalow, 1973 (Sc) Davis, 1969 (Th) Algert 19 59 (Sc) - Donohoe, 1959 (Sc, Sn) - Hicks, 1938 (Sc, Sn) --- Hoover & Yeager, 1953 (Sn) -Jordan, 1971 (Sn) and Me Lain (1969) Kidd, 1955 (TS) Nixon, 1975 (Sc^{*}, S_n) - Peterle & Fouch, 1959 (Sn) Rasmussen, 1941 (Sk) Rusch, 1970 (Th) --- Schultz, 1957 (Sc, Sn) 💶 Thoma & Marshall, 1960 (Sc, Sn)

-Thomson, 1952 (Sn) Uhlig, 1956a (Sc) Uhlig, 1956b (Sc)

PREDATION BY

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Adams, 1939 (Th)
Alkon, 1962 (Th)
Bailey, 1923 (Sc)
Brackbill, 1967 (Sc)
Delmee, et. al., 1972 (Sv)
Hamilton, 1934 (Th)
Ingram, 1940 (Th)
McClelland, 1948 (Th)
Prescot, 1967 (Sc)
Russell, 1929 (Td)
Thoms, 1922 (Th)
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PREDATION ON

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Allen, 1942 (Sk)
-Allen, 1943 (Sn)
  Barkalow & Soots, 1965 (Sc)
 Bartholomew, 1933 (Sc)
  Beckwith, 1957 (Sc)
  Brown & McGuire, 1975 (Sau)
  Brunton & Pittaway, 1971 (Th)
  Cole, 1922 (Th)
  Davis, 1950 (Sc)
  Eicholtz, 1951 (Sc)
- English, 1934 (Sn, Th)
- Errington, 1932 (Sn)
  Errington, 1933 (Gen)
-Errington, et. al., 1940 (Sn)
  Farentinos, 1972 (Sab)
  Glue, 1973 (Sc)
  Goldman, 1928 (Sk)
  Grakov, 1962 (Sv)
  Hamilton, 1934 (Sc)
  Heller, 1950 (Sv)
  Ingles, 1947 (Sg)
  Johnson, 1970 (Th)
  Luttich, et. al., 1970 (Th)
-Moore, 1957 (Sn)
  Murie, 1936 (Sg) Nellis & Keith 1968 (Th)
  Ofelt, 1975 (Th)
-Packard, 1954 (Sn)
  Progulske, 1955 (Sc)
  Pulliainen, 1973 (Sv)
  Reynolds, 1963 (Sab)
  Sheffield & Barkalow, 1970 (Sc)
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Smith, 1965 (Th, Td) Van Zyll de Jong, 1966 (Th) Uhler, et. al., 1939 (Sc) Yazan, 1970 (Sv)

PRODUCTIVITY

-Nixon, 1965 (Sc, Sn)

PROTECTIVE ackard, 1954 (Sc. Sn)

PSYCHOLOGY EXPERIMENTS

Hassmann, 1952 (Sv) - Hitchcock, et. al., 1963 (Sc, Sn) - King & Tallis, 1967 (Sn) - King, et. al., 1968 (Sn) Kolb & Franken, 1973 (Th) Michels, et. al., 1962 (Sc)

RABIES

Pritchett, 1938 (Sc) Winkler, et. al., 1972 (Sc)

RELEASES

- Bailey, 1923 (Sc, Sn)

REPRODUCTION

Allanson, 1933 (Sc)
Allen, 1942 (Sn)
Allen, 1943 (Sn)
Allen, 1948 (Sc, Sn)
Allison, 1953 (Sc)
Anon, 1941b (Sc)
Anon, 1945c (Sc)
Anon, 1950b (Sc)
Asdell, 1964 (Sc, Sn, Sv, Th)
Bailey, 1932 (Sab, Td)
Bailey, 1936 (Sg, Td)
Barber, 1953 (Sc)
Barkalow & Soots, 1965 (Sc)
Bauer & Dusing, 1961 (Sc)

Brown & Martan, 1972 (TS) - Brown & Yeager, 1945 (Sn) Carlson, 1940 (Sc) Chapman, 1938a (Sc) Colin, 1957 (Sc) Collett, 1907 (Sv) Collett, 1911 (Sv) Cowles, 1977 (Sc) Davis, 1950 (Sc) Davis, 1969 (Th) Deanseley & Parkes, 1933 (Sc) Degn, 1973 (Sv) Dolbeer, 1973 (Th) - Dozier & Hall, 1944 (Sn) Eibl-Eibesfeldt, 1951 (Sv) Farentinos, 1972 (Sab) Ferron & Prescott, 1977 (Th) Flyger & Cooper, 1967 (Sc) - Goodrum, 1937b (Sc, Sn) Goodrum, 1940 (Sc) Hamilton, 1939 (Th) Hatt, 1943 (Th, Td) Hediger, 1945 (Sv) Hoffman & Kirkpatrick, 1960 (Sc) Hugues, 1938 (Sv) Jones & Genoways, 1971 (Sde, Sri) Keith, 1956 (Sab) 1959 (Se) 1956) Sc) Keith, 1965 (Sab) Kirkpatrick & Hoffman, 1960 (Sc) Lampio, 1967 (Sv) - Longley, 1963 (Sc, Sn) - Marsh, 1951 (Sc, Sn) -- Martan, et. al., 1970 (Sn, Sc) McCloskey, 1969 (Sn) - McCloskey & Vohs, 1966 (Sn) - McCloskey & Vohs, 1971 (Sn) Millais, 1905 (Sv) Millar, 1970a (Th) Millar, 1970b (Th) Moran, 1952 (Sc) Moran, 1953c (Sc) Newell & Kirkpatrick, 1968 (Sc) Nares, 1950 (Sc) Naumov, 1934c (Sv) Nixon & McClain, 1975 (Sc) Peery, 1948 (Sc) Redmond, 1951 (Sc) Redmond, 1953 (Sc) Roecker, 1951 (Sc) Rowlands, 1938 (Sv) Sanderson & Berry, 1973 (Sc) Shorten, 1951 (Sc) Shorten & Courtier, 1955 (Sc)

Smith, 1967 (Sc) Soper, 1942 (Th) Swanson, 1970 (Th) Thornburg, 1946 (Sab) Turner, 1974 (Th) Uhlig, 1956b (Sc) Yamatani, 1969 (Sv)

SARCOCYSTIS

Davidson, 1976 (Sc)

SCABIES

Stone, et. al., 1972 (Sc)

SCENT MARKING

Taylor, 1968 (Sc)

SEX RATIO

- Allen, 1942 (Sn) - Allen, 1949 (Sn) Allison, 1953 (Sc) Amin, 1974 (Sc) - Baumgartner, 1937 (Sn) Baumgartner, 1940c (Sn) Bennett & Kidd, 1960 (Sau) - Bertram & Gault, 1952 (Sc, Sn) Brown & McGuire, 1975 (Sau) Brown & Yeager, 1945 (Sc) Chapman, 1938a (Sc) Colin, 1957 (Sc) Davis, 1969 (Th) Davis & Sealander, 1971 (Th) - Dennett & Kidd, 1960 (Sc, Sn) Donohoe, 1961 (Sc, Sau) - Donohoe, 1965 (Sc, Sn) Farentinos, 1972 (Sab) Ferron & Prescott, 1977 (Th) Hamilton, 1969 (Sc) - Hoover, 1953 (Sn) -Jordan, 1971 (Sn) Kemp & Keith, 1970 (Th) Keith, 1956 (Sab) - Kline, 1965 (Sc, Sn) Lampio, 1967 (Sv) Layne, 1954b (Th)

Longley, 1963 (Sc, Sn)
Marsh, 1951 (Sc, Sn)
Moran, 1952 (Sc)
Moulton & Thompson, 1971 (Sc, Sn)
Nixon, 1965 (Sc, Sn)
Nixon, et. al., 1974 (Sn)
Robinson & Mct. Gowan, 1954 (Sc)
Sanderson, 1954 (TS)
Shorten, 1951 (Sc)
Shorten & Courtier, 1955 (Sc)
Taylor, et. al., 1971 (Sc)
Uhlig, 1952 (Sc)
Uhlig, 1957 (Sc)
Yeager, 1959 (Sn)

SHOCK

Allen, 1943 (Sn)
 Allison, 1953 (Sc)
 Guthrie, et. al., 1967 (Sc)
 Ludwick, et. al., 1969 (Sc)

SIPHONAPTERA

Bell & Chalgren, 1943 (Sc) Freeman, 1941 (Sc) Harkema, 1936 (Sc) Parker, 1968 (Sc) Shorten & Courtier, 1955 (Sc)

SIZE & WEIGHTS

- Allen, 1943 (Sn) Allison, 1953 (Sc)
- Baumgartner, 1937 (Sn)
- Brown & Yeager, 1945 (Sn) Eichhorn, 1962 (Sc) Jones & Genoways, 1971 (Sri) Keith, 1956 (Sab) Smith, 1965 (Th, Td)

SPREAD

Bergman, 1932 (Sv)
 Hamilton, 1963 (Sn)
 Kolstoe, 1968 (Sn)
 Lloyd, 1962 (Sc)
 Mortensen, 1965 (Sv)

Tate, 1868 (Sv) Walker, 1923 (Th) SQUIRRELS: GENERAL Allen, 1878 Allen, 1878 Alston, 1878 Barry, 1972 Black, 1963 MacClintock, 1970

STATUS

Allen, 1942 (Sk, Sn) Degn, 1974 (Sv)

STOCKING (TRANS-LOCATION)

Johnson, 1957 (Sn)
 Taylor, et. al., 1971 (Sc)

STOMACH CONTENTS

- Baumgartner, 1939 (Sn)

SUB-SPECIES

Anderson, 1962 (Sco)

SURVEY

- Allen, 1899 (Sc)
- Black, 1936 (Sn)
- Kidd, 1954 (Sc, Sn)
- Schultz, 1957 (Sc, Sn)

SWIMMING

- Bashiruliah, 1974 (Sn) Chape, 1951 (Sv) Leavey, 1951 (Sv) Parkinson, 1976 (Sc) Pope, 1924 (Th) Rand, 1933 (Th) Steinbacher, 1940 (Sv) TAIL-TANGLING

McClung, 1952 (Sc)

TAXONOMY

Allen, 1899 (TS) Allen, 1915 (TS) Anderson, 1941 (Th) Bachman, 1839a (TS) Bachman, 1839b (TS) - Bailey, 1920 (Sn) Bailey, 1937 (Sc) Bangs, 1896 (TS) - Barkalow, 1954 (Sn) - Barkalow, 1956 (Sn) Barrett-Hamilton, 1899 (Sv) Black, 1963 (TS) Burnett & Dickerman, 1956 (Th) Degn, 1973 (Sv) Doutt, 1951 (Sar) Durrant & Kelson, 1947 (Sab) Durrant & Hansen, 1954 (Th) - Evans, 1968 (Sn) Gray, 1867 (TS) Hayward, 1941 (Th) Hight, et. al., 1974 (TS) - Howell, 1919 (Sn) Howell, 1929 (Th) Howell, 1936 (Tre, Th) Howell, 1942 (Th) Howell, 1943 (Th) 🗕 Hubbard & Banks, 1970 (Sc, Sn) Jones & Cortner, 1960 (Sc) Kelson, 1952 (Sv) Lee & Hoffmeister, 1963 (<u>S. nayaritensis</u>) Long & Captain, 1974 (TS) - Lowery & Davis, 1942 (Sn) Major, 1893 (TS) McPherson, 1971 (Sva) Miller, 1955 (TS) Moore, 1960 (Sc) Müeller, 1971 (S. ingrami) Musser, 1967 (Sau) Musser, 1970 (Sau, S. nigrescens) Nelson, 1945 (Th) - Poole, 1944 (Sn) Sanford, 1963 (Sc) Seaman, 1975 (TS) Sidorowicz, 1970 (Sv) Sidorowicz, 1971 (Sv)

Stephens, 1892 (<u>S</u>. <u>fossor</u>) Stephens, 1892 (<u>S</u>. <u>leporinus</u>) Sowerby, 1921 (Sv) Sulinski, 1964 (<u>S</u>. <u>warthae</u>) Swarth, 1921 (Th) True, 1894 (Sab) Voipio, 1956 (Sv) Voipio, 1957 (Sv)

TECHNIQUES

- Barry, 1972 (Sn) - Beal, 1967 (Sc, Sn) Doebel, 1967 (Sc) Donohoe & Beal, 1972 (Sc) Drew, 1948 (TS) Halvorson, 1972 (Th) Hendricks & Fayer, 1973 (Sc) Jacobson & Kirkpatrick, 1973 (Sc) Mellace, et. al., 1974 (Sc) Patton, et. al., 1976 (Sab) Rasmussen, et. al., 1975 (Sab) Sharp & Malcom, 1955 (Sc) Shorten & Courtier, 1955 (Sc) - Smith, 1970 (Sn) Ward & Leonard, 1968 (Sc) -Wood, 1970 (Sn) Wood, 1976 (Sc)

TEETH

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England, 1936 (Sc)
Kiris, 1937 (Sv)
Miyao, 1971 (Gen)
-- Moore, 1956 (Sn)
Stoner, 1918 (Sg)
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THYROID GLAND

Hoffman & Kirkpatrick, 1960 (Sc)

TICKS

Grulich, et. al., 1967 (Sv) Harkema, 1936 (Sc) Milne, 1949 (Sv) Redmond, 1953 (Sc) Sonenshine & Stout, 1971 (Sc)

TOOTH MARKS

Pearce, 1938 (TS) Pearce, 1947 (Sc, Th)

TOXICANT BURDEN

Wise, 1968 (Sc)

TOXOPLASMA

Coles, 1914 (TS) Jacobs, et. al., 1962 (Sc)

TRANSPLANTING

Flyger, 1955 (Sc) - Hibbard, 1956 (Sc, Sn) Keith, 1956 (Sab) Oregon, 1973 (TS)

TRAPPING

- Allen, 1943 (Sn) Allison, 1953 (Sc) Anon, 1953c (Sc) Anon, 1955 (Sc) - Baumgartner, 1940 (Sn) Bequaert, 1958 (TS) - Dennett & Kidd, 1960 (Sc, Sn) - Donohoe, 1965 (Sc, Sn) Eley, 1967 (Sc) Guthrie, et. al., 1967 (Sc) Kidd & Soileau, 1965 (TS) - Longley, 1963 (Sc, Sn) - Nixon, 1965 (Sn) Nixon, et. al., 1967 (Sc) Patton, et. al., 1976 (Sab) Perry, 1977 (Sc) Sharp, 1958 (Sc) Shirley, 1953 (Sc) Soots, 1965 (Sc) Taylor, 1970 (Sc) Taylor, et. al., 1971 (Sc)

TREMATODA

Davidson, 1976 (Sc) Price 012

TRYPANOSOMES

Dorney, 1967 (Th) Dorney, 1969 (Th)

URINE

Hoff, et. al., 1976 (Sc)

USE

Olsen, 1945 (Gen) Sviridenko, 1971 (Sv)

VISION

Dodwell & Bessant, 1961 (Sc) Locher, 1933 (Sv)

VIRUSES

Amin & Thompson, 1974 (Sc) Colin, 1957 (Sc) Fyson, et. al., 1975 (Th) Hoff, et. al., 1971 (Th) Issel, et. al., 1975 (Sc) Kempski & Losinski, 1972 (Sv) Kilham, 1955 (Sc) Kilham, 1959 (Sc) Kilham, et. al., 1953 (Sc) Kirschenstein, 1958 (Sc) LeDuc, 1975 (Sc) Lennette, et. al., 1956 (Sg) Levine, 1934 (Sc) McLean, 1973 (Th) Regnery, 1976 (Sg) Vizoso, 1969 (Sv) Vizoso & Hall, 1964 (Sv) Vizoso, et. al., 1964 (Sv)

VOCALIZATION

Ingles, 1947 (Sg) Nice, et. al., 1956 (Th) Smith, 1965 (Th, Td) Smith, 1968 (Th, Td) WEIGHT

- Amin, 1974 (Sc, Sn) --- Baker, 1944 (Sc, Sn) Barrett-Hamilton, 1910 (Sv) - Baumgartner, 1938 (Sn) - Baumgartner, 1940c (Sn) Brown & Yeager, 1945 (Sc) Chapman, 1938a (Sc) Collett, 1907 (Sv) Colin, 1957 (Sc) - Dozier & Hall, 1944 (Sn) - Goodrum, 1972 (Sn) Grodzinski, 1971 (Th) Hamilton, 1969 (Sc) - Jordan, 1961 (Sn) Keith, 1956 (Sab) Keith, 1965 (Sab) - Longley, 1963 (Sc, Sn) - McCloskey & Vohs, 1966 (Sn) Middleton, 1930 (Sc) Patton, et. al., 1976 (Sk, Sab) --- Short & Duke, 1971 (Sc, Sn)
- Thoma & Marshall, 1960 (Sc, Sn) Uhlig, 1955b (Sc)

WINTER ACTIVITY

Pruitt, 1960 (Th)

YOUNG (DESCRIPTION)

Ingles, 1947 (Sg)

ZOONOSIS

Delamater, 1939 (TS) - Diesch, et. al., 1967 (Sn) English, 1969 (Sc) Enright, 1971 (Sc) Evans, 1937 (TS) Francis, 1937 (TS) Lewis, et. al., 1975 (Sc) Abbott, Charles Conrad. 1868. Catalog of vertebrate animals of New Jersey. Geology of New Jersey, Newark. pp751-830.

. 1885. A naturalist rambles about home. D. Appleton & Co. 785pp. References to squirrels in New Jersey are confusing and it is difficult to know which species are discussed.

- Abbott, H.G. & W.H. Belig. 1961. Juniper seed, a winter food of red squirrels in Massachusetts. J MAMMAL 42(2):240-244.
- Abbott, Jackson W. 1958. Death on the highway. VIRGINIA WILDLIFE 19(6):16-17. Gray squirrels were the most abundant highway casualties on an 11 mile stretch of a Virginia highway.
- Abplanalp, Paul. 1970. Some subcortical connections of the visual system in tree shrews and squirrels. BRAIN BEHAV Vol. 3, pp155-168.

_____. 1974. Topography of retinal efferent connections in Sciurids. BRAIN BEHAV 9(5):333-375.

- Ackerman, Ralph and Peter D. Weigl. 1970. Dominance relations of red and grey squirrels. ECOLOGY 51(2):332-334. Captive T. hudsonicus and S. carolinensis shared a nest box at night. Gray squirrels did not share a nest box with each other.
- Adams, Charles C. 1927. The economic and social importance of animals in forestry with special reference to wildlife. ROOSEVELT WILDLIFE BULLETIN 3(4):509-676.
- Adams, Clark Edward. 1973. Aspects of fox squirrel (*Sciurus niger*) home range and behavior as determined by radiotelemetry technique. PROC NEBRASKA ACAD SCI AND AFFIL SCI 83rd Annual Meeting p5.

. 1973. Population dynamics of fox squirrels, Sciurus niger, in selected areas in Seward County, Nebraska. Ph.D. Thesis, University of Nebraska 165pp.

. 1974. Utilization of home ranges to determine probabilities of interactions between members of fox squirrel, *Sciurus niger* populations. PROC NEBRASKA ACAD SCI AND AFFIL Vol. 84 pp6-7.

. 1976. Measurements and characteristics of fox squirrel, Sciurus niger refiventer. AM MIDL NAT 95(1):211-215. The home range of 20 male fox squirrels averaged 7.56 hectares while that of 17 females averaged 3.55 hectares. Yearling fox squirrels had an average home range size of 15.2 hectares. There is a relationship between size of home range and size of woodlot.

- Adams, Lowell. 1939. Sierra chickaree eats young blue-fronted jays. YOSEMITE NATURE NOTES 18(8):93.
 - . 1955. Pine squirrels reduce future crops of Ponderosa pine cones. J FOREST 53(1):35. *T. hudsonicus* often cuts the shoots from the ends of branches and eats the cambium layer. The ground beneath the trees may be littered with these shoots many of which bear immature conelets thus reducing future cone crops.
- Ah, Hyong-Sun. 1964. Zumptiella coreaensis, a new species of nasal mite from the Korean squirrel, Sciurus vulgaris coreae Sowerby, 1921. PARASITOL 54(3):403-408.
- Aldrich, John Warren and Benjamin Patterson Bole, Jr. 1937. The birds and mammals of the western slope of the Azuero Peninsula (Republic of Panama). Science Publications, Cleveland Museum of Natural History 7:5-139, 189-196.
- Aleksiuk, Michael. 1970. The occurrence of brown adipose tissue in the adult red squirrel (Tamiascurus hudsonicus). CAN J ZOOL 48(1):188-189.
 - . 1971. Seasonal dynamics of brown adipose tissue function in the red squirrel (Tamiasciurus hudsonicus). COMP BIO A 38(4):723-731.
- Alkon, Philip U. 1962. Red quirrel predation on nestling cottontail. N Y FISH AND GAME JOUR 9(2):142.
- Allan, Philip F. 1935. Bone cache of a gray squirrel. J MAMMAL 16(4):326.
- Allanson, M. 1933. The reproductive processes of certain mammals. Part V. Changes in the reproductive organs of the male gray squirrel (Sciurus corolinensis). PHI T ROY 222B:79-96.
- Allen, Durward L. 1938. Ecological studies on the vertebrate fauna of a 500-acre farm in Kalamazoo County, Michigan. ECOL MONOGR 8:347-436.

. 1939. Report of fox squirrel investigations at the Swan Lake Wildlife Experiment Station. Michigan Department of Conservation, Game Division. Unpublished Report 1-198.

. 1940. A point on fox squirrel management. Shooting into nests is wasteful hunting. MICH CONSERVATIONIST 9(12):11.

. 1941. Rose Lake Wildlife Experiment Station. Second Annual Report. Michigan Department of Conservation, Game Division. 365pp. (Mimeo). . 1942. Populations and habits of the fox squirrel in Allegan County, Michigan. AM MIDL NAT 27(2):338-379. A comprehensive general article with much information. Scabies is an important cause of mortality. Highway mortality is conspicuous, but predation is unimportant.

. 1943. Michigan Fox Squirrel Management.Game Division, Department of Conservation, Michigan 404pp. This well illustrated book covers so many aspects of fox squirrel biology that a short abstract cannot adequately describe its contents.

and Howard D. McGinley. 1947. A method for the year-to-year measurement of mast yields. J WILDL MAN 11(2):184-185. Trees growing in open situations were sampled by removing and counting all the mast (acorns and hickory nuts) on the ground from a wedge shaped portion of the total crown at weekly intervals. The size of the wedge is determined by the size of the mast crop and the requirements for getting an adequate sample and could vary from 8 to 50 percent of the tree crown area.

- Allen, Grover Morrill. 1902. The mammals of Margarita Island, Venezuela. PROC BIOL SOC WASH 15:91-97.
 - . 1942. Extinct and vanishing mammals of the western hemisphere with the marine species of all the oceans. Special Publication No. 11. American Commission for International Wildlife Protection. 620pp. Listed are S. Kaibabensis, S. niger avicennia and S. n. cinereus.
- Allen, J.A. 1868. Catalogue of the mammals of Massachusetts with a critical revision of the species. BULL MUS OF COMP ZOOL pp 143-252. Fox squirreis are rare in most of the state.
- ______. 1871. On the mammals and winter birds of east Florida, with an examination of certain assumed specific characters in birds, and a sketch of the bird-fauna of eastern North America. BULL MUS OF ZOOL pp161-450.
- . 1874. On geographical variation in color among North American squirrels: with a list of species and varieties of the American Sciuridae occurring north of Mexico. PROC BOSTON SOC NAT HIST 16:276-294.

. 1877. Sciuridae. Monographs of North American Rodentia. 11:631-939. In: REP U S GEOL SURV Territories.

_____. 1878. Synonymatic list of American Scuri. BULL U S GEOL SURV IV:877-887.

. 1891. On seasonal variations in colors in *Sciurus hudsonicus*. BULL AM MUS NAT HIST 3:41-44.

The black lateral line is characteristic of the summer pelt.

⁵. 1898. Revision of the chickarees, or North American red quirrels (subgenus *Tamiasciurus*). BULL A MUS NAT HIST 10:249-298. Based on examinations of 1085 specimens the author concludes that there are four species of *Tamiasciurus*, i.e. *hudsonicus douglasii*, *fremonti* and *mearnsi*. Keys to species and subspecies are given as well as descriptions.

. 1899. The North-American arboreal squirrels. AM NATURAL 33(392):635-642.

This is a discussion of E.W. Nelson's 1899 paper and includes a list of 10 species and 25 subspecies of *Sciurus* (including *Tamiasciurus*) found north of Mexico.

. 1904. Mammals from southern Mexico and Central and South America. BULL AM MUS NAT HIST 20:29-80.

. 1908. Mammals from Nicaragua. BULL AM MUS NAT HIST 24:647-670.

. 1910. Additional mammals from Nicaragua. BULL AM MUS NAT HIST 28:87-115.

. 1914. Review of the Genus Microsciurus. BULL AM MUS NAT HIST 33(11)20pp.

_____. 1915. Review of the South American Sciuridae. BULL AM MUS NAT HIST 34 (Art. 8):147-309. Purely taxonomic.

Allen, John M. 1947a. Average squirrel hunter bags only one per trip. OUTDOOR INDIANA 14(2):2-3.

. 1947b. Mast production - a key to squirrel crops. OUTDOOR INDIANA 14(5):18.

_____. 1947c. Squirrel hunters get results in state forests. OUTDOOR INDIANA.

______. 1948a. Mast production and squirrel crops. 10th Midwest Wildl Con, Ann Arbor, Michigan 3pp mimeo.

. 1948b. Squirrelitis. OUTDOOR INDIANA 15(8):4-5.

______. 1950. What about the squirrel season? OUTDOOR INDIANA 17(9):14-15, 19.

_____. 1952. Gray and fox squirrel management in Indiana. IND DEPT CONS P-R BULLETIN NO. 1 pp 1-112. 4.

_____. 1957. Gray and fox squirrels. IND DIV FISH AND GAME P-R BULLETIN NO. 3. pp 151-174.

- Allen, Ross and Wilfred T. Neill. 1955. The eastern gray squirrel. FLA WILDL 9(5):7,49. Popular general account.
- Allison, Ray. 1948. Preliminary report on gray squirrel investigations in North Carolina. JOURNAL OF THE ELISHA MITCHELL SCI SOC 64(2):177. Very few squirrels are infected by bot-flies after October 15.

. 1949a. A list history study of *Sciurus carolinensis* with notes on the seasonal incidence of infestation with warblefly larvae (*Cuterebra sp.*). M.S. Thesis, North Carolina State University. 144pp.

- . 1949b. A list history study of *Sciurus carolinensis* with notes on the seasonal incidence of infestation with the warblefly larvae (*Cuterebra sp.*) Southeast Assoc Game and Fish Commissioners Conf.
- . 1953. North Carolina gray squirrel investigations, 1947-1950. North Carolina Wildlife Resources Commission. Raleigh, North Carolina 61pp.
- Alpin, O.V. 1885. Habits of the squirrel. ZOOLOGIST 9(3):479-578.
- Alston, Edward R. 1865. On the habits of the squirrel. 200LOGIST 9481-9484.

_____. 1878a. On the squirrels of the neotropical region. PROC ZOOL SOC LOND pp656-670.

A discussion of species based on examination of species in Museums of Berlin, Paris & London. Twelve species are described with "lumping" of some species.

______. 1878b. Supplementary note on the neotropical squirrels. PROC ZOOL SOC LOND 954pp.

- Alvarez, Ticul. 1961. Sinopsis de las ardillas arboreas del genero Sciurus en Mexico. AN ESCUELA CIENC BIOL MEX 10(1-4):123-148.
 - and Clemencia E. Avina. 1963. Notas acerca de algunas especies mexicanas de ardillas del genero *Sciurus* (Rodentia: Sciuridae). REV SOC MEX NAT HIST 24:33-39. Descriptions of specimens of genus *Sciurus*, four species, in the National University Museum of Mexico.

Ames, Oakes I. 1946. Squirrels and bird window feeders. BULL MASS AUDUBON SOC 29(10):311-312.

Page le Missing

. 1934. Sun spots and squirrel migrations. LITERARY DIGEST. January 20.

Aplin, O.V. 1885. Habits of the squirrel. ZOOLOGIST 3(9):478-479.

- Applegate, Roger D. and Rita C. McCord. 1974. A description of swimming in the fox squirrel. AM MIDL NAT 92(1):255. Two fox squirrels were observed swimming in an Illinois river.
- Archibald, S. 1904. On the damage done to fir-trees by squirrels. TRANS EDINB FLD NAT SOC MICROSE 5:95-96.
- Arden, G.B. and Katharine Tansley. 1955. The spectral sensitivity of the pure cone retina of the grey squirrel (Sciurus carolinensis leucotis). J PHYS 127(3):592-602.
 - and Pirscilla H. Silver. 1962. Visual thresholds and spectral sensitivity of the grey squirrel (*Sciurus carolinensis Leucotis*). J PHYS 163(3):540-557. The dark-adapted threshold approaches that of man.
- Arlamowska-Palider, Anna and Jacek Zablocki. 1972. Musculus omotransversarius in the light of comparative anatomy.
 ACTA THERIOL 17(29):381-398. Illus. Polish summary.
 Both the musculus omotransversarius and omotransversarius dorsalis occur in the European red squirrel. These muscles begin on the atlas and the first of them extends to the process acromialis scapulae, covering the insertion of the capitad bundles of m. trapezius. The second fuses with pars capitis of m. rhomboideus and ends at the base of crista scapulae.
- Armstrong, David M. 1972. Distribution of mammals in Colorado. UNIV KANS MUS NAT HIST MONOGR No. 3 415 pp. Fox squirrel distribution is the result of introductions and natural spread. Habitat is restricted to river bottoms, towns or hedgerows along ditch banks.
- Arzamasov, I.T., N.I. Dyl'ko, I.V. Merkusheva, and Yu T. Petrovskii. 1966. (Parasites of Sciuridae in Belorussia (Squirrel, Rodentia).) ZOOL SHUR 45(6):830-835. In Russian.
- Asanuma, K. 1957. Chiggers found on a squirrel, Sciurus vulgaris lis in Japan. SANIT ZOOL 8:181-182. In Japanese.
- Asdell, S.A. 1964. PATTERNS OF MAMMALIAN REPRODUCTION. 2nd Edition 2-11, 5-34Cornell University Press. 670pp. This includes a summary of status of knowledge of squirrel reproduction by species.
- Asserson III, W.C. 1974. Western gray squirrel study in Kern County, California. California Department of Fish and Game. Administrative Report 74-1.

7.

6-18

- Atkeson, Thomas Z. 1958. Shotguns versus rifles in gray squirrel hunting. J WILDL MAN 22(1):99-100. Alabama squirrel hunters using rifles hunted longer per animal bagged, fired more shots, took less game and hunted with a possibly lower rate of crippling than did hunters using shotguns.
 - and John L. Heflin. 1947. Wheeler squirrel hunt. ALA CONSERV 18(9):9.
 - and John L. Heflin. 1948. Wheeler squirrel hunt. ALA CONSERV 19(10):8.
 - and Lawrence Givens. 1951. Grey squirrel parasitism by heel fly larvae. J WILDL MAN 15(1):105-106.
 - and D.C. Hulse. 1952. Crippling as a factor in gray squirrel hunting. J WILDL MAN 16(2):230-232. Crippling loss was 12.51 percent for .22 rifles and 9.45 percent for shotguns. Crippling loss was 8.67 percent when dogs were used and 11.04 percent without dogs.
- Audubon, J.J. and J. Bachman. 1854. The Quadrupeds of North America. 383pp. Text and paintings reprinted in: Cahalane, Victor H. (ed). 1967 The Imperial Collection of Audubon Animals. Bonanza Books, New York. 307pp.
- Austin, M.D. and S.W. Rolfe. 1938. The grey squirrel: A review of the present situation. JL S-EAST AGRIC COLL Wye 42:93-98.
- Bachman, John. 1838a. Habits and characteristics of the North American squirrels. PROC ZOOL SOC LOND 6:85-103.

______. 1838b. Monograph of the species of squirrel inhabitin North America. PROC ZOOL SOC LOND 6:85-103.

. 1839a. Monograph of the genus *Sciurus*, with descriptions of new species and their varieties as existing in North America. NAT HIST MAG 3 No. 5.

. 1839b. Abstract of a monograph of the genus *Sciurus*, with descriptions of several new species and varieties. AM JOUR SCI ARTS 37:290-310.

- Badger, C.W. 1949. Black squirrels. FIELD, London pp194-946. Melanistic S. vulgaris in Great Britain.
- Bagg, A.M. 1952. Anting not exclusively an avian trait. J MAMMAL 33:243. A gray squirrel rolled and rubbed its body on the ground where many small ants were present.

- Bailey, Barnard. 1923. Meat-eating propensities of some rodents of Minnesota. J MAMMAL 4(2):129. Gray squirrels robbed nests of Baltimore oriole, chipping sparrow, robin and bluebird. A gray squirrel was seen carrying a half grown bluebird.
- Bailey, Florence Merriam. 1932. Abert squirrel burying pine cones. J MAMMAL 13(2):165-166. Abert squirrels bury cones of yellow pine. A Mearn's woodpecker chased a squirrel out of a tree in which the woodpecker had many storage holes.
- Bailey, Harold H. 1920. A new fox squirrel from the Eastern Shore of Maryland. BULL BAILEY MUSEUM LIBR NAT HIST 1(1).

. 1937. Changes of name of Sciurus carolinensis minutus Bailey. J MAMMAL 18(4):516. Changed to Sciurus carolinensis matecumbei from the Florida keys.

- Bailey, John Wendell. 1946. The Mammals of Virginia. Williams Printing Company, Richmond, Virginia. 416pp. S. niger has not been reported since 1895 from the Dismal Swamp in Norfolk County, Virginia.
- Bailey, Vernon. 1923. Mammals of the District of Columbia. PROC BIOL SOC WASH 36, pp103-138. Red squirrels were common from 1902 to 1906 in parts of Washington D.C. Gray squirrels were released in Washington parks by several people. Black squirrels from Ontario were released in the National Zoological Park. One shipment of 10 was in 1906. Fox squirrels have been recorded from west of Plummers Island. They have been released in Washington on several occasions but never took hold.

1925. The Carolina gray squirrel. NATURE MAG May pp303-306.

. 1932. Mammals of New Mexico. U.S. Dept Agric Bureau of Biological Survey. NORTH AMERICAN FAUNA #53. 416pp. During good cone years the main food of Abert squirrels is yellow pine seeds. They also eat the bark of tender twigs and staminate catkins of yellow pine. The Arizona gray is found in canyons and stream valleys. Chickarees occupy spruce and fir forests but not pines.

_. 1936. The mammals and life zones of Oregon. U S Dept Agric Bureau of of Biological Survey. NORTH AMERICAN FAUNA #55. 416 pp. Sugar pine seeds are one of the favored foods of the California gray squirrel. Yellow pine, Jeffry pine and Douglas fir also furnish food. They sometimes eat bark from tree branches. They are a nuisance in the walnut and filbert growing districts.

5-30

Trapping seems to be the best means of control. The main food of the Douglas squirrel is conifer seeds (Douglas fir, Sitka spruce, hemlock, balsam and pine). Berries, acorns, mushrooms, buds and bark are also eaten. They drink sap from where red-breasted sapsuckers have punctured willow trees.

_____. 1940. Gray squirrels. FRONTIERS 5(1):13-15.

Bailey, Wayne. 1964. Why can't we hunt squirrels in September? W VA CONSERV 28(8):8-15.

______. 1968. 1967 Squirrel season's results. OUTDOOR W VA 32(8):34-35.

_____. 1969. September squirrel season evaluated. OUTDOOR W VA 33(7):5.

Baille, Jas. L., Jr. 1931. A gray red squirrel. CAN FIE NAT 45(8):207.

Baker, M.H.P. 1951. An albino grey squirrel. FIELD, London 198:990.

Baker, Rollin H. 1943. Are hunting laws fair to squirrels? TEX GAME AND FISH 1(2):5,10.

. 1944. An ecological study of tree squirrels in eastern Texas. J MAMMAL 25(1):8-24. Based on time-area counts gray and fox squirrel densities varied from 12 to less than one per acre. During the coldest part of the year squirrels were more active in early morning than they were during the warmer half of the year.

. 1951a. Mammals taken along the Alaska highway. UNIV KANS MUS NAT HIST 5:87-117. Records of *Tamiascuurus* along the highway.

. 1951b. Mammals from Tamaulipas, Mexico. UNIV KANS MUS NAT HIST 5:207-218. Records of Sciurus aureogaster and S. negligens.

. 1956. Mammals of Coahuila, Mexico. UNIV KANS MUS NAT HIST 9:125-335. Records of Sciurus niger and S. alleni.

______. 1959. The gray squirrel - past, present and future. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:390-392.

. 1973. Black phase of the gray squirrel in East Lansing. JACK-PINE WARBLER 51(2). Introductions of melanistic *S. carolinensis* has resulted in

the spread of this color phase in residential sections of the city.

and J. Keever Greer. 1962. Mammals of the Mexican 5-24State of Durango. PUBL MUS MICH STATE UNIV BIOL SER 2(2):29-154.

Bakken, Arnold. 1952. Interrelationships of *Sciurus carolinensis* (Gmelin) and *Sciurus niger* (Linnaeus) in mixed populations. Ph.D. Dissertation, University of Wisconsin. 188pp.

______. 1959. Behavior of gray squirrels. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:393-406.

- Bakko, Eugene Barnard. 1973. Water balance in four species of sciurid mammals. Ph.D. Thesis, University of Minnesota 86pp. S. carolinensis and T. hudsonicus.
- Balcells, E. and R. Palaus. 1955. Ein Albino Eichhornchen, Sciurus vulgaris Linne 1758, aus Nordost-Spanien. SAUGETIER MITTEILUNG, Stuttgart 3(4):174-175.

Balch, R.E. 1942. A note on squirrel damage to conifers. FOR CHRO 18(1):42. Tomiasciurus hudsonicus damages conifers in maritime Canada by nipping off buds. The winter diet of cached material is supplemented by buds of trees. Flower buds of balsam and fir are favorite food items.

- Baldwin, J.T., Jr. 1969. The white squirrels of Chickahominy Park. VIRGINIA WILDL 30(4):8-9.
- Ball, T.V. and L.M. Gershtein. 1966. Comparative data on cytochemical characteristics of the visual cortex in the squirrel and rat. ARKH ANAT GISTOL EMBRIOL 50(6):47-53. In Russian with English summary.

Ballou, W.H. 1927. Squirrels as mushroom eaters. J MAMMAL 8(1).

Bangs, Outram. 1896. A review of the squirrels of eastern North American. PROC BIOL SOC WASH 10:145-167.

_____. 1899. Sciurus (Tamiasciurus) gymnicus. PROC NEW ENGL ZOOL CLUB 1:28.

_____. 1902. Chiriqui mammals. BULL MUS COMP ZOOL 39:17-51.

Banks, Martin. 1972. Red squirrels in Britain. ANIMALS 14(9):400-403.

- Baranyay, J.A. 1968. Squirrel feeding on dwarf mistletoe infections. BI-MONTHLY RESEARCH NOTES - Department of Fisheries, Ottawa 24(5):41-42. Tamiasciurus feeds on the bark of Pinus contorta infected by dwarf mistletoe.
- Barber, Harold L. 1953. Kentucky squirrel studies. KY HAPPY HUNTING GROUND 9(2):24-25.

______. 1954. Gray and fox squirrel food habits investigations. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM. 8:9pp

- . 1957. Squirrel studies. Pittman-Robertson Report W-31R-t. Job IC. Kentucky Department of Fish and Wildlife Resources.
- . 1961. Squirrels, a staple item in the diet of pioneer days, still are one of the most hunted animals; with ample food they'll always be around. KY HAPPY HUNTING GROUND 17(4):4-5, 29. Popular article.
- Barger, N.R. 1949. Red squirrel (Tamiasciurus hudsonicus loquax). WIS CONSERV BULL 14(3):39.

. 1950a. Northern gray squirrel (Sciurus carolinensis leucotis). WIS CONSERV BULL 15(3):38-39.

. 1950b. Western fox squirrel (Sciurus niger rufiventer). WIS CONSERV BULL 15(9):33-34.

Barkalow, Frederick S., Jr. 1954. The status of the names Sciurus niger cinereus Linnaeus and Sciurus niger vulpinus Gmelin. ELISHA MITCHELL SCI SOC 70(1):19-26.

. 1956. Sciurus niger cinereus Linne neotype designation. PROC BIOL SOC WASH 69:13-20. Gives measurements of 36 specimens and designates a neotype. Specimens came from Dorchester and Talbot Counties, Maryland plus Dauphin County, Brandywine Valley, and Lancaster County, Pennsylvania.

. 1965. A gray squirrel nest box photo story. WILDL IN N C (June) 9-11.

. 1967. A record gray squirrel litter. J MAMMAL 48(1):141. A nest of eight young less than 3 days old was found in North Carolina.

, R.R. Hamilton and R.F. Soots, Jr. 1970. The vital statistics of an unexploited gray squirrel population. J WILDL MAN 34(3):489-500.

and Monica Shorten. 1973. The World of the Gray Squirrel. J.B. Lippincott Company, Philadelphia and New York. 160pp.

A popularly written comprehensive summary of gray squirrel biology.

and R.F. Soots, Jr. 1965a. An improved gray squirrel nest box for ecological and management studies. J WILDL MAN 29(4):679-684. A nest box is described which has been useful for capturing wild squirrels. Handling and capture techniques are described. Raccoons and black rat snakes are predators on squirrels. and R.F. Soots, Jr. 1965b. An analysis of the effect of artificial nest boxes on a gray squirrel population. TRANS N A WILDL NAT RESOUR CONF. 30:349-360. Nest boxes increased the carrying capacity of a forest for gray squirrels.

and R.F. Soots, Jr. 1975. Life span and reproductive longevity of the gray squirrel, *Sciurus c. carolinensis* Gmelin. J MAMMAL 56(2):522-524. Twelve wild gray squirrels had reached an age of over six years. One female reached an age of 12½ years and was pregnant at the time of her last capture.

Barnes, G. 1962. Boxes for bushytails. WILDL IN N C

- Barnes, V. and A. Duncan. 1954. The population of grey squirrels in the ground of a college in Surrey. SCHOOL NATURAL STUDIES JOURNAL 49(194):6-10.
- Barnstein, N.J. and H.W. Mossman. 1938. The origin of the penile urethra and bulbourethral glands with particular reference to the red squirrel (*Tamiasciurus hudsonicus*). ANAT REC 72:67-86.

Barrett, Charles. 1934. The gray squirrels in Melbourne. VICTORIAN NAT 51(4):108-110.

. 1955. An Australian animal book. Oxford University Press. 325pp. Several pairs of gray squirrels were released about the turn of the century. They have been restricted to suburban Melbourne south of the Yarra River. Their range is still restricted from Ripponlea to Elsternwick and other suburbs.

Barrett, H.G. 1967. Red squirrels (*Sciurus vulgaris*) at Winston. TRANS SUFFOLK NAT SOC 13(5):336.

Barrett-Hamilton, G.E.H. 1899. On European squirrels. PROC ZOOL SOC LOND pp3-6.
The British squirrel is distinguished from continental specimens by never having a red tail but a brown one which bleaches to a dirty cream or straw color. Descriptions of four subspecies from the continent are given. . 1910. A history of British mammals. Gurney and Jackson. London 748pp.

S. vulgaris was abundant in Ireland until the 15th century and may have become extinct there until re-introductions were made in 1815. Body fur is moulted twice a year and tail hair only once a year. After the tail moult the hairs gradually become bleached and turn almost white.

Barrier, Martin James. 1967. Pelage characteristics of the gray squirrel, Sciurus carolinensis carolinensis Gmelin, in Wake County, North Carolina. M.S. Thesis, North Carolina State University 76pp.

and F.S. Barkalow, Jr. 1967. A rapid technique for aging gray squirrels in winter pelage. J WILDL MAN 31(4):715-719. The banding of guard hairs on the lateral rump region of gray squirrels in winter pelage can be used to distinguish nestlings, juveniles, sub-adults and adults.

- Barrington, B.A., Jr. 1949. Mammals of a North Florida flatwoods. Ph.D. Dissertation, University of Florida.
- Barrington, R.M. 1880. On the introduction of the squirrel into Ireland. PROC SOC DUBLIN (n.s.) 2:615-631.
- Barry, William J. 1972. Methoxyflurane: an anesthetic for field and laboratory use on squirrels. J WILDL MAN 36(3):992-993.
- Barryford, J.P. 1950. Red squirrels in Warwickshire. COUNTRY LIFE 107-1893.
- Bartholomew, James, 1933. The grey squirrel. THE GLASG NAT 11:34-45. Red squirrel nests are usually placed in evergreens whereas gray squirrel nests usually occur in deciduous trees. Gray squirrels are reported to kill and eat young rabbits. A gray squirrel was seen pursuing a red squirrel through the trees, finally catching it and killing it.
- Bashiruliah, A.K.M. 1974. A description of swimming in the fox squirrel. AM MIDL NAT 92(1):255-256.
- Bauer, Alfred and Albert Dusing. 1961. Sexual cycles and breeding seasons of gray squirrels, Sciurus carolinensis Gmelin. TRANS KY ACAD SCI 22(1-2):16-27. There are two sharply defined breeding seasons of gray squirrels in Kentucky.
- Bauer, Erwin A. 1951. Greasy ridge grays. OHIO CONSERV BULL 15(8):16-17. A picture article on squirrel hunting.

14.

Baumgartner, Luther L. 1937. A survey of the 1937 fox squirrel harvest in 27 Ohio counties. OHIO STATE UNIV WILDL RESEARCH STATION RELEASE No. 69. 8pp.

. 1938a. What about the fox squirrel. OHIO CONSERV BULL (Aug.):29.

. 1938b. Population studies of the fox squirrel in Ohio. TRANS WILDL CONF. 3:685-689. A general account of various aspects of squirrel biology.

. 1939a. Foods of the fox squirrel in Ohio. TRANS N AM WILDL CONF. 4:579-584. Food habits were studied by field observations and stomach analysis. 2 to 3% of squirrel food in summer and early autumn is insects.

. 1939b. Fox squirrel dens. J MAMMAL 20(4):456-465. 169 fox squirrel dens were examined. The openings are almost constant in size and shape and are usually oval in outline and average 2.9" x 3.7". Dens are formed by breaking off of a branch from the trunk and subsequent decay with gnawing by squirrels to maintain the opening. A den is probably usable for no more than 10 to 20 years.

. 1939c. A survey of the 1939 squirrel harvest in Ohio. OHIO STATE UNIVERSITY WILDL RESEARCH STATION RELEASE No. 104.

. 1940a. Trapping, handling, and marking fox squirrels. J WILDL MAN 4(4):444-450.

Construction details are given for a wooden trap and a handling cage. Hints for trapping and handling squirels are given. Squirrels were marked using ear tags (re-bent to reduce loss), toe clipping and shaving tail hairs.

. 1940b. The fox squirrel: its life history, habits, and management in Ohio. OHIO STATE UNIVERSITY WILDL RESEARCH STATION RELEASE No. 138.

. 1940c. The fox squirrel: its life history, habits, and management in Ohio. Ph.D. Dissertation, Ohio State University 257pp.

. 1940d. A survey of the 1939 squirrel harvest in Ohio. OHIO STATE UNIVERSITY WILDL RESEARCH STATION RELEASE No. 128. 11pp.

. 1943a. Fox squirrels in Ohio. J WILDL MAN 7(2):193-202. Fox squirels occupy small farm woodlots and prefer oak-hickory

types. Dispersal movements occur in late August and early September probably caused by intra-specific intolerance. . 1943b. Pelage studies of fox squirrels. (Sciurus niger rufiventer). AM MIDL NAT 29(3):588-590.

and A.C. Martin. 1939. Plant histology as an aid in squirrel food-habit studies. J WILDL MAN 3(3):266-268. Properly cleared and mounted plant tissues from squirel stomachs possess sufficiently distinctive structural characteristics for identification.

Baumgras, Philip S. 1942. Population studies and habitat improvement for southern Michigan fox squirrels. Mich Department of Conservation, Game Division. Unpublished Report 112pp.

. 1944. Experimental feeding of captive fox squirrels. J WILDL MAN 8(4):296-300. Red oak acorns are a low quality food.

Bayliss, H.A. 1934. Miscellaneous notes on parasitic worms. ANN MAG NAT HIST 13:223-228.

. 1939. Further records of parasitic worms from British vertebrates. ANN MAG NAT HIST Series II 4:473-498.

- Beal, Roger O. 1967. Radio transmitter-collars for squirrels. J WILDL MAN 31(2):373-374.
- Beale, Donald M. 1962. Growth of the eye lens in relation to age in fox squirrels. J WILDL MAN 26(2):208-211. Weight of dried eye lenses in reliable for separating juveniles, and adults. Adults can perhaps be separated into year classes up to an age of 2¹/₂ years.
- Beatly, M.E. 1932. California gray squirrels. YOSEMITE NATURE NOTES 11(11):5-6.
- Bechthold, G. 1933. Wie öffnet das Eichhörnchen die Nüsse?
 Z Saeugetierkd 8 (3-6): 280-281.
 A description of how Sciurus vulgaris uses its incisors.
- Becker, P. 1934. Eichhörnchen und Blattläuse. Aus der Heimat, Ohringen/Württ 47:61.

Beckwith, Stephen L. 1959. Purple squirrels. FLA WILDL 11(5):18-19, 41. 1,150,000 squirrels were killed (exceeded only by guail and Mourning doves) in the 1955-56 hunting season. These were mostly S. carolinensis with a few S. niger. The most preferred acorns are from live oak and blue jack (or upland willow) oak. Water oak acorns are preferred least. A large mouth bass was reported to have swallowed a full grown gray squirrel. Bedford, Duke of. 1950. Black squirrels. FIELD, London 196:28. Melanism in British squirrels.

Beever, N. 1946. Squirrels in Upper Weardale. VASCULUM 31(1):4.

- Bell, J.F. and W.S. Chalgren. 1943. Some wildlife diseases in the eastern United States. J WILDL MAN 7(3):270-278.
 A variety of ectoparasites were found on gray squirrels and red squirrels. The squirrel flea, Orchopeas wickhami was also found on cottontail rabbits.
- Bell, R. 1898. On the chickaree or red squirrel. IN: Mills, W. The Nature and Development of Animal Intelligence. New York, Macmillan. pp75-78.
- Bell, Ruth E.S. 1974. The ingenious grey squirrel. COUNTY-SIDE 22(7):318-321.
- Bellrose, Frank C. and Louis G. Brown. 1943. Use of nesting boxes for wood ducks by other wildlife. J WILDL MAN 7(3):298-306.
- Benham, E.M. 1953. The distribution of squirrels in Dorset 1945-1951. PROC DORSET NAT HIST ARCHAEOL SOC 74:121-132. A parish-by-parish survey of red and gray squirrels was made in Dorset. Between 1945 and 1951 the red squirrel decreased while the gray increased but there is no evidence that the gray drove out the red. The red squirrel appears to have declined independently of the gray.
- Bentz, Frank L. 1943. Migration of grey squirrels. MD NAT 23(1 and 2):80 Squirrel migration about 1922, east of Cumberland, Maryland.
- Bequaert, Frank. 1958. Bird feeders squirrel problem. NAT MAG 51(9):472. Description of a live trap using a mouse snap trap as trigger device.
- Bergman, Stan. 1932. On the immigration of the squirrel into Kamtchatka. ARKIV FÜR ZOOLOGI 23B(4):1-4.
- Berner, Alfred and Lestie W. Gysel. 1967. Raccoon use of large tree cavities and ground burrows. J WILDL MAN 31(4):706-714.
- Berry, Swift. 1914. Work of California gray squirrel on conifer seed in the southern Sierras. PROC SOC AM FOR 9(1).
- Bertram, E. Cooper. 1952. Project designed to obtain data on squirrel habits and habitat. KY HAPPY HUNTING GROUND 8(1):30-31.

. 1952. Kentucky squirrel investigations. Pittman-Robertson Project 26-R. Kentucy Department of Fish and Wildlife Resources. 10pp. and William L. Gault. 1952. Kentucky squirrels. PROC ANNU CONF, SOUTHEAST ASSOC GAME FISH COMM. 6:16pp.

- Berwin, 1974. The grey squirrel's extra toll. FIELD 245(6353):985. S. carolinensis is a serious menace to hardwood trees because of its habit of stripping bark from trees. Spring litters averaged 2.5 young and fall litters average 1.5 young.
- Besadny, C.D. 1954. A survey of squirrel habitat and population distribution. P-R PROJ 2-9-R-10. Job 4-B. Wisconsin Bureau of Fish and Wildlife Management. pp45-64.

. 1957. Bushytail business. WIS CONSERV BULL 22 (10):17-19.

Over a million fox and gray squirrels are harvested every year in Wisconsin. Fox squirrels are most abundant in southeastern Wisconsin - open-type country with farmland interspersed with small woodlots (less than 20 percent of the land area). Gray squirrels are more common in the western uplands where much of the land is covered by mature oak woodlands - heavily wooded with dense undergrowth. Where as little as 10 percent of the land is wooded the two species are about equal but as the proportion of woodlands increases fox squirrels decrease until at 70 percent woodland they are almost absent.

Bigalke, R. 1929. The longevity of wild animals in captivity. W AFR J NAT HIST 6:297-302. A captive S. carolinensis reached the age of 15 years.

_____. 1937. The naturalization of animals with special reference to South Africa. A AFR J SCI 33:46-63. S. carolinensis.

- Bismark, O. von. 1939. Frisst das Eichhörnchen Blattläuse? AUS DER HEIMAT Öhringen/Württ 52:93.
- Black, Craig C. 1963. A review of the North American Tertiary Sciuridae. BULL MUS COMP ZOOL (Harvard) 130(3):109-248.

. 1972. Holarctic evoluation and dispersal of squirrels NV-2(Rodentia: Sciuridae). IN: Dobzhansky, T., et al (Eds). Evolutionary Biology, Vol. 6 pp305-322. Appleton-Century-Crofts, New York. 445pp. The Sciuridae first appeared in North America in the early Oligocene and by mid-Oligocene were found in both North America and Europe. By late-Oligocene ground squirrels and tree squirrels had evolved.

Black, J.D. 1936. Mammals of northwestern Arkansas. J MAMMAL 17(1):29-35. S. carolinensis and S. niger are common in this area; the latter species prefers denser growths of timber.

- Blackford, John L. 1946. Cone year. NAT MAG 39(8):409-412, 442. Popular account of animals feeding on ponderosa pine cones.
- Blackman, R.M. 1944. An eye for squirrels. OUTDOORSMAN, Chicato 869(5):10-11, 35, 36.
- Blair, W. Frank. 1935. The mammals of a Florida hammock. J MAMMAL 16(4):271-277.

S. carolinensis in this area relied to a great extent on fruit of Magnolia grandiflora plus mast from Quercus nigra and Carya alba.

- . 1939. Faunal relationships and geographic distribution of mammals in Oklahoma. AM MIDL NAT 22(1):85-133. The gray squirrel is abundant in flood-plain forests of the biotic districts of eastern Oklahoma. It does not extend westward beyond the Osage Savanna district. The fox squirrel is widely distributed in the upland forests of the biotic district of eastern Oklahoma and extends westward along wooded stream valleys nearly across the mixed-grass plains district.
- Blomquist, A. 1879. Some observations of the periodicity of the seeding of pine and spruce and on the abundance of squirrels in In Finland. SKOGNÄNNEN In Finnish.
- Boas, J.E.V. 1924. Dansk Forstzoologie. Gyldendalske Boghandel. Copenhagen xxii, 761pp. Pages 1 to 126 are devoted to forest mammals including S. vulgaris.
- Bohmann, L. 1939. Die grossen einheimischen Nager als Fortbewegungstypen Z MORPH OKÖL TIERE Berlin 35-317-388. Comparison of external skeletal and musculature anatomy of squirrel, beaver, marmot and hare.
- Bolls, Nathan J. and John R. Perfect. 1972. Summer resting metabolic rate of the gray squirrel. PHYSL ZOOL 45(1):54-59. Oxygen consumption was 0.84 ml/gram/hr. Heat production was 9.61 kcal/100 g body wt/day. CO₂ production was 0.65 ml/g/hr. Respiratory quotient was 0.785 and body temperature was 38.7°C.
- Booth, H.B. 1928. Grey squirrels at Baildon. NATURALIST, London 858:206.
- Boothby, G.A., et al. 1952. Range of grey squirrels. FIELD 199:26. Recent records in Scotland.
- Boulware, Jean T. 1941. Eucalyptus tree utilized by fox squirrel in California. AM MIDL NAT 26(3):696-697.
 The blue gum (Eucalyptus globulus) is used by fox squirrels as a nesting site and food source. A nest was built in the fork of a tree from bark strips. The small black pyramidal seeds are eaten.

- Bowers, James R. and Gordon L. Kirkland, Jr. 1968. Observations on an anomalous fox squirrel. J MAMMAL 49(2):345-347. A fox squirrel which was shot in Michigan had an extra leg dangling from the inguinal region. It had two bladders, each with a separate urethra passing to a corresponding vulva. Each uterine horn connected with its corresponding vulva.
- Bowles, D. 1951. The range of grey squirrels. FIELD, London 189:1028. In Scotland.
- Bowles, J. Hooper. 1920. The Claifornia gray squirrel an enemy to the Douglas fir. AM FOR 26:26.In Oregon the California gray squirrel girdles the bark of second growth Douglas firs. The squirrel eats the inner bark and soft wood. Small trees are attacked close to the ground and girdled to the top but trees of 25 to 100 feet high usually have only the upper hald girdled. The work begins when sap starts running in the spring.
- Boyd, C.E., et al. 1966. Watch in the Devil's Pocket. TEX PARKS
 WILDL 25(1):7-9.
 A description of hunting in managed areas for fox and gray squirrels.
- Boyer, Richard H. 1943. Weasel versus squirrel in Sequoia National Park. J MAMMAL 24(1):99-100. -Charckarees gave alarm notes together with chipmunks and ground squirrels when one of the latter was under attack by a weasel.

Boyle, C.L. 1953. Congregation of squirrels. FIELD 201:244.

- Bozhko, S.I. 1975. On the breeding success of birds in Leningrad USSR parks. ACTA BIOL Debricina 12:57-60. S. vulgaris.
- Brackbill, H. 1967. Cardinal being eaten alive by gray squirrel. BIRD-BANDING 38(3):236. An adult male cardinal was killed by a gray squirrel.
- Bradt, G.W. 1947. The game squirrels fox, gray and black. MICH CONSERV 16(9):4-5.

. 1948. The lesser squirrels. MICH CONSERV 17)3):4-5.

Brand, Douglas. 1951. Red squirrel damage to timber. SCOTT FOR 5:89-90.

The greatest damage caused by S. vulgaris to timber is to Scots pine. Squirrels gnaw off the soft bark of young trees to get at the sweet cambium layer. From 1928 to 1939 squirrel densities were reduced by heavy infestation of ticks.

- Brauer, Alfred and Alfred Dusing. 1961. Sexual cycles and breeding seasons of the gray squirrel, *Sciurus carolinensis* Gmelin.
 TRANS KY ACAD SCI 22(1-2):16-27.
 A female captured April 22 was lactating and when recaptured on September 20 was again lactating.
- Brayton, A.W. 1882. Report on the mammalia of Ohio. IN: REP GEOL SURV OHIO, Vol. 4. Pages 105-115 contain interesting notes on squirrels.
- Breckenridge, W.J. 1947. An unusual melanistic squirrel. J MAMMAL 28(4):403-404. A black S. carolinensis with a white tipped tail had an extra rudimentary tail.
- Brehm, A.E. 1897. From North Pole to Equator. C.S. Elton in his book ANIMAL ECOLOGY (London: Sidgwick & Jackson, 1927) quotes Brehm as describing a squirrel emigration "...while in 1897 a great swarm of the same sort passed through Tapilsk in the Ural mountains: a solid army marched through for three days, only stopping at night, and they also swam across the river."
- Brennan, James M. 1946. A new genus and species of chigger, Chatia setosa (Trombiculidae, Acarina) from northwestern United States. J PARASITOL 32(2):132-135.
- Brenneman, William S. 1954. Tree damage by squirrels; silviculturally significant. J FOR 52(8):604. Fox and gray squirrels damage sugar maples by scraping inner bark. (During winter in Michigan).
- Brink, C.H. 1964. Spruce seed as a food of the squirrels Tamiasciurus hudsonicus and Glaucomys sabrinus in interior Alaska. M.S. Thesis, University of Alaska 73pp.
- and F.C. Dean. 1966. Spruce seed as a food of red squirrels and flying squirrels in interior Alaska. J WILDL MAN 30(3):503-512. White spruce is important food of the *T. hudsonicus* and preference for this item appears to influence the distribution and densities of red squirrels within the taiga.
- Britnell, F. 1949. Squirrel in rabbit bury. FIELD, London 193:190. S. carolinensis.
- Britton, W.E. 1902. The gray squirrel as a twig-pruner. SCIENCE (n.s.) 15(389):950. Gray squirrels gnawed twigs of elms with seeds. These fell to the ground presumably to be eaten later. Twigs without seeds were not trimmed.

. 1933. Injury to trees by squirrels. PROC NATL SHADE TREE CONF 9:85-91. Red and gray squirrels sometimes damage trees by gnawing into branches to obtain insect larvae and pupae. Twigs, branches, buds, fruit and seeds from many trees are cut off or eaten. Sometimes the bark of sugar maples and other trees is gnawed to the extent of girdling large branches. The list of trees damaged by squirrels is a long one.

- Brooks, Fred E. 1922. Note on a feeding habit of the gray squirrel. J MAMMAL 4(4):257-258. Gray squirrels gnaw the outer bark on small areas of large chestnuts, chestnut oak and white oak. In the latter two trees the gnawing was done below large warty protrusions of the tree trunks.
- Brown, David E. 1971. Tree squirrel management information. Arizona Game and Fish Department. Special Report Project W-53-21. 15pp mimeo. Directions are given for conducting clipping surveys.
- Brown, J.A. Harvie. 1881. PROC R SOC EDIN Sect A 5:31-63, 115-183. Distribution and history of *S. vulgaris* in Great Britain.

Brown, J.C. and G.J. Twigg. 1965. Some observations on grey squirrel dreys in an area of mixed woodland in Surrey. PROC ZOOL SOC LOND 144(1):131-134.
Winter dreys are spherical, solds structures almost invariably borne in a fork formed by a main branch with the tree trunk. Summer dreys are more saucer-shaped and situated on smaller branches away from the main trunk. There were only three cases of two dreys in a tree - each time this was a summer drey and a winter drey. Dreys were situated on the average somewhere near the mid-point of tree height. Most drey twigs are between 10 and 20 cm long (rarely 50 cm) and mostly from the tree in which the drey is located. *Tilia* was the preferred tree for location of dreys.

Brown, Larry N. 1965. Albert's squirrel in southern Wyoming. J MAMMAL 46(3):516. The Abert's squirrel's range extends 5 to 10 miles into southern Wyoming.

. 1969. An exotic squirrel. FLA WILDL 23(6):4-5. Sciurus aureogaster was introduced onto Elliott Key in 1938. It appears well established and has 2-3 litters a year and 2-3 young per litter.

. 1971. Everglades fox squirrel. FLA WILDL 25(6):21. Preservation of the Big Cypress Swamp is vital to the preservation of the rare S. niger avicennia. They can best be seen in the Corkscrew Swamp Audubon Sanctuary. and Richard M. McGuire. 1969. Status of the red-bellied squirrel (*Sciurus aureogaster*) in the Florida Keys. AM MIDL NAT 82(2):629-630. This species is abundant on Illiott Key, Dade County, Florida. Most individuals are melanistic rather than red-gray.

and Richard M. McGuire. 1975. Field ecology of the exotic Mexican red-bellied squirrel in Florida. J MAMMAL 56(2):405-419. On Elliott Key, Florida the average population density was 2.5 S. aureogaster per hectare. Two pelage color phases occur here. Mean home range for males was 2.3 hectares and 0.9 hectares for females. Reproduction occurs throughout the year.

Brown, Louis G. 1942. Forecast better squirrel hunting for 1942 season. ILL CONSERV 7(2):7-8. Summarizes life history of fox squirrel.

and Frank C. Bellrose, Jr. 1943. Use of nesting boxes for wood ducks by other wildlife. J WILDL MAN 7(3):298-306. Nest box utilization seemed to reflect population densities of fox squirrels.

- and L.R. Yeager. 1945. Fox squirrels and gray squirrels in Illinois. BULL ILL ST NAT HIST SURVEY 23(5):449-536. This is an extensive and informative booklet summarizing knowledge on fox and gray squirrels.
- Brown, Pat I. and Jan Martan. 1972. Epididymal spermatozoan associations in representatives of six genera of Sciuridae. AM ZOOL 12(4):732 (Abstract). It appears to be characteristic of the Sciuridae that spermatozoa form long polarized cylindrical bodies in the upper caput epididymis. Spermatozoan heads are regularly spaced at the surfaces of the cylindrical bodies, while their tails are directed to the interior of the cylinders.
- Brownell, L.W. 1923. How our squirrels pass the winter. NAT MAG 2(5):289-291, 305.
- Brunett, Louis E. 1957. Squirrel populations in relation to forest types in Zemurray's Park, Tangipahoa Parish, Louisiana. M.S. Thesis, Louisiana State University. 112pp.
- Brunton, Daniel F. and Ronald Pittaway, Jr. 1971. Observations of the great gray owl on winter range. CAN FIELD NAT 85(4):315-322. A great gray owl tried unsuccessfully to capture an American red squirrel.
- Bryant, Harold C. 1925. Squirrel moves her babies. YOSEMITE NATURE NOTES 4:47-48.

. 1927. Chickarees eat stems of black oak leaves. YOSEMITE NATURE NOTES 6:62.

Bryant, Monroe D. 1945. Phylogeny of neoarctic Sciuridae. AM MIDL NAT 33(2):257-390. A comparative description of squirrel anatomy. The Sciuridae probably originated in the Eocene from protogomorphs.

Buchan-Hepburn, J. 1953. Traps for squirrels. FIELD 201:1043.

- Buchner, E. 1889. Ueber das Fehlen des Eichhornchens im Kaukasus. IZV IMP AKAD NAUK 8:75-82. Records of squirrels in the Caucasus are all probably due to confusion with the dormouse.
- Bugbee, Robert E. and Andrew Riegel. 1945. Seasonal food choices /- & of the fox squirrel in western Kansas. TRANS KANS ACAD SCI 48(2):199-203. Food habits based upon observations in the wild.
- Bugge, J. 1971. The cephalic arterial system in sciuromorphs with special reference to the systematic classification of rodents. ACTA ANAT 80(3):336-361.
- Buller, A.H. Reginald. 1920. The red squirrel of North America as a mycophagist. TRANS BR MYCOL SOC 6(4):355-362.
- Bunn, C.I. 1941. Squirrels with young in late September. N C WILDL CONSERV 5(11):7.
- Burger, George V. 1969. Response of gray squirrels to nest boxes at Remington Farms, Maryland. J WILDL MAN 33(4):796-801. Placement of artificial dens in wooded areas increased squirrel populations 65 to 100% because of increased survival.
- Burnett, Frances L. and Robert W. Dickerman. 1956. Type locality of the Mogollon red squirrel, Tamiasciurus hudsonicus mogollonensis. J MAMMAL 37(2):292-294. This squirrel occurs only in fir and spruce forests; never in pines (in Arizona).
- Burns, Paul J., Donald M. Christisen and J.M. Nichols. 1954.
 Acorn production in the Missouri Ozarks. UNIV MISS AGRIC EXPER STA BULL No. 611 8pp.
 Only a small proportion of acorns were sound or mature. The average number of sound, mature acorns per tree per year varied from only 11 for post oak to 153 for white oak. Mast-consuming wildlife species exhibited no apparent preference for any species of acorn. The effect of either good or poor acorn crops is reflected in the squirrel population of the following year.

- Burroughs, A.L., R. Holdenreid, D.S. Longanecker and K.F. Meyer. 1945. A field study of latent tularemia in rodents with a list of all known naturally infected vertebrates. J INFEC DIS 76:115-119.
- Burroughs, John. 1901. Squirrels and other fur-bearers. Houghton-Mifflin and Company. 149pp. Popular article. Tells of a squirrel falling 600 feet without injury.
- Burt, William H. 1943. Territoriality and home range concepts as applied to mammals. J MAMMAL 24(3):346-352. Squirrels of the genus *Tamiasciurus* exhibit territorial behavior.
- ______. 1945. Review: Michigan fox squirrel management. J WILDL MAN 9(3):258-259.
- _____. 1946. The mammals of Michigan. University of Michigan Press XV+288pp.
- Burton, Maurice. 1947. The grey squirrel in Britain. ILLUS LOND NEWS 211:300.
 - . 1947. Squirrels and the food crisis. ILLUS LOND NEWS 211(5671):726.

______. 1951. The chequered story of red squirrels. ILLUS LOND NEWS (7 April).

- Burton, Sidney S. 1930. A new diet for the red squirrel. J FOR 28(2):233. Box elder seeds are cached and preferred over bur oak acorns and green ash seeds.
- Bushong, G. 1961. Squirrel hunting and hunters. OUTDOOR INDIANA 5(1):11-12.
- Butler, J.J. and G. Richardson. 1969. Abert squirrel activity in the Arch Canyon and Babylon timber sales, Monticello Ranger District, Manti La Sol National Forest, Price, Utah. 5pp. Unpublished report on file at Rocky Mt. FOR AND RANGE EXP STA Tempe, Arizona.
- Butterfield, Robert T. 1962. Eight steps to more squirrels. W VA CONSERV 26(9):5-8.

_____. 1968. Fox squirrel. OUTDOOR W VA 32(5):18.

Cabrera, Angel. 1905. Las ardillas de Espana. BOL REAL SOC ESPANA HIST NAT 25:227.

. 1924. La nuova forma de Ardilla. BOL REAL SOC ESPANA HIST NAT 24:420. and Jose Yepes. 1940. Mamiferos Sud-Americanos Buenos Aires: Ediar S.A. Editores, 2nd edition. Volume I 187pp, Volume II 160pp.

- Cahalane, Victor H. 1930. Out-of-season caching by fox squirrel. J MAMMAL 11(1):78. Fox squirrels were seen caching food in late December, March and April.
- . 1942. Caching and recovery of food by the western fox squirrel. J WILDL MAN 6(4):338-352. Fox squirrels recover and consume 99% of the nuts they bury. Experiments and observations indicate cached nuts are located by smell.
- Caldwell, David K. and Melba C. Caldwell. 1961. Gray squirrels larcenously feeding at cracker vending machines. Q J FLA ACAD SCI 23(4):285-288.
- Calinescu, Raul. 1958. La repartition geographique des Sciurides en Roumanie. SAEUGETIERD MITT 6(1):17-20. Only the subspecies S.v. fuscoater is found in Roumania. From time to time mass invasions of squirrels occur many of which are infected with mange (Sarcoptes) and tapeworm.
- Cambridge and Thomas. 1895. ZOOLOGIST pp103-104. Sciurus vulgaris: autumnal variation in tailcolor.
- Cameron, Thomas M. 1932. On a new species of oxyurid from the gray squirrel in Scotland. J HELMINTH 10(1):29-32.
 A description of *Enterobius sciuri sp. nov.* from the colon.
- Camp, C.L. and V.L. Vanderhoof. 1940. Bibliography of fossil vertebrates. 1928-1933. GEOL SOC AM SPEC PAP 27: 1-503.
- Campbell, Bruce. 1936. Early nesting of the red squirrel (Sciurus vulgaris, L.) in Dumbriesshire. SCOTT NAT 217:7.
- Campbell, C.M. 1945. Corn fed squirrels. PENNS GAME NEWS 16(9):3.
- Canavan, W.P. 1929. Nemotode parasites of vertebrates in the Philadelphia Zoological Garden and vicinity. PARASITOLOGY w1:63-102.
- Cansdale, G.S. 1951. Squirrel populations. FIELD, London 198:428. Abundance of S. carolinensis in Surrey.
- Capel-Edwards, Maureen. 1971. The susceptibility of three British
 small mammals to foot and mouth disease. J COMP PATH 81(3):433-436
 and 2 plates.
 S. carolinensis developed a few primary lesions and low titre
 antibodies when experimentally infected.

- Cappucci, D.T., Jr., R.W. Emmons and W.W. Sampson. 1972. Rabies in an eastern fox squirrel. J WILDL DIS 8(4):340-342.
 A fox squirrel which attacked a woman in Alameda County, California was found to harbor rabies virus.
- Carhart, Arthur H. 1951. A squirrel in the home. NAT MAG 44(10):517-520. Popular account of a pet fox squirrel.
- Carlson, A.J. 1940. Eating of bone by the pregnant and lactating gray squirrel. SCI n.s. 91(2372):573.
- Carr, G. 1949. Black squirrels, FIELD, London 194:784. Melanism in S. vulgaris in Cambridge.

_____. 1950. Black squirrels. FIELD, London 196:28.

- Carson, J.D. 1961. Epiphyseal cartilage as an age indicator in fox and gray squirrels. J WILD MAN 25(1):90-93.
 X-ray examination of the distal epiphyses of the radius and ulna revealed that adults can be separated from young-of-the year between the dates of July 1 and January 15 for fox squirrels and February 1 and December for gray squirrels. Spring born and summer born young can be separated by this method.
- Carson, Jim. 1957. Squirrels! Are they invincible? W VA CONSERV 21(7):11-13. Heavy hunting pressure had no lasting effect on squirrel populations in a West Virginia study.
- Cass, J.S. 1939. An annotated bibliography of references concerning parasites of squirrels. OHIO WILDL STATION RELEASE No. 131. 21pp.
- Carthew, Arthur. 1938. Sudden death. YOSEMITE NATURE NOTES 17(12):159. Red squirrels were killed by automobiles.
- Caton, J.D. 1879. Mode of drinking of the red squirrel. AM NAT 13(1):46. p21.
- Cavazza, F. 1913. Studio intorno alla variabilita dello *Sciurus vulgaris* in Italia. ATTI ACAD NAZ LINCEI RC 5, IX 503.

Chambers, R.E. 1969. Highway mortality of squirrels. CONSERVATIONIST (New York) 23(6):40. On September 22, 1968, 205 squirrels were seen dead on the road between State College, Pennsylvania and Syracuse, New York (223 miles). All were gray except for 15-20 red squirrels. An excellent mast crop occurred in the fall of 1967 and the winter of 1967-68 was relatively mild. The fall of 1968 was characterized by reports of mast scarcity. Squirrels ear-tagged in Pennsylvania prior to the mast failure were recovered the following year as far as 60 miles from point of tagging.

- Chan, Ming S., Gerald L. Hoff, William J. Bigler, Juan A. Tomas, Nathan J. Schneider. 1976. Electrophoretic separation of serum protein from gray squirrels. AM J VET RES 37(10);1237-1239. Serum proteins of S. carolinensis were electrophoretically separated into 7 fractions as compared with the 5 fractions obtained from human serum.
- Chandler, Asa C. 1942. Helminths of tree squirrels in southeast Texas. J PARASITOL 28(2):135-140. Six helminth sepcies (including two microfilariae) were found in fox and gray squirrels.
 - . 1947. Notes on *Moniliformis clarki* in North American squirrels. J PARASITOL 33(3):278-281. Found in intestines of gray and fox squirrels.
 - and R. Rausch. 1946. A study of strigeids from Michigan mammals with comments on the classification of mammalian strigeids. T AM MICROSC SOC 65:328-337.
- Chape, G. 1951. Swimming squirrels. FIELD, London 198:114. S. vulgaris.
- Chapman, Floyd B. 1936a. Report on state hunting preserves, 1935. OHIO BUR SCI RES, BULL No. 97. 9pp.
 - ______. 1936b. Some recorded parasites of squirrels. M.S. report to Ohio Wildlife Research Station, Ohio State University.

. 1936c. Fox squirrels and gray squirrels. OHIO DIV CONSERV, BULL No. 127. 4pp mimeo.

. 1937. Controlled squirrel and rabbit hunting on State hunting preserves, 1936. OHIO WILDL RES STA RELEASE No. 37. 11pp.

. 1938a. Summary of the Ohio gray squirrel investigation. TRANS N AM WILDL CONF 3:677-684. The January-February breeding season is the only important one in southern Ohio. Gray squirrel cycles probably occur at five year intervals.

- . 1938b. Controlled squirrel and rabbit hunting on State hunting preserves, 1937. OHIO WILDL RES STA RELEASE No. 68. 8pp mimeo.
 - ______. 1938c. A summary of the Ohio gray squirrel investigation. OHIO WILDL RES STA, RELEASE No. 71. 7pp mimeo.
- ______. 1939a. A summary of the gray squirrel investigation in southeastern Ohio. U.S.D.A., WILDL RES AND MANAGEMENT LEAFLET BS-134. 9pp mimeo.

. 1939b. Controlled squirrel hunting on public lands in Ohio, 1938. OHIO WILDL RES STA, RELEASE No. 101. mimeo.

. 1939c. Winter feeding of squirrels. OHIO CONSERV BULL 3(2):6-7.

. 1940. The squirrel harvest on Ohio public hunting preserves, 1939. OHIO WILDLIFE RESEARCH STATION, RELEASE No. 142. 8pp mimeo.

. 1941. The 1940 squirrel harvest on ten public hunting preserves in Ohio. OHIO WILDLIFE RESEARCH STATION, RELEASE No. 162. 17pp mimeo.

. 1942. More squirrels in Penn's woods. PENN GAME NEWS June:5, 30, 32. Lack of den trees and adequate winter food supply are the major limitation on squirrel populations. Nest boxes and winter feeding may help maintain higher densities.

_____. 1943. The red squirrel and the birds. CARDINAL, Sewickley 6(1):6.

. 1947. Controlled squirrel and rabbit hunting on State hunting preserves, 1936. OHIO WILDLIFE RESEARCH STATION, RELEASE No. 37. 11pp mimeo.

and Luther L. Baumgartner. 1939. Winter feeding of squirrels. OHIO DIVISION OF CONSERVATION BULLETIN No. 150. 7pp. and also: OHIO CONSERV BULL 3(2):6-7.

- Chapman, H.H. 1944. Cooperation of squirrel and grouse. J WILDL MAN 8(3):266.
- Chappellier, A. 1939a. Notes sur l'ecureuil. BULL SOC NAT ACCLIM Paris 86:88-101.

. 1939b. Notes sur l'ecureuil - les cachettes. TRAV STN ZOOL Winnereux, 13:69-75.

- Chaworth-Musters, J.L. 1937. On the type locality of the Caucasian squirrel, *Sciurus anomalus* Guldenstaedt. ANN MAG NAT HIST Series 10, 20:560.
- Chernousova, A.V. and Putiato, N.G. 1957. The clinical aspects
 of listerellosis. AH MIKROBIOL EPIDEMIOL IMMUNOBIOL 28(3):365-367.
 (English translation).
 A boy was infected by a pet squirrel (Sciurus vulgaris).
- Chesemore, David Lee. 1975. Ecology of fox and gray squirrels (Sciurus niger and Sciurus carolinensis in Oklahoma. Doctoral Dissertation, Oklahoma State University. 370pp.

29.

- Cheviot. 1930. Grey squirrels. A problem for game keepers and county councils. FIELD, London 155(4040):797.
- Cheyney, E.G. 1929. Damage to Norway and Jack pine by red squirrels. J FOR 27:382-383. During winter when the tips of tree branches are frozen and stiff, squirrels (Tamiasciurus) cannot easily push lateral tips aside to get at cones and therefore nip off the entire tip. They do not eat the buds. In years of seed scarcity squirrels eat the streaks of putch on the stems leaving a narrow, white streak of exposed wood.
- Christisen, Donald M. 1950. Are squirrels expendable? MO CONSERV 11(8):1-3.

. 1954. Too young to die. MO CONSERV 15(5):4-5. A discussion of the effects of an early hunting season.

. 1962. Analysis of biological data from squirrels taken by hunters in 1961 and evaluation of harvest and special management practices. Federal Aid Project No. 13-R-16. Missouri Conservation Commission.

______. 1964. Squirrel management. Missouri Department of Conservation, Jefferson City. 7pp.

. 1967. An analysis of biological data from squirrels taken by hunters in 1966 and evaluation of harvest and special management practices. MISSOURI DEPARTMENT OF CONSERVATION JOB COMPLETION REPORT, Federal Aid Project No. 13-R-21, Work Plan No. 9-Job No. 1.

_____. 1968. Squirrel hunting with a dog. MO CONSERV 29(10):12-13.

. 1971. Importance of daily bag in squirrel hunting. TRANS N AM WILDL NAT RES CONF 36-322-331. Most hunters shoot one or two squirrels and most hunting trips last no more than three hours. The average time spent per squirrel decreases as the bag increases.

and Leroy J. Korschgen. 1955. Acorn yields and wildlife usage in Missouri. TRANS N AM WILDL CONF 20:337-357. Consumption by wildlife is probably a limiting factor in the regeneration of oaks in poor seed years, but in good seed years wildlife does not consume all the sound acorns. Squirrels may even aid regeneration by leaving buried acorns to germinate.

Clapman, R. 1929. Agility of squirrels. FIELD, London 153-25.

Clark, Austin H. 1931. Speed of the gray squirrel. J MAMMAL J MAMMAL 12(1):70 Clocked at 15 mph. Clark, Gordon Marston. 1938. Hepatozoon griseisciuri n. sp., a new species of Hepatozoon from the gray squirrel (Sciurus carolinensis Gmelin, 1788) with studies of the life cycle. J PARASITOL 44(1):52-63. Sporogony occurs in the mite Euhaemogamasus ambulans. Schizogony occurs in the spleen, liver and bone marrow of the squirrel.

. 1959. Parasites of the gray squirrel. PROC ANN CONF SOUTHEAST ASSOC GAME FISH COMM. pp368-373.

. 1960. Three new nasal mites (Acarina: Speleognathidae) from the gray squirrel, the common grackle and the meadowlark in the United States. P HELM SOC 27(1):103-110.

Clark, W. Kim. 1958. The land mammals of the Kodiak Islands. J MAMMAL 39(4):574-577. The red squirrel was introduced onto these Alaska islands, probably in the 1920's and has become established.

Clark, C.H.D. 1939. Some notes on hoarding and territorial behavior of the red squirrel, *Sciurus hudsonicus* (Erxleben). CAN FIELD-NAT 53(3):42-43. Cones of red pines are not cached in large accumulations but rather in twos and threes or singly. One individual buried about 1000

in twos and threes or singly. One individual buried about 1000 cones in one day. Red pine cones are the favorite conifer cones of red squirrels.

Clarkson, David P. and Homer J. Ferguson. 1969. Effect of temperature upon activity in the red squirrel. AM ZOOL 9(4):1110. As temperatures increased from 10° to 35° C the activity of *T. hudsonicus* decreased.

and J.H. Ferguson. 1972. Environmental temperature versus spontaneous running - wheel activity in the red squirrel, *Tamiasciurus hudsonicus*. INT J BIOM 16(3):269-276.

- Cleere, R.L. and Cecil S. Mollohan. 1968. Follow-up plague Denver, Colorado. MORBIDITY AND MORTALITY, U S Dept Health, Education and Welfare. 17(28):261-262. A die-off of S. niger in Denver, Colorado in 1968 revealed 27 were positive for Pasteurella pestis.
- Clegg, T.M. 1970. Introduced forms of the red squirrel in south Yorkshire and north Derbyshire. NATURALIST (leeds) 912:1-4.

Cobold, S.T. 1876. Notes on entozoa. PROC ZOOL SOC LOND 1876:200.

- Coffman, Charles C. and Edward U. Balsbaugh, Jr. 1971. The immature insects found in three leaf nests of the Eastern fox squirrel, Sciurus niger rufiventer (Geoffroy). PROC S D ACAD SCI 50:201-204. Sixteen families and one superfamily of insects (8 orders) were found. Fleas were identified as Orchopeas caedens.
- Cohen, Adolph I. 1964. Some observations on the fine structure of the retinal receptors of the American gray squirrel. OPTHALMOLOGY 3(2):198-216.
- Cole, L.J. 1922. Red squirrels swimming a lake. J MAMMAL 3:53-54. Many red squirrels swam a lake during September 1921 in Wisconsin. Residents near a lake in Michigan reported that red squirrels frequently swam the lake and one was removed from the stomach of a 37 inch great northern pike.
- Coles, A.C. 1914. Blood parasites found in mammals, birds, and fishes in England. PARASITOL 7:17-61. Toxoplasma and haemogregarines in squirrels.
- Colin, L. and J. Kyle. 1958. Effects of timber management on squirrel populations. P-R REP No. 5. Alabama Fish and Game Department. 10pp.
- Colin, Wayne F. 1949. Measures of productivity in the fox and gray squirrel and a study of moults in fox squirrels. M.A. Thesis, University of Missouri.
 - _____. 1957. Alabama squirrel investigations. ALA DEP CONSERV, FINAL REPORT W-25-R. 83pp.

and George Kyle. 1958. An Alabama squirrel study. ALA CONSERV 29(4):24-27. Popular article.

Collett, R. 1907. Ekoren i Norge. NORSK JAEG 36:1-6.

S. vulgaris squirrels are found throughout Norway wherever forests occur, especially evergreen forests. In the south, S.v. vulgaris is found while S.v. varius is found in the north. Ear tufts begin growing in August at the same time that tail hairs are moulted. Bird eggs and young, especially of *Turdus pilaris*, are eaten. Food caches are made. Young are born in April and August. Average litter size is 4.

_____. 1911-1912. Norges Pattedyr. H. Achehoug. Kristiania (Oslo). 214-228.

S. vulgaris causes considerable damage to Scotch pine by peeling bark and nipping off terminal buds. Many mushrooms including Boletus and truffles are eaten. No emigrations, even in times of high densities, have been reported.

- Collins, Jack O. 1961. Ten year acorn mast production study. Federal Aid Project Report. LA WILDL AND FISH COMM.
- Colquhoun, M.K. 1942. The habitat distribution of the grey squirrel (Sciurus carolinensis) in Savernake Forest. J ANIM ECOL 11:127-130. By walking at the rate of 1 mph the author counted from 1.2 to 6.0 gray squirrels per hour at various months of the year.

______. 1951. The range of grey squirrels. FIELD, London 198:1028. S. carolinensis in Scotland.

Cook, David B. 1954. Susceptibility of larch to read squirrel damage. J FOR 52(7):491-492. In New York State red squirrels damage European larch but leave Japanese larch and Dahurian larch alone.

Cook, Fannye A. 1946. Squirrels. MISS GAME FISH 10(4):1-2.

- Cooley, Marvin E. 1948. Improved toe-tag for marking fox squirrels. J WILDL MAN 12(2):213. A circular monel metal band similar to a bird band was used.
- Cooper, G.F. and J.G. Robson. 1966. Directionally selective movement detectors in the retina of the grey squirrel. J PHYSIOL (LOND) 186(2):116-117.
 - and J.G. Robson. 1969. The yellow colour of the lens of the grey squirrel (*Sciurus carolinensis leucotis*). J PHYSIOL (LOND) 203(2):403-410. The maximum absorption spectrum of the gray squirrel lens is at

370 n.m. The yellow pigment is water soluble and is unlike either flavinoid or melanoid substances.

- Corbet, G.B. 1974. The distribution of mammals in historic times. IN: Hawksworth, D.L. (ed.) The Changing Flora and Fauna of Britain, Academic Press, London. pp179-202. S. carolinensis.
- Cordes, Carroll Lloyd. 1965. Home range and movements of the eastern gray squirrel, *Sciurus carolinensis carolinensis* Gmelin, in Wake County, North Carolina. M.S. Thesis, North Carolina State University.

and Frederick S. Barkalow, Jr. 1973. Home range and dispersal in a North Carolina gray squirrel population. PROC ANN CONF SOUTHEAST ASSOC GAME FISH COMM 26:124-135. Adult squirrels had home ranges averaging 1.8 acres. Males had larger home ranges than did females. Young squirrels often remained with their mother 6 months or more. Individuals tend to remain in the same area for their lifetime.

- Corell, M.Gil and F. Marti. 1967. Distribucion y biotopo de las ardillas (Sciurus vulgaris) en la provincia de Valencia. BOL R SOC ESP HIST NAT SECC BIOL 65_3/4):249-251.
- Cottøm, Clarence. 1941. How fast can a fox squirrel run? J MAMMAL 22(3):323. 10-12 mph.
- Cotterell, Richard. 1954. Three against the grey squirrel. FIELD 203:12-13.

. 1954. Grey squirrel destruction. QUART JOURNAL *I-2* OF FORESTRY 48:104-108. Beech, sycamore, oak and ash are girdled in May, June and July (mostly June). Squirrels are killed by poking nests and shooting the fleeing occupants. Trapping is also an effective control method. (Great Britain).

- Coues, Elliott. 1867. The quadrupeds of Arizona. AM NAT 1:355-357. Discusses the habits of S. aberti and describes S. arizonensis as a new species. S. castanotus Baird is considered the same as S. aberti.
 - and J.A. Allen. 1877. Monograph of North American Rodentia. REP U S GEOL SURV 11:1091.
- Coughlin, Louis E. 1938. The case against the tuft-eared squirrel. United States Forest Service, Rocky Mountain Region, BULLETIN 21(4):10-12 mimeo. Denver.
- Courtier, F.A. 1962. Grey squirrels in woodlands. AGRICULTURE (Great Britain) 69(3):136-138. Gray squirrels cause costly damage to sycamore, beech and oak trees by peeling bark off the tree trunks. They can best be controlled by trapping. 260 were caught in four days with 70 traps.
- Coventry, A.F. 1940. The eating of bone by squirrels. SCIENCE n.s. 92(2380):128. A red squirrel made almost daily visits to gnaw on a moose skull.
- Coville, L. 1929. Squirrel or peach-pit "Who's the Nut?" J HERED 20:287. Peach pits were seemingly opened in an inefficient manner.
- Cowles, C.J., R.L. Kirkpatrick and J.O. Newell. 1977. Ovarian follicular changes in gray squirrels as affected by season, age, and reproductive state. J MAMMAL 58(1):67-73. Pregnant females had heavier ovaries than did lactating females or those with a closed vaginal opening.

- Coyne, John F. 1968. Laspeyresis ingens, a seedworm infesting coves of longleaf pines. ANN ENTOMOL SOC AM 61(5):1116-1122. Squirrels effectively reduce populations of this insect.
- Craddock, C.H. 1951. More red squirrels. FIELD, London 197:478. Red squirrels are reported to be recovering in West Sussex.
- Cram, William E. 1924. The red squirrel. J MAMMAL 5(1):37-41. In New Hampshire T. hudsonicus hangs mushrooms on branches and when dry these are cached in tree hollows or beneath logs and stumps.
- Cranbrook, Earl of and W.H. Payn. 1965. Squirrel survey 1963-1964. TRANS SUFFOLK NAT SOC Norwich 13:83-86. The distribution of red and gray squirrels in Suffolk is described for 1964.
- Crandall, Lee S. 1964. The Management of Wild Mammals in Captivity. University of Chicago Press. 769pp. Tree squirrels are difficult to breed in captivity. S. vulgaris has a short life span in captivity, the longest record being 21 months.
- Crane, Jocelyn. 1936. Shadrock, the squirrel from Kurdistan. NATURE MAG 28(6):332-334, 380. Experiences with a pet S. vulgaris.
- Crase, Fred T. 1970. Food and feeding habits of the western gray squirrel, El Dorado County. Master's Thesis, California State University, Sacramento.
 - . 1973. New size records for the western gray squirrel. MURRELET 54(2):20-21. Body measurements of *S. griseus*.
- Creed, William A. 1956. Mr. Bushytail -- We have your number. PA GAME NEWS 27(10):40. Hunters shooting ear tagged gray squirrels are requested to report this to the author.
 - ______. 1957. A study of the northern gray squirrel in Cameron County, Pennsylvania, with emphasis on the beech-birchmaple forest type. M.S. Thesis, Pennsylvania State University, 175pp.
 - and Ward M. Sharp. 1958. Melanistic gray squirrels in Cameron County, Pennsylvania. J MAMMAL 39(4):532-537. Melanism has decreased in northern hardwood and transition types.

Creutz, Gerhard. 1953. Zur Ernahungsweize des Eichhornchens, Sciurus vulgaris fuscoater Altum, 1876. SAUGETIERKD MITT Stuttgart 1(1):31. S. vulgaris reported feeding on the flesh of Taxus baccata berries but tossing the seeds away. The receptacle of Crataegus flowers were also consumed.

Cross, R.H., Jr. 1942a. For squirrel hunters only. VA WILDL 5(1):29-31.

÷

. 1942b. Breeding habits and management of the gray squirrels in Virginia. Virginia Commission on Game and Inland Fish, 5pp mimeo.

. 1942c. A study of the habits and management of the gray squirrel in Virginia. M.S. Thesis, Virginia Polytechnic Institute.

______. 1946. The gray squirrel. VA WILDL 7(2):14, 20.

______. 1949. Squirrels in September. VA WILDL 10(9):8-9. Early seasons present problems.

- Cross, Stephen Paul. 1969. Behavioral aspects of western gray squirrel ecology. Ph.D. Dissertation, University of Arizona, 185pp.
- Cunningham, L.M. 1952. Melanistic squirrels. CTRY LIFE, London 111:363.
- Curtis, James D. 1945. The when, the where, the what of squirrel storage. FRONTIERS 10(1):16-17, 21.

. 1952. Destruction of paper tree tags by squirrels. forestry 50(3):220-221. *T. hudsonicus*.

- Cushing, J.E., Jr. 1945. Quarternary rodents and lagomorphs of San Josecito Cove, Neuvo Leon, Mexico. J MAMMAL 26(2):182-185. Sciurus identified on basis of a skull and mandibles.
- Cypert, E. and B.S. Webster. 1948. Yield and use by wildlife of acorns of water and willow oaks. J WILDL MANAG 12(3):227-231.
- Dalke, Paul D. 1948. Some observations on den trees in the Missouri Ozarks. J WILDL MANAG 12(1):107-109.

. 1953. Yields of seeds and mast in second growth hardwood forest, southcentral Missouri. J WILDL MANAG 17(3):378-380. Seed yield for 1939 was only 10 percent of that for 1938.

- Dallman, A.A. 1936. Grey squirrel at Wadworth. NWEST NAT Arbroath 11(1):45.
- Dalquest, W.W. 1950. Records of mammals from the Mexican state of San Luis Potosi. Occas pap MUS ZOOL LA State Univ 23:1-15.
- Dalton, D.N. 1950. Grey squirrels. FIELD, London 195:930. Predation on young birds.
- Dambach, Charles A. 1942. Gray squirrel feeding on Crataegus. J MAMMAL 23(3):337. Seeds of Crataegus were eaten even when other foods were available (July).
- Danilov, D.N. 1938. The caloric values of main foodstuffs of the squirrel. ZOOL ZH Moscow 17:734-738.

. 1941. Methods for estimating crops of the squirrels" foods when predicting the animals' numbers. TRANS CENTR LAB BIOL AND GAME INDUSTRY Moscow 5:34-45. Translated by J.D. Jackson for Bureau of Animal Population, Oxford. Just what title says but a poor paper.

Dansby, Karen N. and Jon P. Shoemaker. 1971. Occurrence of Neohaematopinus sciuri Jancke, 1933 on a West Virginia gray squirrel. J PARASITOL 57(4):886. Enderleinellus longiceps and N. sciuri have been found on gray squirrels and Hoplopleura sciuricola has been found on fox squirrels in West Virginia.

Dapson, Richard W. 1963. Color aberration in the red squirrel. J MAMMAL 44(1):123. One T. hudsonicus from New York State was predominantly white and gray.

Dasgupta, B. and Kamani Meedeniya. 1958. The vector of Hepatozoon sciuri. PARASITOLOGY 48(3/4):419-422. Sporogony was demonstrated in the flea, Orchopeas wickhami in England.

Davidson, A.M. 1968. Red squirrel in Thetford Chase. Q J FOR 62(3):214-225. The British red squirrel prefers forests of pines and in such areas the gray squirrel may be excluded. The red squirrel is acutely sensitive to heat and locates its nests not so much for protection from cold but for protection from heat.

. 1971. Red squirrels in Thetford Chase -- III. Q J FOR 65(1):52-64. and W. Adams. 1973. The gray squirrel and tree damage $Q ext{ J FOR 67(3):}237-247$, and 67(4):289-307.

S. carolinensis strips tree bark to line its nests. Squirrels may also gnaw bark because they like the texture and perhaps this is why they gnaw lead telephone cables. Squirrels may eat bark but there is no evidence for this.

Davidson, William Randolph. 1975. Dirofilariaeformia pulmoni sp. n. (Nematoda Onchocercidae) from the eastern gray squirrel (Sciurus carolinensis Gmelin). J PARASITOL 61(2):351-354. Adult worms were found in the pulmonary artery and its branches and microfilariae were present in the blood.

. 1976. Endoparasites of selected populations of gray squirrels, *Sciurus carotinensis* (Gmelin). Ph.D. Dissertation, University of Georgia, 207pp.

. 1976. Endoparasites of selected populations of gray squirrels (*Sciurus carolinensis*) in the southeastern United States. PROC HELMINTHOL SOC WASH 43(2):211-217. Twenty-nine species of endoparasites were found in 270 gray squirrels examined. Infection with *Hepatozoon griseisciuri* may be related to mid-winter mortality.

and Janet P. Calpin. 1976. Hepatozoon griseisciuri infection in gray squirrels of the southeastern United States. J WILDL DIS 12(1):72-76. Hepatozoon was found in blood smears from 110 of 270 (41%) gray squirrels in twelve states. This parasite may be more pathogenic than previously realized and may possibly be related to high mortality during late winter.

Davis, D.H.S. 1932. Coleoptera found in the nest of the American grey squirrel (Sciurus carolinensis Gmelin) from Wynchwood Forest, Woodstock, Oxon 13(11):30. J ENT SOC S ENGL.

. 1950. Notes on the status of the American grey squirrel (Sciurus carolinensis Gmelin) in the southwestern Capte (South Africa). PROC ZOOL SOC LOND 120 (Part 2):265-268. From the time of introduction of gray squirrels in 1900 until 1959 they colonized an area of several hundred square miles. The chief limiting factor to their spead is the absence of tall seed-bearing trees. They eat lizards, insects and probably bird eggs and young. The chicken flea is the only ectoparasite so far recorded.

Davis, Donald Wayne. 1969. The behavior and population dynamics of the red squirrel (Tamiasciurus hudsonicus) in Saskatchewan. Ph.D. Dissertation, University of Arkansas, 229pp.
Home range was 3.3 and 3.6 acres for males and females respectively. Densities ranged from 0.16 per acre in mixed jack-pine-black spruce to 0.95 per acre in white spruce forests. Yearling females had lower breeding percentages and smaller litters than older adults. The breeding season was only once a year - from March to May.

and J.A. Sealander. 1971. Sex ratio and age structure in two red squirrel populations in northern Saskatchewan. CAN FIELD-NAT 85(4):303-308. Age can be estimated reasonably by eye lens weights, and juveniles can be separated from adults by epiphyseal notches of humeri and femora. Natural mortality is high during the first two years of life and decreases with age. Five percent lived five years in one area and three of these (0.4%) survived for more than eight years. Sex ratios at birth are probably equal and sex ratios of older animals may reflect relative availability to the collector because of differences in behavior of the sexes.

Davis, Frank. 1976. Phantoms of the Forest. LA CONSERV 28(9-10):4-7. A good general article on how to hunt squirrels.

Davis, John W., Lars H. Karstad and Daniel O. Trainer. 1970.
Infectious Diseases of Wild Mammals. Iowa State University Press, Ames, Iowa. 421pp.
The following diseases of squirrels are discussed - fibromatosis, tularemia, listerosis, encephalitis and adiaspiromycosis.

and Roy C. Anderson (eds.). 1971. Parasitic diseases of wild animals. Iowa State University Press. 364pp.

Davis, William B. 1939. The Recent Mammals of Idaho. Caxton Printers, Calwell, Idaho. 400pp. *Tamiasciurus hudsonicus* is the only species of tree squirrel native to Idaho.

. 1960. Eastern gray squirrel, *Sciurus carolinensis* (Gmelin). IN: The Mammals of Texas, TEX GAME AND FIS COMM BULL No. 41:137-141.

Davis, William T. 1907. Insects as food of squirrels. CAN ENTOMOL 39(1):16. Squirrels prefer Balaninus larvae from acorns to the acorns. They also eat pupae from cocoons of Clistocampa.

. 1924. Local notes on the gray squirrel. PROC STATEN ISL INST ARTS SCI 2:629-634.

. 1924. Oak apples destroyed by gray squirrels. BROOKLYN ENTOMOL SOC BULL 19(3):91-93.

- Davison, Verne E. 1964. Selection of foods by gray squirrels. J WILDL MANAG 28(2):346-352. Squirrels were carefully observed in Athens, Georgia to determine food preferences. Tables showing foods classed as choice, fair or uneaten give a good indication of squirrel food preferences.
- Dawson, Mary R. 1961. The skull of *Sciurus nitidus*, a Middle Eocene rodent. POSTILLA (Yale Peabody Mus.) 53:1-13 illustrated Specimens are found throughout the Bridger formation of Wyoming.

- Day, P.L. 1948. Squirrels in the New Forest. FIELD, London 192:77 S. carolinensis.
- Dean, Wallace E. 1965. An analysis of biological data from squirrels taken by hunters opening day October 16, 1965. FEDERAL AID JOB COMPLETION REPORT W-41-D-3. Conservation Commission of West Virginia.
- Deansely, Ruth and A.S. Parkes. 1933. The oestrous cycle of the grey squirrel (Sciurus carolinensis). PHIL TRANS R SOC 222(485):47-78.
- Dechaseaux, Colette. 1943. Contribution a l'etude de Sciurus feignouxi Pomel. MAMMALIA 10(3-4):129-139. The skull of S. feignouxi from the Oligocene of France is described and compared with other squirrels.
- Degerbøl, Magnus. 1933. Danmarks Pattedyr i Fortiden. VIDENSK MEDDR DANSK NATURH FOREN 95:357-641. Bones of S. vulgaris have been found in deposits from the Beginning Forest Period, Early Neolithic Age, Late Neotithic Age and the Bronze Age. The only evidence of interglacial presence are some spruce cones from Ejstrup gnawed by a rodent (squirrel?).
- Degn, Hans Jørgen. 1973. Systematic position, age criteria and reproduction of Danish red squirrels (Sciurus vulgaris L.). DAN REV GAME BIOL 8(2):1-24.
 Danish and Russian summaries. Squirrels from Bornholm are identified as S.v. vulgaris while those from the rest of Denmark are S.v. fuscoater. Offspring are produced from February through August.
 - . 1974a. The past and present occurrence of the red squirrel (*Sciurus vulgaris*) in Denmark. DANSKE WILDTUNDERS, Meddelelse No. 118,48pp. Vildtbiolgisk Station, Kalø. In Danish with English summary. Red squirrels have spread in Denmark since the turn of the century partly due to increase of coniferous plantations and introductions. On the island of Fyn both red and black squirrels now occur where formerly only the black color phase was found.

. 1974b. Wormian bones in a sample of Danish squirrels, Sciurus vulgaris Linne, 1758. SAUGETIERKD MITT 22(3):236-238.

. 1974c. Feeding activity in the red squirrel Sciurus vulgaris. J ZOOL LOND 174(4):516-520. The time of day and weight of stomach contents of squirrels shot in Denmark was compared. Squirrels seem to feed more toward evening during September and October while in February they concentrate on eating during a short period in the morning.

DeGraff, Olga F. 1946. A squirrel in the family. AUDUBON MAG 48(6):369-372. Experiences with a pet gray squirrel.

- Dehm, Richard. 1950. Die Nagetier aus dem Mittel-Miocän (Burdigalium) von Wintershof-West bei Eichstätt in Bayern. NEUES JB MINER GEOL PALAÖNT REF 91(3):321-428. Sciurus costatus and Sciurus fissurae.
- DeLamater, E.D. 1939. The squirrel as a new host to a ringworm fungus. MYCOLOGIA 31:519-526.
- Delmee, E., P. D. Dachy and P. Simon. 1972. Contribution a la biologie des mesanges (Paridae) en milieu forestier. (Contribution to the biology of titmice (Paridae) in a forest setting. AVES (1/2):1-80. S. vulgaris is a predator on titmice.
- Delost, P. 1965. Le Cycle sexuel saisonnier de l'ecureuil (Sciurus vulgaris) C R SEANC SOC BIOL 159(5):1141-1145.
 - and M. Guerin. 1962. Variations ponderales saisonnieres des glandes surrenales de l'ecureuil (*Sciurus vulgaris*) dans le Tarn. (Seasonal weight variations of the adrenal glands of the squirrel {*Sciurus vulgaris*} in the Tarn). C R SEAN SOC BIOL 156(7):1305-1308. The left adrenal is larger than the right. The adrenals are largest in summer and smallest in winter. The adrenals do not hypertrophy in gestation but they do increase in weight during lactation.
- and J.C. Fayet. 1962. Étude topographique et volumetrique de l'hypophyse de l'écureuil (*Sciurus vulgaris*). (Volumetric and topographical study of the squirrel (*Sciurus vulgaris*) hypothysis. C R SEAN SOC BIOL 156(12):2143-2147.
- Dennett, Dan and J.B. Kidd. 1960. An analysis by tag returns of three years controlled squirrel hunting. PROC ANN CONF SOUTHWEST ASSOC GAME FISH COMM pp66-73. Hunters remove about 15% of the fox and gray squirrels on 6,000 acre game management area.
- Dennis, John. 1973. The vanishing Delmarva squirrel. NATL PARKS CONSERV MAG 47(10):10-11. A popular article on S. niger cinereus.
- Dennis, Wayne. 1930. Rejection of wormy nuts by squirrels. J MAMMAL 11(12):195-201. Gray squirrels do not always reject wormy nuts which seem to be detected solely by smell.
- Dent, G. 1940. The red squirrel and the dormouse. ESSEX NAT Stratford 26(5):281. S. vulgaris has recently reappeared in the London district, Essex, England.
- Deuber, Carl G. 1934. Defoliation activities of gray squirrels in American elm trees. SCIENT MON 38:60-63.

- deVos, Antoon. 1964. Range changes of mammals in the Great Lakes region. AM MIDL NAT 71(1):210-231. S. niger and S. carolinensis have spread northward in recent times.
- Diamond, I.T. 1970. Thalamic projections to the visual cortex of the squirrel. (Sciurus carolinensis). ANAT REC 166(2):299 (Abstract).
- Dice, Lee Raymond. 1921. Notes on the mammals of interior Alaska. J MAMMAL 2(1):20-28. Red squirrels live in white spruce forests and only rarely among black spruce. They lay out mushrooms to dry and later cache them. The fur is of little use.

______. 1927. How do squirrels find buried nuts. J MAMMAL 8:55.

. 1941. Methods of estimating populations of animals. J WILDL MANAG 5(4):398-407. Slight success in determining gray squirrel abundance was achieved by recording the number of squirrels treed per hour by a dog.

- Dickey, D.R. 1928. Five new mammals of the rodent genera Sciurus, Orthogeomys, Heteromys and Rheomys from El Salvador. PROC BIOL SOC WASH 41:7-14.
- Didier, Robert. 1952. Étude systématique de l'os pénien des mammiferes /-4 (Suite) Rongeurs. MAMMALIA, Paris 16:7-23. Descriptions of baccula of various tree squirrels.
- Diesch, S.L., R.P. Crawford, W.F. McCulloch and F.H. Top. 1967. Human leptospirosis acquired from squirrels. N ENGL MED 276(15):838-842. Several squirrel hunters developed leptospirosis presumably from S. niger. Leptospira grippotyphosa was isolated from one squirrelan Wannach.
- Dippner, Robert. 1974. Dark adaptation in the American red squirrel (Tamiasciurus hudsonicus). J COMP PHYSIOL 87(1):62-72. This squirrel possesses a functional duplex retina. Complete dark adaptation occurs in 30 minutes. An increase in visual sensitivity of more than 3 log units occurs and the final visual threshold is about 1 log unit above that of a human.

and John Armington. 1971. A behavioral measure of dark adaptation in the American red squirrel. PSYCHON SCI SECT ANIM PHYSIOL PSYCHOL 24(1):43-45.

More than 30 minutes was required for complete dark adaptation and the final threshold of the squirrel was about 1.5 log units above that of man. The threshold changes at least 4 log units, going from a light adapted state to a dark-adapted state. Tree squirrels have a duplex visual system (double layer of receptor cells in the retina.) One type may be the basis for a cone system and the other for a rod system. Dobroruka, Ludek J. 1960. Some anatomical differences between *Sciurus vulgaris* L. and *Citellus citellus* L. due to differences in their way of life. VESTN CESK SPOL ZOOL 24(2):97-104. Czech with German summary.

o lng Dobrovsky, C.G. and M.J. Harbough. 1934. *Gysticercus fosciolaris* from the red squirrel. T AM MICROC COC 53:67.

- Doby, J.M. and M.T. Boisseau-Lebreuil. 1971. Rôle possib le des animaux sauvages carnassiers (Oiseaux et Mammifères) dans la dissémination mécanique de l'adiaspiromycone par Emmonsia crescens Emmons et Jellison, 1960 dans la nature. C R SEAN SOC BIOL 165(5):1119-1122. 165(5):1119-1122. Spores of this fungus can be spread by the feces of mammals including S. vulgaris.
- Dodt, E. 1962. Vergleischende Untersuchunger Über das adaptive Verhalten reinder Zapfennetzhäute. (Comparative studies of the adaptive behavior of pure cone retinae). PFLUGERS ARCHIV GESAMTE PHYSIOL MENSCHEN TIERE 275:561-573.
- Dodwell, P.C. and D.E. Bessant. 1961. The squirrel as an experimental animal: some tests of visual capacity. CAN J PSYCHOL 15(4):226-236. Tree squirrels should be good experimental animals especially for studies on vision. Their vision seems to be excellent and dexterity and activity are good. Laboratory rats on the other hand have poor visual acuity, do not rely much on vision, learning tends to be slow, and they are nocturnal. Squirrels are active, alert and curious.
- Doebel, John H. 1967a. A note on denning habits of the gray squirrel. VA WILDL 28(8):6.
 - . 1967b. Home range and activity of the gray squirrel in a southwest Virginia woodlot. M.S. Thesis, Virginia Polytechnic Institute.

. 1967c. Radiotracking Mr. Bushytail. VA WILDL 28(3):4-5. The home range of three *S. carolinensis* measured with radiotelemetry were 1.03, 1.02 and 0.80 acres. Radio transmitters weighed 40 to 45 grams and were held by a harness.

and Burd S. McGinnes. 1974. Home range and activity in a gray squirrel population. J WILDL MANAG 38(4):860-867. The mean home range was 0.49 ha (1.20 acres). Testing of 11 environmental variables contributed little to describing variance in squirrel activity.

- Dolbeer, Richard A. 1973. Reproduction in the red squirrel (Tamiasciurus hudsonicus) in Colorado. J MAMMAL 54(2):536-540. There was no evidence of females producing two litters per year. Red squirrels have a relatively low reproductive rate and although populations do fluctuate on a short-term basis in relation to food (cone crops) the annual density changes are not of the magnitude seen in snowshoe hare populations.
- Donohoe, Robert W. 1959. A progress report on gray and fox squirrel population studies in Ohio. TRANS MIDWEST WILDL CONF 21:8pp.
 - _____. 1963. Recent squirrel studies in Ohio and their application to management. OHIO WILDL MANAG ASSOC CONTR 4:37pp.
 - . 1965. Squirrel harvest and population studies in Ohio. Ohio Department of Natural Resources. GAME RESEARCH IN OHIO 3:65-93.
 - and Kahler Martinson. 1961. A preliminary report of age and sex ratios among Ohio squirrel populations. OLENTANGY WILDL EXP STAT RELEASE No. 75. 5pp.
 - and Roger O. Beal. 1972. Squirrel behavior as determined by radiotelemetry. OHIO FISH WILDL REP No. 2. 20pp.
- Dorney, Robert S. 1962. A survey of the coccidia of some Wisconsin Sciuridae with descriptions of three new species. J PROTOZOOL 9:258-261.
 - . 1963. Coccidiosis incidence epizootiology in two Wisconsin Sciuridae. TRANS N AM WILDL NAT RES CONF 28:207-215. Coccidiosis is a common chronic disease in *T. hudsonicus*. There was no evidence of mortality related to infection with two species, *Eimeria tamiasciuri* present in almost all animals and *E. toddi* which occurred irregularly.

. 1967. Incidence, taxonomic relationships and development of Lewisi-like trypanosomes in Wisconsin Sciuridae. J PROTOZOOL 14(3):425-428. The levisi-like trypanosomes in the red squirrel and eastern chipmunk appear to be host specific.

- . 1968. Morphology and population biology in two phyletic lines of eimerians in nearctic Sciuridae. Paper given at Amer. Sox. Parasitol. 43rd Annual Meeting.
- . 1969. Epizootiology of trypanosomes in red squirrels and eastern chipmunks. ECOLOGY 50(5):817-824. The prevalence of lewisi-like trypanosomes in red squirrels from Wisconsin varied from 4% to 37%.

and A.C. Todd. 1959. Occurrence of Hepatozoon in gray squirrels in Wisconsin. J. PARASITOL 45(3):309. Gametocytes were found in the bood of two gray squirrels out of four.

- Douthitt, H. 1915. Studies on the cestode family Anoplocephalidae. ILLINOIS BIOL MONOGR 1:351-446.
- Doutt, J. Kenneth. 1951. A new subspecies of the Arizona gray squirrel (Sciurus arizonensis Coues). ANN CARNEGIE MUS 20(2):271-273.
- Dowding, Eleanor Silver. 1947. Haplosporangium in Canadian rodents. MYCOLOGIA 39(3):372-373. Cells of this fungus were found in the lungs of a T. hudsonicus.
- Dowling, John E. 1970. Organization of vertebrate retinas (human, rabbit, monkey, cat, mud puppy, squirrel, frog, pigeon). INVEST OPTHALMOL 9(9):655-680.
- Downs, Albert A. 1944. Estimating acorn crops for wildlife in the southern Appalachians. J WILDL MANAG 8(4):339-340.

and W.E. McQuilkin. 1944. Seed production of southern Appalachian oaks. J FOR 42:913-920.

In the experimental area deer seemed far more important than rodents as consumers of acorns. The 7 year study demonstrated that acorn production per tree was related to size of crown, and hence with trunk diameter.

- Dozier, Herbert L. and Harold E. Hall. 1944. Observations on the Bryant fox squirrel. MD CONSERV 21(1):2-7.
- Drew, George A. 1948. Our squirrel feeding station. BULL MASS AUDUBON SOC 32(8):301-303.
- Dubock, Adrian. 1975. Here they come gathering nuts...and myths. WILDL, London 17(11):490-495. A general account of the gray squirrel in Great Britain.
- Dubos, René. 1959. Mirage of Health. Doubleday and Company, Inc. 235pp. "Early in the 1940's a local zoo on the Japanese island of Oshima exhibited a few squirrels from Formosa. The squirrels soon overran the whole island and almost ruined its major industry, the production of camellia oil, by destroying the birds that distributed the pollen to the camellia flowers". p. 51 entire note.
- Duck, Les. 1951. Dust bowl bushytails. OKLA FISH GAME NEWS 7(1):3-6. An account of hunting fox squirrels in the canyons of western Oklahoma.

Dudderaa, G.R. 1967. A survey of the food habits of the gray squirrel (Sciurus carolinensis) in Montgomery County, Virginia. M.S. Thesis, Virginia Polytechnic Institute. 92pp.

Duffy, M. 1961. Squirrels for tomorrow. LA CONSERV 13(12):2-4.

- Dunaway, Paul B. 1969. "Perfect" polydactylism in hind feet of a gray squirrel. AM MIDL NAT 81(1):244-247. A squirrel with seven functional toes on each hind foot was shot in Knox County, Tennessee.
- Duncan, Stewart. 1973. Eimeria ontarioensis Lee and Dorney 1971, from the gray squirrel, Sciurus carolinensis, in Massachusetts. J PARASITOL 59(2):330.
- Durrant, Stephen D. and Keith R. Kelson. 1947. A new Abert squirrel from Utah. PROC BIOL SOC WASH 60:79-91.

and R.M. Hansen. 1954. Taxonomy of the chickarees (Tamiasciurus) of Utah. J MAMMAL 35(1):87-95. The distribution of four subspecies of T. hudsonicus in Utah.

- Durrell, Jackqueline. 1969. Keeping tropical squirrels in captivity. Jersey Wildlife Preservation Trust. ANN REP 6:53-55.
- Dustman, E.H. 1950. Squirrel housing problems. OHIO CONSERV 14(9):15, 32. Describes how squirrel dens develop.
- Dury, C. 1898. Squirrel bot fly (*Cuterebra emasculator*). J CINCINNATI SOC NAT HIST 19:143.
- Dvorak, J., M. Otcenasek and J. Prokopic. 1965. The distribution of adiaspiromycosis. J HYG EPIDEMIOL MICROBIOL IMMUNOL (Prague) 9(4):510-514. Three T. hudsonicus were found to be infected.
- Dymond, R. 1930. Grey squirrels and walnuts. FIELD, London 156 (4055):379.
- Eckerlin, Ralph Peter. 1974. Studies on the life cycle of Strongyloides robustus Chandler, 1942, and a survey of the helminths of Connecticut Sciurids. Ph.D. Thesis University of Connecticut. 116pp.
- Edminster, Frank C. 1934. The grey squirrel migration. NATURE MAG May 1934. :221-222, 225, 256.

. 1937. An analysis of the value of refuges for cyclic game species. J WILDL MANAG 1(1-2):37-41. Refuges are of no value in maintaining populations of cyclic species such as ruffled grouse, cottontail rabbit and gray squirrel.

- Edson, J.M. 1936. Muscular power of a squirrel. MURRELET 17(1):18. Sciurus douglasii.
- Egorov, O.V. 1959. Forecasting the number of squirrels in Yakutiya. TR INST BIOL YAKUTSK FIL SIB OTD AKAD NAUK SSSR. 6:3-46. In Russian.
 - . 1961. Ecology and hunting of squirrels in Yakutiya. TR INST BIOL YAKUTSK FIL SIB OTD AKAD NAUK SSSR Moscow. 208pp.
- Ehrström, Carl Robert. 1852. Djurvandringar i Lalpmarken och nona delen af Finland årer 1839 och 1840. Societas pro fauna et flora fennica. NOTISER UR FORHANDLINGAR, 1952. 2:1-8.
 A mass migration of lemmings in Finnish Lapland, was followed by migrations of squirrels, hares and some species of birds.
- Eiberle, K., and F. Ziegler. 1967. Dégâts d'écorgage par l'écureuil. (Barking damage by squirrels). SCHWEIZ Z FORSTW 118(11):717-723. Barking and girdling of young trees is uncommon and is a localized affair confined to the season of May through July. Larch and spruce trunks were stripped of bark in one area during June 1967 in Switzerland.
- Eibl-Eibesfeldt, Irenaus. 1951. Beobachtungen zur Fortpflanzungsbiologie und Jugendentwicklung des Eichhornchens (Sciurus vulgaris L.) (Observations on breeding, biology and development of young squirrels). Z TIERPSYCHOL 8(3):370-400.

A study of a pair of tame squirrels and their offspring. The growth and development of young is described.

. 1957. Uber die ontogenetische Entwicklung der Technik des Nusseoffeus vom Eichhornchen (*Sciurus vulgaris* L.) Z SAEUGETIERKD 21(3-4):132-134. Describes how a squirrel improves its technique of opening nuts.

- Eicholtz, John. 1951. Pop goes the weasel. PA GAME NEWS 21(11):50. A weasel was seen chasing a gray squirrel through the trees of a forest.
- Eichhorn, R. 1962. Facts about Florida squirrels. FLA WILDL 15(9):10-15. Popular, well illustrated account, of fox, gray and flying squirrels in Florida. Southern Florida gray squirrels average 16.6" while those in the northern part of state average 20" in total length. About 556,600 squirrels are harvested yearly. (1961).
- Eley. 1967. Grey squirrels: shooting and trapping. Eley Game Advisory Station, Fordingbridge, Hampshire, England 19pp. A popular booklet giving advice on control of S. carolinensis by trapping and shooting.

47.

Elliott, Phillip F. 1974. Evolutionary responses of plants to seedeaters: pine squirrel predation on lodgepole pine. EVOLUTION 28(2):221-231. Lodgepole pine responds to red squirrel cone consumption by increasing the amount of protective tissue (cone scales) per cone while keeping seed size relatively constant and reducing the number of seeds per cone.

- Emmel, Ludwig. 1938. Die Herkunst des Schmelzes der erwachsenen Nager /-3 mit Untersuchungen uber den Magezahn von Sciurus vulgaris L. Z WISS ZOOL Leipzig 150:358-403.
- Emmons, R.W., R.P. Maynard, and D.O.N. Taylor. 1974. Total alopecia in a gray squirrel (*Sciurus carolinensis*). J WILDL DIS 10(1):42-43. A completely hairless wild adult male was found in San Mateo County, California.
- Engelhard, Arthur W. and W.H. Bragonier. 1960. Squirrels as possible vectors of the oak wilt fungus in Iowa. PLANT DIS REP 44(3):192-196. Squirrels may be able to spread oak wilt fungus by transmitting the pathogen and by making wounds on healthy trees.
- Engelhart, Max. 1955. Eichhornchen, Sciurus vulgaris, furchtet sich im Heim 1. Ordnung vor einer Waldmaus, Apodemus species. SAEUGETIERKD MITT 3(4):171. A tame S. vulgaris became highly excited when a mouse (Apodemus) entered ner nest box.
- Engels, William L. 1933. Notes on the mammals of St. Joseph County, Indiana. AM MIDL NAT 14(1):1-16. The gray squirrel is very scarce, while fox squirrels are fairly common, even inhabiting parts of South Bend.

England, Douglas. 1950. Grey squirrels. FIELD, London 195:721.

_____. 1936. Overgrowth of teeth in rodents (gray squirrel). FIELD, London 167(4340):462.

- English, Mary P. 1969. Ringworm in wild mammals: further investigations. J ZOOL 159(4):515-522. Twelve gray squirrels were examined in Great Britain for the ringworm fungus, *Trichophyton*, and none were found to be infected.
- English, Pennoyer F. 1934. Some observations on a pair of red-tailed hawks. WILSON B 46(4):228-235. A pair of adult Buteo borealis brought five S. niger and one T. hudsonicus to their nest in Michigan to feed their young.

- Enright, J.B., C.E. Franti, D.E. Behymer, W.M. Longhurst, V.J. Dutson and M.E. Wright. 1971. Coxiella burneti in a wildlifelivestock environment: distribution of fever in wild mammals. AM J EPIDEMIOL 94(1):79-90. Antibodies were found in 6% of the gray squirrels examined.
- Errington, Paul L. 1932. Food habits of southern Wisconsin raptors. Part I. Owls. CONDOR 34(4):176-186. Remains of three fox squirrels were found in almost 800 pellets of Bubo virginianus.
 - . 1933. Food habits of southern Wisconsin raptors. Part II. Hawks. CONDOR 35(1):19-29. One Sciurus was found in 359 kills of Circus hudsonicus. Eleven Sciurus were found in 165 kills of Buteo borealis.
- , Frances Hamerstrom and F.N. Hamerstrom, Jr. 1940. The great horned owl and its prey in North-Central United States. IOWA AGRIC EXP STN RES BULL 277:757-850. Remains of S. niger were found in 0.4 percent of the pellets and stomachs of Bubo virginianus.
- Evans, D. 1951. Grey squirrels in Glamorganshire. FIELD, London 198-552.
- Evans, Everett F. 1953. Game squirrels of Texas: the gray squirrel. TEX GAME FISH 11(3):13-14.
- Evans, F.C. 1937. Sources of infection and seasonal incidence in tularemia in man. U.S. PUBLIC HEALTH REPORTS 52:103-112.
- Evans, Gail. 1950. Squirrel ranks second. MD CONSERV 27(4):19, 27. Squirrel hunting accounts for about fourteen percent of the annual shotgun shell production of Remington Arms Company. Rabbits account for about thirty percent.
- Evans, James E. 1968. A preliminary study of the taxonomic status of the fox squirrel in West Virginia. M.S. Thesis, West Virginia University.
- Evans, W. 1913. A list of Anoplura obtained in the Forth Area. P R S EDIN 19:93-95.
- Evenden, Fred G. 1971. Animal road kills. ATL NAT 26(1):36-37. Gray squirrels made up 30% of 12 species (46 individuals) of animals counted along a 1.5 mile Maryland suburban road.
- Evermann, B.W. and A.W. Butler. 1894. Preliminary list of Indiana mammals. PROC INDIANA ACAD SCI 3:124-139.
- Fairbairn, Douglas. 1971. A Squirrel of One's Own. The McCall Publishing Company. 153pp. Experiences with a pet gray squirrel.

____. 1973. A Squirrel Forever. Simon and Schuster.

219pp.

More experiences with a pet gray squirrel. A sequel to "A Squirrel of One's Own."

- Faleschini, R.J. and B.K. Whitten. 1975. Comparative hypoxic tolerance in the Sciuridae. COMP BIOCHEM PHYSIOL 52(1A):217-221. Hypoxic tolerance in greatest in hibernating and fossorial species.
- Fankhauser, R. and K. Fischer. 1965. Toxoplasmosis (Sporozoa) in martens (Carnivora) and squirrels (Rodentia). SCHWEITZ ARCHIV TIERHEILKD 107(11):611-614.
- Farentinos, Robert Chris. 1971. Social dominance and mating activity in the tassel-eared squirrel (Sciurus aberti ferreus). Ph.D. Thesis, University of Colorado 83pp.

. 1972a. Observations on the ecology of the tassel-eared squirrel. J WILDL MANAG 36(4):1234-1239.

______. 1972b. Nests of the tassel-eared squirrel. J MAMMAL 53(4):900-903.

Abert squirrels favor nest construction in the southern portion of ponderosa pines and tend to build nests close to the trunk and about 3/4 of the way up. Squirrels will often take advantage of witches brooms caused by dwarf mistletoe and build nests in such growths.

. 1974. Social communication of the tasseleared squirrel (*Sciurus aberti*): A descriptive analysis 2. TIERPHYCHOL 34(5):441-458.

- Fayet, J.C. and P. Delost. 1963. Donees sur l'hypophyse de l'Ecureuil (Sciurus vulgaris). (Data on the hypophysis of the squirrel). In: 2nd Conference of European Comparative Endocrinologists, Brussels, 1963. GEN COMP ENDOCRINOL 3(6):698. Abstract only.
- Fellenberg, W.O. 1964. Gebaudenester des Eichhornchens (Sciurus vulgaris) in Westfalen. BONN ZOOL. BEITR 15(1-2):72-77.
- Felling, Bob. 1967. Aim for the bark. TEX PARKS WILDL 25(10:16-18. If the bullet strikes the tree bark next to the animal's head wood will be splintered jarring the squirrel to the ground where a better shot can be had.
- Ferguson, J. Homer and G. Edgar Folk, Jr. 1971. Effect of temperature and acclimation upon FFA levels in three species of rodents. CAN J ZOOL 49(3):303-305. Red squirrels are able to mobilize free fatty acid during short term exposure to cold, especially when cold-acclimated. Rats and mice did not respond to acclimation.

- Ferner, John W. 1974. Habitat relationships of Tamiascuurus hudsonicus and Sciurus aberti in the Rocky Mountains. SOUTHWEST NAT 18(4):470-473. There is overlapping in habitat and food resources of these two species.
- Ferron, Jean. 1974. Étude éthologique de l'Écureuil Roux d'Amérique, (Tamiasciurus hudsonicus). Ph.D. Dissertation University of Montréal, Montréal, Quebec, Canada. 370pp.

. 1975. Solitary play of the red squirrel (Tamiasciurus hudsonicus). CAN J ZOOL 53(11):1495-1499.

. 1976. Cycle annuel d'activite de l'ecureuil roux (Tamiasciurus hudsonicus) adults et pienes en semi-liberte au Quebec. The annual cycle of activity of Tamiasciurus hudsonicus -- adults and juveniles. NAT CAN (QUE) 103(1):1-10.

. 1976. Comfort behavior of the red squirrel (Tamiasciurus hudsonicus). Z TIERPSYCHOL 42:66-85. Activities such as self-grooming, stretching, resting, sleeping, elimination, and nose-blowing are described. The pattern of grooming activities follows a predictable sequence.

- and Jacques Prescott. 1977. Gestation, litter size, and number of litters of the red squirrel (*Tamiasciurus hudsonicus*) in Quebec. CAN FIELD-NAT 91(1): 83-84. The gestation of *T. hudsonicus* was 35 days. The average litter size (of 7 litters) was 5.4.
- Ffolliott, P.F. and D.R. Patton. 1975. Production-rating functions
 for Abert squirrels in southwestern ponderosa pine. WILSON BULL
 3(4):162-165.
- Fichter, George S. 1950. Squirrels on the march. FRONTIERS, Philadelphia 14(3):73-74.
- Fields, Hugh M. 1966. Improved squirrel nest box. N C AGRIC EXT SERV. MISC EXT PUBL No. 9. 2pp.
- Figulla, R. 1933. Untersuchungen über die Existenz und Bau einer "Lippenplatte" (Schumacker) und äknlicher Gebilde bei einigen Nage tieren. ANAT ANZ 76:65-79.

Findley, James S. 1960. The fox squirrel in New Mexico. J MAMMAL
41(3):403.
Fox squirrels are found in and around Roswell, Chaves County,
New Mexico.

, et al. 1975. Mammals of New Mexico. University of New Mexico Press, Albuquerque. S. aberti, S. niger, S. arizonensis, and T. hudsonicus.

- Finley, Irene. 1943. Squirrel of the golden forest. NAT MAG 36(5):263-264. Popular article on S. kaibabensis.
- Finley, Robert B., Jr. 1969. Cone caches and middens of *Tamiasciurus* in the Rocky Mountain Region. UNIV KANS MUS NAT HIST No. 51: 233-273. A squirrel may use from 8 to 24 bushels of cones in half a year and the entire cone crop may be collected in some years. Cone caches are a source of seeds for forest tree nurseries.
- Finley, William L. and Irene. 1925. The wit of a red squirrel. NAT MAG 5(3):141-144, 152. Popular article.
- Fischer, Joh von. 1877. Das ranke Eichhorn, Sciurus rigidus Peters. ZOOL GART 18(1):21-27. Two individuals were kept in captivity and observed for over a year. Their actions were much like those of S. vulgaris.
- Fischer, Wolfgang. 1957. Winterwurf des Eichhörnchens. Z SAEUGETIERKD 22(1-2):105-106. Description of winter nest.
- Fiserius, E. 1892. Beitrage zur Entwicklungs geschichte von Sciurus vulgaris. VERH PHYS-MED GES WÜRZB 26:103-122. "An epitome of the developmental history of this species." ZOOLOGICAL RECORD.
- Fish and Wildlife Service. 1948. Feeding and caring for squirrels. U S DEPT INT WILDL LEAFLET No. 302. 2pp mimeo.
- Fisher, Edward Wayne. 1967. A population analysis of tree squirrels of Shelby Forest, Tennessee. M.S. Thesis, Memphis State University 43pp.

and Alfred E. Perry. 1970. Estimating age of 5-2/gray squirrels by lens weights. J WILDL MAN 34(4):825-828. 5-2/The dried lens weight is sufficiently accurate to separate juveniles from adults and to estimate year classes of adults.

- Fitter, R.S.R. 1939. The distribution of the grey squirrel in the London area. LOND NAT 1938:6-19. In Kew Gardens lead tree labels are torn to shreds by gray squirrels. The continuous history of the gray squirrel in the London area began with the release of 100 animals at Kingston Hill, adjoining Richmond Park about 1920.
- Fitzgerald, G.L. 1949. Squirrel in rabbit bury. FIELD, London
 193:22.
 S. carolinensis using rabbit holes.

- Fitzsimons, F.W. 1920. The Natural History of South Africa. Longmans, Green and Company, London, Vol 4. Mammals. Gray squirrels were introduced by Cecil John Rhodes on his estate at Groot Schuur. They have spread throughout the suburbs of Cape Town and are a source of vexation to fruit growers. They are considered vermin and a bounty of threepence per head is paid by the Cape Provincial Government.
- Fitzwater, Wm. D., Jr. 1941. The red squirrel: territorialism, activity, census methods. M.S. Thesis, Syracuse University.

. 1943. Color marking of mammals, with special reference to squirrels. J WILDL MAN 7(2):190-192. Gray and red squirrels were successfully marked for field recognition using the dye, Nyanzol A. Directions are given for handling squirrels using a zipper tube and a marking board.

and William J. Frank. 1944. Leaf nests of gray squirrel in Connecticut. J MAMMAL 25(2):160-170. A study was made of nest abundance, location in trees, materials used by squirrels and invertebrate inhabitants of nests.

- Flahaut, M.R. 1941. Exotic squirrels in the Seattle area. MURRELET, Seattle 22:63-64. S.c. leucotis in Washington state.
- Flyger, Vagn F. 1951. A bibliography of the tree squirrels and other pertinent literature. PENN COOP WILDL RES UNIT. QUART REP 13(4):19-38.

. 1952. A study of the nest box habits and the breeding season of the gray squirrel (*Sciurus carolinensis leucotis*) in Maryland and Pennsylvania. M.S. Thesis, Pennsylvania State University. 59pp.

. 1954. The Maryland squirrel study and social rank. MD CONSERV 31(3):14-18. Popular article on *S. carolinensis*.

_____. 1955a. Implications of social behavior in gray squirrel management. TRANS N AM WILDL 20:381-389.

. 19556. The social behavior and populations of the gray squirrel (*Sciurus carolinensis* Gmelin) in Maryland. D.Sc. Dissertation, The Johns Hopkins University 97pp.

. (ed.) 1959. Symposium on the gray squirrel. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:355-407. Ten papers were published and are listed separately by author. . 1959. A comparison of methods for estimating squirrel populations. J WILDL MAN 23(2):220-223.

Time-area counts and trap recapture ratios were employed.

. 1960. Movements and home range of the gray squirrel, Sciurus carolinensis in two Maryland woodlots. ECOLOGY 41(2):365-369. The home range of gray squirrels in 10 acre woodlots was: adult males 1.9 acres, adult females 1.2 acres and immatures 0.9 acres.

. 1969. The 1968 squirrel "migration" in the Eastern United States. PROC NORTHEAST FISH WILDL CONF 26:69-79. Unusual movements of gray squirrels were reported from Vermont to Georgia.

. 1970. Urban gray squirrels - problems, management and comparisons with forest populations. PROC NORTHEAST FISH WILDL CONF 27:107-113. Urban gray squirrels often display great variation in coat colors

including melanism and albinism.

. 1974. Squirrels in an urbanizing environment. Symposium on wildlife in urbanizing environments. University of Massachusetts pp121-124.

H. and Rebecca Cooper. 1967. The utilization of nesting boxes by gray squirrels. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 21:113-117.

and Ephraim Yale Levin. 1977. Congenital erythropoietic porphyria: Normal porphyria of fox squirrels (*Sciurus niger*). AM J PATH 87(1):269-272.

Fox squirrels can serve as animal models in the study of congenital erythropoietic prophyria, a disease of humans. Gray squirrels do not exhibit this condition and could serve as comparison animals.

and Loren W. Lustig. 1976. The potential for reestablishing fox squirrels in portions of their former range in the northeastern states. PROC NORT HEAST FISH WILDL CONF 33:13-17. S. niger has disappeared from its former range throughout most of Pennsylvania and parts of New Jersey, Delaware, New York, Connecticut and Massachusetts. It has good potential for reestablishment.

Fogl, John George. 1972. A new method of aging gray squirrels by the use of cementum annuli. M.S. Thesis Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 45 pp.

- Fogle, Ned E. and Chad L. Fogle. 1959. The ecological relationship between the occurrence of squirrel leaf nests in different types of oak forest habitats. ARKANSAS ACAD SCI PROC 13:75-82. Although one forested area had twice as many squirrel leaf nests as the other no one factor was responsible for the difference. (S. niger and S. carolinensis).
- Fordham, W.H. 1946. Melanistic grey squirrels at Ashwell. TRANS HERTFORDSHIRE NAT HIST SOC FIELD CLUB 22(4):160-161.

______. 1950. Black squirrels at Ashwell. LETCHWORTH NAT SOC 10:15. Melanism in Hertfordshire.

______. 1956. Advance of grey squirrels (*Sciurus carolinensis*) and incidence of melanism in North Hertfordshire. PROC ZOOL SOC LOND 126(1):170-172.

Forestry Commission of Great Britain. 1953. The grey squirrel, a woodland pest. LEAFL FOR COMM 31. 16pp.

Formosov, A.N. 1933. The crop of cedar nuts, invasions into Europe of the Siberian Nutcracker (Nucifraga caryocatactes maccorhynchus Brehm) and fluctuations in numbers of the squirrel (Sciurus vulgaris L.) J ANIM ECOL 2:70-81. The nuts of Siberian cedar (Pinus cembra) are one of the most important sources of food for squirrels. Mass migrations of squirrels is a phenomenon of wide occurrence in the taiga. Statistics on numbers of squirrel skins sold show that invasions of the nutcracker into Europe often coincide with the year of a "bad squirrel harvest" and often proceed it by a year.

. 1934. Mutual relations between (Sciurus vulgaris L.), the crossbill (Laxia curvirostrata L.) and the great spotted woodpecker (Dryobates major L.). DOKL AKAD NAUK SSSR. LENINGR 3:197-201.

Russian with English summary.

. 1935. Fluctuations in the numbers of economically ezploited animals. All-Union Co-operative Unified Publishing House, Moscow and Leningrad. 108pp. (In Russian. Translation in Bureau of Animal Populations, Department of Zoology Field Studies, Oxford University).

. 1935. The migrations of the red squirrel in the U.S.S.R. 2:59-62. (In Russian).

. 1936. Wanderungen des gemeinen Eichhornchens. TRUDY ZOOL INST AKAD NAUK SSSR 3:97-173. (In Russian). Migration of S. vulgaris in the U.S.S.R.

- Forsyth, C.J. 1893. On some Miocene squirrels with remarks on the dentition and classification of the Sciuridae. PROC ZOOL SOC LOND 179-215.
- Fortune, R. 1927. Grey squirrel and pink-footed geese at Goodmanham. NATURALIST, London 849:298.
- Fouch, William R. 1958. Longevity records for the fox squirrel. J MAMMAL 39(1):154-155. Two females were known to be $7\frac{1}{2}$ years old when shot and another was trapped at age 61 years. One male was trapped at an age of at least 6 years.
 - . 1962. Mast crops and fox squirrel populations at the Rose Lake Wildlife Experiment Station. PAP MICH ACAD SCI ARTS LETTER 47 pt 1:211-217. There was no demonstrable relationship between size of mast crop and density of fox squirrels. Perhaps the availability of corn on nearby farms was a factor in this.
 - . 1969. Results of three early squirrel seasons at the Rose Lake Wildlife Research Area. MICH DEPT NAT RES. WLDL DIV REP. 175. 4pp.
- Fox, Adrian C. 1939. Observations on red squirrel travel in treadwheel. J MAMMAL 20(3):373-374. A red squirrel ran up to 23 miles in a treadwheel in 24 hours. He was most active at night.
- 1939. Red squirrels eat basswood and boxelder seeds. J MAMMAL 20(2):257. Seeds of these trees are eaten in midwinter.

- Francis, Edward. 1934. Tularemia. SCIENT MONT 38:476-479. Tularemia in S. carolinensis, S. niger and T. hudsonicus.
- . 1937. Sources of infection and seasonal incidence of tularemia in man. PUBL HLTH REP WASH 52(4):103-113. Ten cases of tularemia in man developed after dressing tree squirrels and one case developed after a bite from a tree squirrel.
- Frank, Harry. 1952. Über die Jugendentwicklung des Eichhornchens. Z TIERPSYCHOL Berlin 9:12-22. The gestation of European red squirrels is 4-5 weeks. Newborn young weight 16-17 grams and gain about 3 grams per day for the first 50 days. The eyes open between 29 and 31 days. The skin begins to darken on the 9th day. Weaning occurs at 9 weeks. Lower incisors erupt at 25 days and the upper at 38 days. The young leave the nest for the first time at 36 days. At 24 months young will start building their own nests.

- Frank, William John. 1948. Wood duck nesting box usage in Connecticut. J WILDL MAN 12(2):128-136.
- Franti, E., H.P. Riemann, D.E. Behymer, D. Suther, J.A. Howarth, and R. Ruppanner. 1976. Prevalence of *Toxoplasma gondii* antibodies in wild domestic animals in northern California. J AM VET MED ASSOC 169(9):901-906. Six Sciurus griseus and two *Tamiasciurus douglasii* were tested and found to be negative.
- Freeman, R.B. 1941. The distribution of Orchopeas wickhami (Baker) (Siphonaptera) in relation to its host the American gray squirrel. ENTOMOL MON MAG (London) 77(4):82-89. O. wickhami is found only on gray squirrels but in some areas it is absent. The red squirrel flea Monopsyllus sciurorum and several other flea species are also found on gray squirrels.
- Freeman, R.S. 1954. Studies on the biology of *Taenia crassiceps* (Zeder, 1800) Rudolphi, 1810. J PARASITOL 40: Sec. 2. 41.
- French, C. 1950. Gray squirrels. FIELD, London 196-786. A note on introduction into England.
- Friedrich, George W. 1946. Gray and red squirrels. CONSERV VOLUNTEER 5(28):9-10.
- Friley, Charles E., Jr. 1952. Criteria for estimating fall fox squirrel populations. Midwest Wildlife Conference, Des Moines, Iowa.

. 1955. Criteria for estimating fall fox squirrel populations. J WILDL MAN 19(1):89-93. By trapping and marking squirrels prior to the hunting season, satisfactory estimates of pre-season populations can be made based on ratio of tagged and non-tagged squirrels shot by hunters.

Fritz, Emanuel. 1932. Squirrel damage to young redwood trees. J MAMMAL 13(1):76. California gray squirrels strip bark from the upper trunks of redwoods and consume the succulent layer of exposed wood. Some trees may be killed and others show permanent scars in the wood. Decay often gains entrance.

. 1951. Bear and squirrel damage to young redwood. J FOR 49(9):651-652. Squirrels peel bark from large saplings and crown of larger young trees.

Frost, Eliott Park. 1913. The behavior of a grey squirrel. J ANIM
BEHAV 3:145-146.
A gray squirrel in Connecticut dug up nuts through two inches of
snow and re-buried them all in a single cache under some leaves.

- Fryzell, F.M. 1926. Squirrels migrate from Wisconsin to Iowa. J MAMMAL 7(1):60. "Armies" of gray squirrels attempted to swim the Mississippi at Prairie du Chien, Wisconsin in early October, 1925.
- Fussner, Bob. 1941. Strange behavior of an eastern gray squirrel. MURRELET 22(3):63.
- Fyson, R.A., J.C.N. Westwood, and A.H. Brunner. 1975. An immuno precipitin study of the incidence of influenza A antibodies in animal sera in Ottawa, Ontario, Canada area. CAN J MICROBIOL 21(7):1089-1101. T. hudsonicus.
- Ganio, Alma. 1967. The bird feeders friend. MASS AUDUBON 52(2):20-23. (Sciurus carolinensis).
- Gaselee, J. 1954. The grey squirrel campaign. CTRY LIFE, London 115:156-157.
- Gashwiler, Jay S. 1970. Plant and mammal changes on a clearcut in west-central Oregon. ECOLOGY 51(6):1018-1026. Douglas squirrels were absent from clearcut forest areas.
- Gates, J. Edward and Donna M. Gates. 1975. Fox squirrel use of cocklebur seeds. J MAMMAL 56(1):239-240.
 Fox squirrels consumed the embryo and inner coat of seeds of Xanthium strumarium and X. chinense during late September. Cocklebur seeds are toxic to other mammalian species.
- Gauckler, Anton. 1963. Eichhornchen (Sciurus vulgaris fuscoater) speichert Pilze. SAEUGETIERKD MITT 11(2):80-81.
 Only one of fifteen squirrels observed gathered mushrooms during a four day observation period in southern Germany. This individual collected and stored 30 to 40 muchrooms high in a pine over a two hour period.
- Gazin, C. Lewis. 1932. A miocene mammalian fauna from south-eastern Oregon. CARNEGIE INST WASH PUBL No. 418:37-86. New: Sciurus malheurensis and S. tephrus.
- Geiler, Heniz. 1949. Eichhörnchen als Blattlausvernichter. Nachrichtentbl f.d. Deutsch. PFLANZENSCHUTZDIENST. Berlin 3:154.

. 1956. Eichhornchen, Sciurus vulgaris fuscoater Altum, 1876, als Vertiliger von Blättlausen (Aphidae). SAEUGETIERKD MITT 4(1):13-15. Squirrels bit open galls on Lombardy poplar leaf-stalks and licked out the plant lice.

Gent, C.J. 1937. A note on the present status of the red squirrel. (Sciurus vulgaris) in Northumberland. VASCULUM 23(2):55-56.

- Gentry, T.G. 1873. PROC ACAD NAT SCI PHILA 101-102. T. hudsonicus eating birds and sucking blood.
- Gerber, Jay D. and Elmer C. Birney. 1968. Immunological comparisons of four subgenera of ground squirrels. SYST ZOOL 17(4):413-416. Tree squirrels and ground squirrels diverged long before the subgenera of ground squirrels originated, lending support to Bryant's (1945) thesis that ground and tree squirrels had diverging lineages since the early Miocene.
- Gerber, Robert. 1950. Mumifizierte Eichhörnchen in Nistkästen. ZOOL GART N.F. 16(5):204.
- Gewalt, Wolfgang. 1952. Beobachtungen uber die Aufzucht von Eichhornchen (Sciurus vulgaris) in der Gefangenschaft. ZOOL GART N.F. 19:26-33.
 - . 1957. Uber das Schwimmen von Eichhorn, Sciurus vulgaris fuscoater, Feldhase, Lepus e. europaeus, und Reh, Capreolus c. capreolus. SAEUGETIERKD MITTEILUNGEN 5(4):162-165. "Brehm" states that a red squirrel swam across a 12 km wide bay. The author watched two frightened squirrels swim a few meters by propelling themselves with their hind legs so that with each kick of the two legs the head and forequarters came out of the water.
- Gibb, J.A. 1959. Predation by tits and squirrels on the eucosmid, Ermarmonia conicolana (Heyl). J ANIM ECOL 27(2):375-396. Tits may normally be density-dependent predators and red squirrels be density-independent but it was not possible to assess their effects on populations of this moth. The destruction of pine seed by E. conicolana larvae and squirrels is economically unimportant in Thetford Chase.
- Gilfallan, Merrill C. 1956. Lessons from longer squirrel seasons. OHIO CONSERV BULL 20(9):13, 28-29. Extending the hunting season from 15 days to 30 days did not reduce gray squirrel populations.
- Gill, John D., Jack Ward Thomas, William M. Healy, James C. Pack, and H. Reed Sanderson. 1975. Comparison of seven forest types for game in West Virginia. J WILDL MAN 39(4):762-768. Counts of gray squirrel leaf nests in seven forest types differed from counts that would be expected if locations of game and sign were independent of forest type.
- Gill, Theodore Nicholas and Elliott Coues. 1877. Material for a bibliography of North American Mammals. U.S. Geological and Geographic Survey (Hayden), FINAL REPORT Vol. 11 being Appendix B of Monographs of North American Rodentia by Elliott Coues and Joel Asap Allen pp951-1081.

- Gilmore, R.M. 1946. Mammals in archeological collections from southwestern Pennsylvania. J MAMMAL 27(3):227-234. Excavations of Indian campsites show S. carolinensis as comprising l percent of the bones found. S. niger bones were found in only l/6th this number.
- Givens, Lawrence S. and Thomas Z. Atkeson. 1949. Squirrels and dumplings. ALA CONSERV 20(11):12,22.
- Glue, David. 1973. Edible dormouse and gray squirrel as tawny owl prey. Q J FOR 67(3):248-249. Remains of S. carolinensis were found in four out of 206 pellets of Strix aluco.

Goertz, John W. and H. Wayne Tubbs. 1967. Aberrant coloration and skull characteristics in a Louisiana gray squirrel.
SOUTHWEST NAT 12(1):109.
A 152 gram specimen had a white pelt with scattered black hairs. The only teeth present were a deformed upper incisor and two cheek teeth in each lower jaw. Skull bones were also abnormally thin.

Goldman, E.A. 1928. The kaibab or white-tailed squirrel. J MAMMAL 9(2):127-129. The kaibab squirrel occupies the same type of habitat as does the Abert squirrel. They are separated by the Grand Canyon.

______. 1931. Three new rodents from Arizona and New Mexico. PROC BIOL SOC WASH 44:133-136. New: Sciurus aberti chusensis.

. 1932. A new squirrel from Honduras. J WASH ACAD SCI 22(10):274-275. New: Sciurus boothiae underwoodi.

______. 1933. Five new rodents from Arizona and New Mexico. PROC BIOL SOC WASH 46:71-78. New: Sciurus chiricahuae.

and H.H.T. Jackson. 1939. Natural history of Plummer's Island, Maryland. IX Mammals. PROC BIOL SOC WASH 52:131-134. The gray is present but red and fox squirrels which were former residents, are now rare or absent.

- Gol'tzmaier, G.K. 1935. The teleutka squirrel. GOSLESTEKHIZDAT pp22-37.
- Gooch, Bob. 1972. Squirrels and squirrel hunting. Tidewater Publishers. Cambridge, Maryland. 160pp.
- Goode, Monroe H. 1944. "Nutcracker suite". SPORTS AFIELD, Minnesota 112(4):30-31, 74, 77-79.

- Gooden, Sam K. 1961. Squirrel de-barking of Loblolly Pine. PROC ANNU CONF SOUTHEASTERN ASSOC GAME FISH COMM 15:116-118. Squirrels, probably S. carolinensis, de-barked pole and sawlog size loblolly pines in local areas in Arkansas. No trees were completely girdled and trees were rarely killed, even indirectly.
- Goodrum, Phil D. 1937a. The gray squirrels and fox squirrels of east Texas. TEX AGRIC EXP STN ANNU REP 50:158. Gray squirrels prefer moist mesophytic vegetation with *Quercus* phellos and Q. niger as the key species. Fox squirrels prefer dryer, more open woodlands with *Quercus stellata* and Q. rubra (red oak) as the key species.
 - . 1937b. Notes on the gray and fox squirrels of eastern Texas. TRANS N AM WILDL CONF 2:499-504. More people hunt the squirrels of east Texas than any other game mammal or bird in the region.
 - ______. 1937c. Wise use of forested lands necessary for squirrel conservation in east Texas. TEX AGRIC EXP STN PROG REP.
 - . 1938a. Squirrel management in east Texas. TRANS N AM WILDL CONF 3:670-676.
 - Light grazing by cattle and horses may improve habitat. Cutting of some trees such as gums and mulberry has contributed to the decline in squirrel numbers.
 - . 1938b. Life history and ecology of the gray and fox squirrels in eastern Texas. TEX AGRIC EXP STN ANNU REP 51:113-114.
 - Gray squirrels are becoming more scarce every year. They prefer hummocks or low sandy loan ridges along the flood plains. They fluctuate considerably in numbers from year to year. No records of migrations in Texas have been found.
 - eastern Texas. M.S. Thesis A & M College of Texas.
 - . 1940. A population study of the gray squirrel in eastern Texas. TEX AGR EXP STN BULL No. 591. 34pp. Much material on many aspects of gray squirrel biology. Chiggers are serious external parasites causing severe skin irritation.
 - . 1959. Acorns in the diet of wildlife. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM. 13:54-61. Acorn yields, chemical analysis, and moisture content of some Texas oak species is given.
 - . 1961. The gray squirrel in Texas. TEX GAME FISH COMM BULL 42. 44pp.

. 1966. Fox and gray squirrel populations in relation to hardwood control. Research Accomplishments January - December 1966, Wildlife Research Laboratory. Denver, Colorado: pp12-13.

. 1972. Adult fox squirrel weights in eastern Texas. J WILDL MAN 36(1):159-160. Adult fox squirrels had the following seasonal average weights:

winter, 695 gm; spring, 681 gm; summer, 645 gm; fall, 703 gm.

_____, V.H. Reid, and C.E. Boyd. 1971. Acorn yields, characteristics, and management criteria of oaks for wildlife. J WILDL MAN 35(3):520-532.

Seed production was related to trunk diameter and crown size. Few trees less than 20 years of age produced acorns. It is estimated that gray and fox squirrels require 13.5 and 13.2 lbs per acre of acorns for 180 days sustenance in east Texas. Ten species of oaks were studied.

Goodwin, George Gilbert. 1932a. New records and some observations on Connecticut mammals. J MAMMAL 13(1):36-40.A hundred years ago the fox squirrel was found over most parts of Connecticut except possibly in the coniferous forests in the highlands of the northeast and northwest. It is now extinct.

. 1932b. A new squirrel from Guatemala. AM MUS NOVIT 574. 2pp. New: Sciurus yucatanensis phaeopus.

. 1934. The gray squirrel migration. NAT MAG 23(5):221-222, 255-256. In Sept-Oct. 1933 a squirrel migration occurred. First reports (August) were from Connecticut where "papillomas" were found.

Much damage to telephone cables in Connecticut occurred during September-October but not in December. The whole state of Connecticut seemed involved, with many reports of squirrels swimming lakes and rivers as well as increased complaints of crop damage. Another migration was in February 1929 near Stamford Connecticut. Sunspots may be an explanation.

. 1935. The mammals of Connecticut. GEOL NAT HIST SURV CONN BULL 53. 221pp. S. niger once found in hardwood fourta.

1943. Two new squirrels from Costa Rica.

AM MUS NOVIT 1218. 2pp. New: Sciurus poasensis Microsciurus alfari alticola

Gordon, Kenneth. 1936. Territorial behavior and social dominance among Sciuridae. J MAMMAL 17(2):171-172. Douglas and pine squirrels and perhaps golden-mantled ground squirrels demonstrate territorial behavior but other ground squirrels and chipmunks demonstrated dominance behavior.

- Gorgas, Michael. 1967. Vergleichend-anatomische Untersuchungen am Magen-Darm-Kanal des Scouromorpha, Hystricomorpha und Caviomorpha (Rodentia.) Z WISS ZOOL 175(3-4):237-404. (In German with English and Russian summaries). This is a comparison of the digestive tracts of rodents.
- Gorschkov, P.K. 1963. Notes on the acclimitization of *Sciurus vulgaris* exalbidus in the Tatar ASSR. IZV AKAD NAUK KAZ SSR: Alma-Ata. pp81-82. (In Russian).
- Gouras, Peter. 1964. Duplex function in the grey squirrel's electroretinogram. NATURE 203(4946):767-768. There are at least two receptor systems contributing to the gray squirrels ERG which behave similarly to the rod and cone components of the ERGs from duplex retinae.
- Graham, Edward and Jacob Uhrich. 1943. Animal parasites of the fox squirrel, Sciurus niger rufiventer, in southeastern Kansas. J PARASITOL 29(2)P159-160. Sixteen species of parasites were found in 100 fox squirrel specimens.
- Grakov, N.N. 1962. The role of squirrels in the diet of martins in the European north. Tr Vses Nauchno-Issled Inst Zhivotn Syr'ya Pushn 19:154-163. S. vulgaris makes up 8 to 18% of the diet of martins.
- Grange, Wallace B. 1928. Pine squirrel carrying young. J MAMMAL 9(2):151-152. A red squirrel carried offspring by grasping the side of the baby so that its front feet were on one side of the mother's neck and the hind feet on the opposite side.
- Granit, A.W. 1906. Ekorren som svanphuggare. TIDSKR JAGT FISKE 111pp.
- Gray, J.E. 1867. Synopsis of the species of American squirrels in /-20 the collection of the British Museum. ANN MAG NAT HIST Ser 3 (0):415-434. Descriptions of museum skins of 39 species from North and South America.
 - . 1868. Note on "l'Écureuil de Gingi" of Sonnerat. ANN MAG NAT HIST 309.
- Green, Daniel G. and John E. Dowling. 1975. Electrophysiological evidence for rod-like receptors in the gray squirrel, ground squirrel and prairie dog retinas. J COMP NEUR 159(4):461-471.
- Greene, H.C. 1950. A record of fox squirrel longevity. J MAMMAL 31(4):454-455.
 - A Michigan fox squirrel $6\frac{1}{2}$ years and another 6 year 2 months old are recorded.

- Grimshaw, P.H. 1931. The menace of the grey squirrel. SCOTT NAT 188:33-35.
- Grinnell, J. 1935. Why we need birds and mammals. SCIENT MON
 41:553-556.
 Squirrels, birds and other animals are the only means for uphill
 distribution of acorns.
- Grodzinski, Wladyslaw. 1971a. Food consumption of small mammals in the Alaskan taiga forest. ANN ZOOL FENN 8(1):133-136. The average daily metabolic rate of the American red squirrel is $1.74 \text{ ccm } 0_2/\text{g-hr}$ and bimodally diurnal. The daily energy budget is 64 kcal for a 230 gm animal.

. 1971b. Energy flow through populations of small mammals in the Alaskan taiga forest. ACTA THERIOL 16(17):231-275. The American red squirrel's daily metabolic rate is 142.8 to 167.8 kcal/kg (0.75) depending on ambient temperature. Animals required 46 to 64 kcal per animal per day depending on size and season.

- and Katarzyna Sawicka-Kapusta. 1970. Energy values of tree-seeds eaten by small mammals. OIKOS 21(1):52-58. The caloric value of 5 European conifers and 14 deciduous treeseeds varied from 4.4 to 6.8 kcal per gram dry weight. Highest were conifers, beech and hazel (6.0-6.8) while the majority of deciduous seeds have a value of 5.0 to 5.3 kcal per gram. Energy values are directly correlated with the lipid content.
- Grosz, Siegfried. 1905. Beitrage zur Anatomie der accessorisches Geschlectsdrussen der Insectivoren und Nagern. ARCH MIKROSK ANAT ENTWMECH 66:567-608. S. vulgaris has one pair of seminal vesicles, one pair of bulbourethral glands and no prostate.
- Grulich, I., J. Nosek and L. Szabo. 1967. The autecology of small rodents and insectivores of the Tribec Mountain Range.
 BULL W H O 36 (Suppl. 1):25-30.
 The population density of squirrels in the Tribec Mountains of Czechoslovakia is at most 1-2 per 100 ha. It is an important host of the ticks Ixodes ricinus, and I. trinaguliceps.
- Guilday, John E., Harold W. Hamilton, and Allen D. McCrady. 1971. The Welsh cave peccaries (*Platygonus*) and associated fauna, Kentucky Pleistocene. ANN CARNEGIE MUS 43(9):249-320. T. hudsonicus.
- Guillery, R.W. and J.H. Kaas. 1974a. The effects of monocular lid suture on the development of the lateral geniculate nucleus in squirrels (Sciurus carolinensis). J COMP NEUROL 154(4):433-442.

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and J.H. Kaas. 1974b. The effects of monocular lid suture upon the development of the visual cortex in squirrels. (Sciurus carolinensis). J COMP NEUROL 154(4):443-452.

- Gunderson, H. and G.C. Decker. 1942. Rodent pests of Iowa and their control. IOWA AGRIC STN BULL P43 (n.s.):423-436. Tree squirrels, especially fox squirrels, sometimes gnaw into corncribs or bark of trees.
- Gunter, Gordon and Lionel Eleuterius. 1971. Bark-eating by the common gray squirrel following a hurricane. AM MIDL NAT 85(1):235. After a hurricane gray squirrels ate the outer cork layer of bark covered by a white, encrusting lichen. Not only the lichen but the whole phellem or outer cork layer of bark was eaten. This occurred only on the trunks and larger limbs of water oaks. Bark of standing trees was not eaten.
- Guthrie, Donald R. 1955. Some physiological changes associated with fatal fear-stress in the gray squirrel. VA ACAD SCI 3pp.

. 1965. Fear-stress in the gray squirrel (*Sciurus* carolinensis). M.S. Thesis, Virginia Polytechnic Institute 80pp.

, J.C. Osborne, and H.S. Mosby. 1967. Physiological changes associated with shock in confined gray squirrels. J WILDL MAN 31(1):102-108.

, Henry S. Mosby and J. Clark Osborne. 1966. Hematological values for the eastern gray squirrel (*Sciurus* carolinensis). CAN J ZOOL 44(2):323-327.

Gysel, Leslie W. 1956. Measurement of acorn crops. FOR SCI 2(4):305-313. Samples from at least 15 trees per species will be needed to adequately estimate acorn production.

. 1961. An ecological study of tree cavities and ground burrows in forest stands. J WILDL MAN 25(1):12-20. Fox squirrel numbers were high in a beech-maple stand and in oak-hickory stands with relatively few cavities (southern Michigan).

. 1971. A 10-year analysis of beechnut production and use in Michigan. J WILDL MAN 35(3):516-519. A single beech tree can provide the energy requirements of one gray squirrel for 13 days.

Habeck, James R. 1960. Tree-caching behavior in the gray squirrel. J MAMMAL 41(1):125-126. Butternuts were cached in the uppermost whorls of branches of saplings of *Pinus strobus* and *P. resinosa*. Î

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- Hadow, Harlo H. 1972. Freeze-branding: a permanent marking technique for pigmented mammals. J WILDL MAN 36(2):645-649.
 S. niger and S. aberti were marked by application of a branding iron to a shaved portion of the animal for 20 to 40 seconds.
- Hahn, W.L. 1909. The mammals of Indiana. ANN REP IND DEPT GEOL NATUR RES 33:414-654, 659-663 (1908).
- Hailman, Jack P. 1960. Notes on the following response and other behavior of young gray squirrels. AM MIDL NAT 63(2):413-417. While following the mother, young squirrels are dependent upon both visual and olefactory stimuli to motivate the "following response" and frequently nuzzle the flanks and shoulders of the mother.
- Hall, E. Raymond. 1946. Mammals of Nevada. University of California Press. 710pp.

and K.R. Kelson. 1952. Comments on the taxonomy and geographic distribution of some North American rodents. UNIV KANS MUS NAT HIST PUBL 5:343-371.

- S. niger rufiventer
- S. carolinensis pennsylvanicus
- S. variegatoides rigidus

and K.R. Kelson. 1959. The mammals of North America. Ronald Press. 546pp.

- Hall, F.G. 1965. Hemoglobin and oxygen: Affinities in seven species of Sciuridae. SCIENCE 148(3675):1350-1351.
 The hemoglobin of gray squirrels and flying squirrels has a lower oxygen affinity than does that of prairie dogs, marmots and 3 species of ground squirrel.
- Hall, Joseph G. 1967. The Kaibab squirrel in Grand Canyon National Park: A seven seasons summary 1960-1966. 54pp.
 UNPUBL REP prepared by the National Park Service, U.S. Dept. of Interior. Grand Canyon, Arizona - on file at the Rocky Mountain Forest and Range Experiment Station, Tempe, Arizona.

______. 1967. White tails and yellow pine. NATIONAL PARKS MAG April: 3pp.

. 1972. Kaibab squirrel report, 1971-1972. 13pp. UNPUBL MAN Rocky Mountain Forest and Range Experiment Station, Tempe, Arizona.

S. kaibabensis spends a considerable portion of its time during the summer on the ground. Much of the daytime is spent resting.

. 1973. The Kaibab squirrel. IN: Symposium on rare and endangered wildlife of the southwestern United States. New Mexico Department of Game and Fish. 167pp.

- Hall, M.C. 1911. A third case of Multiceps serialis in the squirrel.
 SCIENCE 33(860):975-976.
 A gray squirrel was artificially infected with tape worm cysts by feeding proglottids from dog feces.
- Hall, W.C. J.H. Kaas, H. Killackey and I.T. Diamond. 1971. Cortical visual areas in the gray squirrel (*Sciurus carolinensis*): a correlation between cortical evoked potential maps and architectronic subdivision. J NEUROPHYSIOL 34(3):437-542.
- Halse, A. 1974. Electron microprobe analysis of iron content of incisor is associated with the presence of an iron compound in the enamel. The enamel layer is 45um in the incisors of *Sciurus vulgaris*. The iron rich layer has low concentrations of calcium and phosphorus.
- Halvorson, Curtis H. 1972. Device and technique for handling red squirrels. U.S. Fish Wildl Serv, Bur Sport Fish and Wildlife, SPEC SCI REP, Wildl 159:1-10. Squirrels were handled in a wire cone attached to a cloth bag.
- Hamition, Richard Bache. 1968. The parameters and dynamics of an unexploited population of gray squirrels. M.S. Thesis, North Carolina State University. 60pp.

. 1969. September squirrels. VA WILDL

Results of bag check of squirrel hunters on opening day.

Hamilton, T.E. 1949. Bullet meets twig. FIELD AND STREAM 54(7):84-86.

30(1):8-9.

It is safe to shoot at a squirrel (using 22 hollow point bullets) with a 3/8" twig in front of it only if the squirrel is less than a foot behind the twig. The greater the distance of the squirrel from the twig the less likelihood there is of hitting the squirrel due to deflection of the bullet.

Hamilton, William J., Jr. 1928. The height from which rodents may fall. J MAMMAL 9(1):65-66.

A S. vulgaris jumped from a third story fire escape onto a pavement on two occasions without any apparent injury.

. 1934. Red squirrel killing young cottontail and young gray squirrel. J MAMMAL 15(4):322.

. 1939. Observations on the life history of the red squirrel in New York. AM MIDL NAT 22(3):732-745. A general account covering many aspects of red squirrels.

. 1943a. Caterpillars as food of the gray squirrel. J MAMMAL 24(1):104.

Gray squirrels searched carefully under the bark of hickory trees for geometrid caterpillars.

. 1943b. The Mammals of Eastern United States. Comstock Publishing Company. 431pp. General life histories are given for S. carolinensis, S. niger and T. hudsonicus together with distribution maps of the subspecies found east of the Mississippi. 1953. Migrants and emigrants. N Y STATE CONSERV 7(6):10-11. Gray squirrels made mass movements in New York State in 1933, 1935, 1951 and Pennsylvania in 1749. . 1957. The squirrels of New York. N Y STATE CONSERV 11(4):23-26. Fox squirrels have moved into the south western counties in recent years and two were taken in Tomkins County. Fox squirrels seem to prefer parks and towns and have not noticeably invaded the countryside. . 1963. Distribution of fox squirrels in New York. J MAMMAL 44(1):124-125. Records from the 1800's show that S. niger was present in scattered locations throughout New York State. Since then it has disappeared over much of the state but is presently spreading eastward from Chautauqua County in the extreme southwestern portion of the state. Hampe, Irving E. 1938. Maryland nature log II. The squirrels of Maryland. BULL NAT HIST SOC MD 9(3):26-27. . 1944. Maryland nature log. The squirrels of Maryland. MD CONSERV 21(3):11. Hamrick, William J. 1968. The effects of arasan-endrin treated pine seed on bobwhite quail, gray squirrel and turkey. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM. 22:106-114.

- Handley, C.O. 1945. A study of the habits and management of the gray squirrel in southwest Virginia. Virginia Cooperative Wildlife Research Unit QUART REP FISCAL YEAR 1943. 13pp.
- Hankla, D. 1960. Gray squirrel through the year. WILDL N C 24(11):11-14.
- Hansen, H.J. and I.C. Schiodte. 1878-1892. ZOOLOGICA DANICA, Vol I Pattedyr. Copenhagen. Charles Elton (Animal Ecology London 1927) states that on page 88 are notations concerning periodic variations in numbers of Danish squirrels.
- Hanson, E.V. and P.D. Weigl. 1975. Observational learning and the feeding energetics of the red squirrel Tamiasciurus hudsonicus. AM ZOOL 15(3):794.

- Hanson, J.C. 1966. Some physiological characteristics of wild, cage-stressed and shock-comatose gray squirrels. M.S. Thesis Virginia Polytechnic Institute, 65pp.
- Hargrove, William C. 1897. Squirrel ice-boats. POP SCI NEWS, Boston 31(11):256.
- Harkema, Reinard. 1936. The parasites of some North Carolina rodents. ECOL MONOGR 6(2):153-232. 53 gray squirrels from Durham Co., N.C., collected with a 12 gauge shotgun, were examined. They were found to have the following parasitic infestations:

Orchopeas wickhami	50.94%
larval stage of Taenia taeniaeformis	1.89%
Longistriata hassali	92.45%
Atricholaelaps glasgowi	13.2 %
Ixodes hexagonus	5.66%
Trombicula sp.	50.64%
Hoplopleura sciuricola	32.64%
Neohaematopinus sciurinus	50.96%

- Harmon, Roy Lee. 1966. Squirrels will be more active this season as mast is short, so hunters will have to alter hunting styles. W VA CONSERV 30(8):2-5.
- Harper, Francis. 1927. The mammals of the Okefenokee Swamp region of Georgia. PROC BOSTON SOC NAT HIST 38(7):191-396.
 - . 1932. Mammals of the Athabaska and Great Slave Lakes Region. J MAMMAL 13(1):19-36. Red squirrels are especially abundant in jack pine groves.
- Harrell, H.G. 1950. First report on Devonshire mammals. REP TRANS DEVEN ASSOC ADVMT SCI 82:117-123. Status of *Sciurus* in Devon.

- Harris, Alva Howard. 1958. A study of gray squirrel populations on experimental nest box areas. M.S. Thesis, North Carolina State College, 128pp.
- Harris, S. 1974. The history and distribution of squirrels in Essex. ESSEX NAT (London) 33(2):64-78. S. carolinensis and S. vulgaris.
- Harris, William P., Jr. 1930. A new squirrel from Costa Rica. OCC PAP MUS ZOOL UNIV MICH 219:1-4. New: Sciurus adolphei atrirufus.

______. 1951. Second report on mammals. REP TRANS DEVON ASSOC ADVMT SCI 83:79-81. New records of *S. carolinensis* in Devon.

. 1931. A new squirrel of the Sciurus hoffmanni group from Costa Rica. OCC PAP MUS ZOOL UNIV MICH 227:1-3. New: Sciurus miravallensis.

. 1933. A new tree squirrel and a new cottontail rabbit from Costa Rica. OCC PAP MUS ZOOL UNIV MICH 266:1-4. New: Sciurus variegatoides austini.

. 1944a. Additions and corrections to the section on Sciuridae in Ellerman's Families and Genera of Living Rodents. OCC PAP MUS ZOOL UNIV MICH 484:1-21.

. 1944b. A red squirrel in our home. NEWSL CRANBROOK INST SCI 13(9):2-6. A male, *T. hudsonicus*, kept in captivity was unusually tame. It held its summer pelt in winter and vice versa.

. 1947. Revision of *Sciurus variegatoides*, a species of Central American squirrel. OCC PAP MUS ZOOL UNIV MICH 38:39pp.

S. variegatoides ranges from southeastern Mexico to the Panama Canal. Much color variation occurs in this range with fifteen described geographic races which blend into each other.

and Philip Hershkovitz. 1938. Two new squirrels from Ecuador. OCC PAP MUS ZOOL UNIV MICH 391:1-6. New: Sciurus gerrardi imbaburae Sciurus candelensis carchensis

Harrison, George L. 1922. Gray squirrel in the Adirondacks. J MAMMAL An adult male which had been "castrated" and with a stub tail was short in 1887, the only record of a *S. carolinensis* in the Adirondacks according to the author.

Harrison, John L. 1960. A simple trap for squirrels. J MAMMAL 41(1):142-143. A wire trap set on tree branches and baited with unripe bananas was effective in capture of *Callosciurus* in Malaysia.

Harrisson, T.H. 1929. A note on the grey squirrel. FIELD, London 153:228.

Hart, Arthur C. 1936. Red squirrel damage to pine and spruce plantations. J FOR 34(7):729-730.
During winters of deep and prolonged snow-cover, red squirrels feed on buds of certain conifers. Norway and white spruce are the most heavily damaged. White pine, Douglas fir; Japanese red pine and Japanese white pine were free from squirrel damage in these Connecticut plantations.

Harting, J.E. 1891. Hybernation of squirrels. ZOOLOGIST (Ser.3) Vol. 15:101-103.

- Harting, J.K., B.J. Bade, F.W. Atencio. 1974. The organization of retino-geniculate and genicolo-striate pathways in the grey squirrel, *Sciurus carolinensis*. ANAT REC 178(2):370.
- Hartley, John C. 1930. Extraordinary ferocity of a grey squirrel. FIELD, London 156(4061):590.
- Hartman, George P. 1940. Life history and management of the fox squirrels, with particular reference to the western race, Sciurus niger rufiventer (Geoffroy). M.S. Thesis, University of Michigan.
- Harvie-Brown, J.A. 1880-1881. The squirrel in Great Britain. PROC R PHYS SOC EDIN 5:343-348; 6:31-63; 115-83. S. vulgaris.
- Harwood, Paul D. 1943. Wintering with a gray squirrel. AUDUBON MAG 45(6):336-340.
 A baby squirrel raised on evaporated milk developed persistent diarrhea. Other experiences with the pet squirrel are related.

and V. Cooke. 1949. The helminths from a heavily parasitized fox squirrel, *Sciurus niger*. OHIO J SCI 49(4):146-148.

- Hassmann, M. 1952. Vom Erlernen unbenannter Auzahlen bei Eichhornchen (Sciurus vulgaris). Z TIERPSYCHOL 9(2):294-321. Learning experiments.
- Hasson, A.M. and L.B. Holthuis. 1968. Sciurus ebii Pel 1851 (Mammalia): request for supression under the plenary powers. Z.N. (s). 1846. BULL ZOOL NOM, London 25(2-3):125-127.
- Hatt, Robert T. 1927. A gray squirrel carries its young. J MAMMAL 8(3):244-245.
 - . 1929a. The red squirrel farm. NAT HIST 29:319-326. A brief account of the "Red Squirrel Farm owned by Dr. Lillian Delger Powers.
 - . 1929b. The red squirrel: its life history and habits, with special reference to the Adirondacks of New York and the Harvard Forest. ROOSEVELT WILDL ANN 2(1):1-146.

. 1930. The relation of mammals to the Harvard forest. ROOSEVELT WILDLIFE BULL 5(4):625-671.

The red squirrel clips the small slender twigs from the European larch and eats the buds. Winter buds of Scots pine are cut off at the base and the inner green tissue is eaten. The terminal buds of Scots pine and Norway spruce are eaten causing trunk distortion. Most damage occurs during periods of heavy snowfall. Mushrooms such as *Boletus*, *Russula* and *Amanita muscaria* are eaten. . 1943. The pine squirrel in Colorado. J MAMMAL 24(3):311-345.

Lodgepole (*Pinus contorta*) forest is the favored habitat. Open forests and ponderosa forests do not support pine squirrels. Lodgepole seeds are a widely spread food resource and an unusually stable one because the cones hold their seeds for many years. Often a fire causes the cones to open. Seasonal crop failures lose their importance, for less than 1% of the cones are ever cut by squirrels and the larder remains well stocked. This reliability of a single food resource balances the leveling advantages of a more diversified food crop enjoyed by the red squirrel in the eastern states.

. 1959. The Mammals of Iraq. OCC PAP MUS ZOOL UNIV MICH 106:113.

Sciurus anomalus anomalus Guldenstaedt probably occurs in all parts of the Zagros Mountains in which some vestige of forest remains. This species spends much time on the ground and runs to trees when in danger.

- Haugen, Arnold O. 1944. Highway mortality in southern Michigan. J MAMMAL 25(2):177-184. The greatest highway mortality of fox squirrels (and other mammals) is associated with the increased reproductive activity and dispersal period.
- Hauser, Doris C. 1964. Anting by gray squirrels. J MAMMAL 45(1):136-138. Numerous instances of "anting" squirrels are described.
- Havera, Stephen P., Chas. M. Nixon and Floyd Collins. 1976. Fox squirrels feeding on buckeye pith. AM MIDL NAT 95(2):462-464. Several S. niger were observed eating pith from terminal twigs of Ohio buckeye trees (Aesculus glabra). The pith was 12% sugar. Squirrels were seen eating pith all winter from November to March.
- Hawkins, Arthur S. 1937. Winter feeding at Faville Grove, 1935-36. AM MIDL NAT 18(3):417-425. In winter feeding it is estimated that 2.0 lb of yellow dent corn are consumed per squirrel per week.
- Hay, Oliver P. 1921. Descriptions of some Pleistocene vertebrates found in the United States. PROC U S NAT MUS 58(2328):83-146. Fossils of gray and red squirrels from Pleistocene deposits have been found in Tennessee and Maryland. A new species Sciurus tenuidens is described from Cavetown, Maryland.
- Haymond, R. 1869. Mammals found in Franklin County, Indiana. REP INDIANA AGR GEOL 203-208.
 - _____. 1870. Mammals found at the present time in Franklin County, Indiana. GEOL SURV INDIANA ANNU REP 1:203-208.

Hayward, C. Lynn. 1940. Feeding habits of the red squirrel. J MAMMAL 21(2):220.

A red squirrel was observed feeding on Douglas fir cones. A cone was stripped in two minutes. Eating the contents of 12 cones would amount to 540 seeds.

. 1941. A bibliography of Utah mammalogy; including references to names and type localities (first supplement) GREAT BASIN NAT 2(4):125-136. Two subspecies of red squirrels, Tamiasciurus hudsonicus ventorum and T. h. fremonti are listed for Utab. No other two supplements

- and T.h. fremonti are listed for Utah. No other tree squirrels are listed.
- Hazard, E.B. 1960. A field study of activity among squirrels (Sciuridae) in southern Michigan. Ph.D. Dissertation, University of Michigan 281pp.
- Hazelwood, A. 1951. Yorkshire Naturalists' Union: Annual Report 1950. NATURALIST (Yorkshire) 836:20.
 A colony of S. carolinensis occurs above 1000 ft in Yorkshire.

______. 1953. Yorkshire Naturalists' Union: Annual Report 1952. naturalist (Yorkshire) 844:25. S. vulgaris spreading in Yorkshire while S. carolinensis spreading more slowly.

- Hecht, R. 1931. Sciurus vulgaris silanus Hect-ein neues Eichhornchen aus Italien. Z SAUEGETIERKD :238.
- Heck, O.B. 1951. A study of the adult helminths of the digestive tract and larval cestoda in tree squirrels in Douglas County, Kansas. M.S. Thesis, University of Kansas, 55pp.
- Hediger, H. 1945. Zur Biologie des Eichhörnchens (Sciurus vulgaris L.). /-7
 SOCIETE ZOOLOGIQUE SUISSE ET DU MUS D'HISTOIRE NATURELLE 52:361-370.
 The European red squirrel does not hibernate but on the contrary
 is most active in mid-winter. Mating occurs in late January. The
 animals even tunnel through snow to get to food caches (in Switzerland).
- Hefner, John M. 1971. Age determination of the gray squirrel. M.S. Thesis. Ohio State University, 51pp.
- Heinold, George. 1947. Squirrels are planters. FOREST OUTDOORS, Montreal 13:419.
- Heinrich, Gerd. 1936. Ueber die von mir im Jahre 1935 in Bulgarien gesammelten Saugetiere. ISZ TZARSK PRIRODONAUCH INST SOF 9:33-48.
 New: Sciurus vulgaris balcanicus Sciurus vulgaris rhodopensis Sciurus vulgaris istrandjae

73.

- Heinz Felten, F.S. and G. Storch. 1971. Zur Kleinsaugerfauna West-Anatoliens. Teil 1. SENCKENB BIOL 52(6):393-424. (On small mammals from Western Asia Minor, Part 1.) Description of specimens of S. anomalus.
- Heller, Ernst. 1950. Eichhornchen und Nesterraub. ZOOL GART 17(1/5):254. Squirrels were extirpated in a Leipzig park in 1928 and 1929 because they were assumed to be bird predators. The author feels that predation on birds by S. vulgaris is overstated.
- Henderson, J.A. 1947. Gray squirrel in County Fermanagh. IR NAT 9:97.
- Hendricks, Larry Dee. 1972. Schizogonic development of Hepatozoon griseisciuri of the Eastern gray squirrel. Ph.D. Thesis, University of Maryland, 77pp.
- . 1975. Schizogonic development of Hepatozoon griseisciuri Clark 1958 (Sporozoa: Haemogregarinidae), of the gray squirrel, Sciurus carolinensis Gmelin 1788), J PARASITOL 61(3):458-461. Schizogonic stages were found in tissue imprints of liver, or spleen, bone marrow and lungs. Trophozoites, early and mature schizonts were more numerous in bone marrow than in either liver or spleen.

and Ronald Fayer. 1973. Development of Hepatozoon griseiscuri in cultured squirrel cells. J PROTOZOOL 20(5):550-554.

Henshaw, John. 1970. Conflict between red squirrels and gray jays. CAN FIELD-NAT 84(4):390-391. Red squirrels frequently made attempts to drive away gray jays which sometimes resulted in physical contacts. A flying squirrel was also rushed by red squirrels and forced to glide away.

Herman, Carlton M. and Donald L. Price. 1955. The occurrence of Hepatozoon in the gray squirrel. (Sciurus carolinensis). J PROTOZOOL 2(2):48-51. Every squirrel tested (97) in Washington, D.C. and Maryland was infected.

and James R. Reilly. 1955. Skin tumors on squirrels. J WILD MAN 19(3):402-403.

- Herringshaw, D. and D. Gosney. 1974. Red and grey squirrels in the Sheffield area: 1970-1973. NATURALIST 931:127-130.
- Hershkovitz, Philip. 1947. Mammals of northern Columbia. Preliminary Report No. 1: Squirrels (Sciuridae). PROC U S NATL MUS 97 (3208):1-47. New: Sciurus granatensis agricolae Sciurus granatensis norosiensis Sciurus granatensis perijae Sciurus granatensis maracaibensis

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- He Melschwerdt, Robert E. 1942. Use of den boxes in wildlife restoration on intensively farmed areas. J WILDL MANAG 6(1):31-37. Fox squirrels, screech owls, sparrow hawks, opossums, deer mice, and bees made use of 56 nest boxes erected in Champaign County, Illinois.
- Hewson, Raymond. 1953. The red squirrel Sciurus vulgaris leucourus Kerr in Easter Ross. NORTHWEST NAT (n.s.) 1:493-496. Based on kill records there were two high density peaks of red squirrels - 1908 and 1933. Since 1933 red squirrels have declined drastically. The fluctuations in kill of red squirrels closely parallels that of the hare (Lepus timidus).
- Hibbard, Claude W. 1933. A revised list of Kansas mammals. TRANS KANS ACAD SCI 36:230-249. Gray squirrels occur mostly in the easternmost part of the state in heavy timber. Fox squirrels occur along wooded streams and in forested city parks of eastern Kansas.

. 1935. Breeding seasons of gray squirrel and flying squirrels. J MAMMAL 16(4):325-326. Fall litters average larger than spring litters. Size of 27 litters reported.

Hibbard, Edmund A. 1954. Fox and gray squirrels. N DAK OUTDOORS 17(1):4-5. Both species have substantial ranges in NORTH DAKOTA.

. 1956. Range and spread of the gray and the fox squirrels in North Dakota. J MAMMAL 37(4):525-531. Fox squirrels have moved in from South Dakota and Minnesota during the last 20 years. They were also introduced from Indiana and Minnesota. Gray squirrels have been in the Fargo area at least since 1906. Both species have spread greatly.

Hicks, Ellis A. 1940. A comparison of inventory methods applicable to the western fox squirrel (*Sciurus niger rufiventer* Geoffroy). M.S. Thesis, Iowa State College.

. 1942. Some major factors affecting the use of two inventory methods applicable to the western fox squirrel, *Sciurus niger rufiventer*, Geoggroy. IOWA COLL J SCI 16(2):299-305. Two inventory methods --linear counts and spot counts are compared. Temperatures between 31°F and 50°F are most conducive to squirrel activity. Peak activity occurred from 8-10 A.M. with a minor surge from 1-2 P.M.

. 1947. Ecological factors affecting the activity of the western fox squirrel(*Sciurus niger rufiventer*, Geoffroy). IOWA ST COLL J SCI 22(1):36-38. Intensity of activity is inversely proportional to the degree of cloudiness. Greatest summer activity is from 6 A.M. to 7 A.M. and 6 P.M. to 7 P.M. and in winter is 8 A.M. to 9 A.M. and noon to 2 P.M. . 1947. Ecological factors affecting the activity of the western fox squirrel, *Sciurus niger rufiventer* (Geoffroy). Ph.D. Thesis, Iowa State College.

. 1949. Ecological factors affecting the activity of the western fox squirrel, *Sciurus niger rufiventer* (Geoffroy). ECOL MONOGR 19(4):287-302. Activity is greatest during December, followed by November, October and January. Least activity occurs in July, May, June and August. There are three peaks of daily activity; 6 A.M. to 9 A.M., 11 A.M. to 1 P.M. and a minor peak from 6 to 7 P.M. Activity is inversely proportional to wind velocity. The least activity occurs on cloudy days and the greatest activity occurs on clear days.

- Hicks, L.E. 1938. The status of game mammals in Ohio. TRANS N AM WILDL CONF 3:415-420. The total annual kill of gray and fox squirrels in Ohio is 1,216,000, of which 64% are fox squirrels.
- Hight, Mary Etta, Morris Goodman and William Prychodko. 1974. Immunological studies of the Sciuridae. SYST ZOOL 23(1):12-25. A survey of immunological affinities among the Sciuridae.
- Hill, John Eric. 1942. Notes of mammals of northeastern New Mexico. J MAMMAL 23(1):75-82. Abert squirrels frequently prefer to escape by running on the ground if there is adequate underbrush, rather than by climbing a tree.
- Hill, W.C. Osman. 1948a. An undescribed structure in the rodent rhinarium. NATURE 161:276-277.
 A description of the external structure of the squirrel nose compared to that of other rodents.
 - . 1948b. Rhinoglyphics: Epithelial sculpture of the mammalian rhinarium. PROC ZOOL SOC LOND 118:1-35. Structure of gray squirrel nose.
- Himelick, E.B., Richard D. Schein and E.A. Curl. 1953. Rodent feeding on mycelial pads of the oak wilt fungus. PLANT DIS REP 37:101-103. Possibly squirrels (fox or gray) spread oak wilt fungus (Endoconidiophora fagaceanum).
 - and E.A. Curl. 1955. Experimental transmission of oak wilt fungus by caged squirrels. PHYTOPATHOLOGY 45(11): 581-584. Caged gray and fox squirrels transmitted oak wild fungus. Only creosote was able to repel squirrels from gnawing bark.
- Hinde, W. von. 1934. Eichhornchen und Blattlause. AUS DER HEIMAT Öhringen, Wustt 47:219.

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6-14

- Hines, Bob. 1950. Squirrel season. OHIO CONSERV BULL 14(9):9. A page of pen and ink drawings of red, gray, and fox squirrels.
- Hipgrave, Arthur. 1930. Grey squirrels. FIELD, London 156 (4059):517-518. Gray squirrels damage wheat in England.
- Hirth, R.S., D.S. Wyand, A.D. Osborne and C.N. Burke. 1969. Epidermal changes caused by squirrel pox virus. J AM VET MED ASSOC 155(7):1120-1125. Six gray squirrels from Connecticut with fibroma like lesions were examined histologically. On the basis of epidermal changes it was considered that the infections, as a group, may represent variations in the condition described as squirrel fibroma.
- Hitchcock, Lloyd, Jr., K.M. Michels and D.R. Brown. 1963. Discrimination learning: squirrels vs. raccoons. PERCEPT MOT SKILLS 16(2):405-414.
- Hoff, Gerald L., Ellnora B. Lassing, Ming S. Chan, William J. Bigler, and Thomas J. Doyle. 1976. Hemotologic values for free-ranging urban gray squirrels (*Sciurus c. carolinensis*). AM J VET RES 37(1):99-101. Values are given for erythrocyte sedimentation rate, packed cell volume, hemoglobin concentration, erythrocyte and leucocyte counts, differential leucocyte counts, blood platelet counts, hemoglobin electrophoresis and erythrocyte fragility.

, L.E. McEldowny, W.J. Bigler, L.J. Kuhns, and J.A. Thomas. 1976. Blood and urinary values in the gray squirrel. J WILDL DIS 12(3):349-352.

Blood levels were determined for uric acid, urea nitrogen, glucose, total serum protein, cholesterol, triglycerides, calcium, magnesium phosphorus, and chloride plus urine levels of bilirubin, ketones, blood, protein and glucose.

, Thomas M. Yuill, John O. Iversen, and Robert P. Hanson. 1971. Silverwater virus serology in snowhsoe hares and other vertebrates. AM J TROP MED HYG 20(2):326-330. *Tamiasciurus hudsonicus* in Alberta, Canada. Two of 23 were seropositive reactors.

Hoffman, Carl K. and H. Weyenbergh, Jr. 1870. Die Osteologie und 1-2/1Myologie von Sciurus vulgaris L. verglichen mit der Anatomie der Lemuriden und des Chiromys und ueber die Stellung des letzteren im natürlichen Systeme. NATURKUNDIGE VERKANDELINGEN HOLLANDSCHE MAATSCHAPPII DER WATENSCHAPPEN, Harlem. 136pp. Skeleton and musculature of the European red squirrel compared to that of lemurs and the aye-aye.

- Hoffman, Robert S. and Donald L. Pattie. 1968. A guide to Montana mammals: identification, habitat, distribution and abundance. University of Montana Printing Services. 133pp.
 - , Philip L. Wright and Fletcher E. Newby. 1969. The distribution of some mammals in Montana I. Mammals other than bats. J MAMMAL 50(3):579-604.

S. carolinensis occurs in Cascade, Wheatland, and Custer Counties where it has been introduced into urban settings. S. niger occurs in riparian cottonwood forests and town parks along the Yellowstone river as far west as Stillwater County and in Yellowstone and Big Horn Counties.

Hoffman, Roger Alan. 1952. A histological study of the accessory sex glands of male fox and gray squirrels as criteria of age and sexual activity. M.S. Thesis, Purdue University.

and Charles M. Kirkpatrick. 1956. An analysis of techniques for determining male squirrel reproductive development. TRANS N AM WILDL CONF 21:346-355. General appearance of external genitalia, grouping by size of Cowper's glands, or measurements of reproductive glands are poor criteria for determining sexual development, and are not reliable for separating adults from juveniles. Cyclic histological changes occur in male reproductive organs.

and Charles M. Kirkpatrick. 1959. Current knowledge of tree squirrel reproductive cycles and developments. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:363-367. Male S. carolinensis attain sexual maturity when at 10-11 months old. There was no correlation of a drenal or pituitary weights with the male reproductive cycle but low thyroid activity was associated with progressive gonad degeneration.

and Charles M. Kirkpatrick. 1960. Seasonal changes in thyroid gland morphology of male gray squirrels. J WILDL MANAGE 24(4):421-425. Weight and morphology of thyroid glands from male gray squirrels change in relation to season and age but not with sexual activity. The thyroid cycle seems to be influenced by environmental factors and modified by unknown internal conditions.

Hoffmeister, Donald F. and Woodrow W. Goodpaster. 1954. The Mammals of the Huachuca Mountains, Southeastern Arizona. ILL BIOL MONOGR 24(1):1-152. S. arizonensis.

Hofman, J.V. 1923, Furred forest planters. SCIENT MON 16:280-283. The California gray squirrel is probably responsible for planting stands of sugar pine.

Duplicate page number 78.

Holtzapple, Raymond. 1939. Squirrel box. PENN GAME NEWS 10(8):30.

- Hooper, Donald. 1973. Gray squirrels in Weekes, Saskatchewan. BLUE JAY 31(4):238. Gray squirrels may have been introduced into this area or come in during one of the "migrations".
- Hooper, Emmet T. 1947. Notes on Mexican mammals. J MAMMAL 28(1):40-57.
 Collections were made of Sciurus deppei, aureogaster, nelsoni, socialis, griseoflavus, variegatoides and alleni.
- Hoover, Earl E. 1936. Migration of gray squirrels. SCIENCE 83(2151):284-285. Author gives reasons why gray squirrel migrations are not due to harassment and emasculation by red squirrels. He believes migrations are due to lack of food. This paper is a rebuttal to Jackson (1935).
- Hoover, Robert L. 1954. Seven fetuses in western fox squirrel (Sciurus niger rufiventer). J MAMMAL 35(3):447-448. Six fetuses had been the previous record.

and Lee E. Yeager. 1953. Status of the fox squirrel in northeastern Colorado. J MAMMAL 34(3):359-365. By stocking and invasion the fox squirrel has become established in northeastern Colorado, mainly in bottomland hardwoods. Grains (corn, wheat, oats and barley) take the place of nuts, acorns and other mast which is totally lacking in this region.

Hurnung, Viktor. 1952. Eichhornchen näscht Birkensaft. ZOOL GART (n.f.) 19(5):258-259. A European red squirrel was seen eagerly lapping sap from an

injury on a birch tree.

. 1956. Abnorme Farbung eines Eichhornchens, Sciurus vulgaris.

- Horrox, W. 1970. Red squirrels on Speyside. FIELD, London 236(6135):361.
- Horter, R. 1963. Uber eine enterale Candida albicans Infektion bei einem Eichhörnchen. (Enteric infection with Candida albicans in a squirrel). DTSCH TIERAERZTL WOCHENSCHR 79(9):245-246.
- Horvath, Lajos. 1972. The life history of the mistle-thrush (*Turdus viscivorus* Linnaeus) in Hungary. BERTEBR HUNG. 13:87-103.
 Mistle-thrushes prefer nesting near human habitations to reduce predation by S. vulgaris and jays.

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- Horwich, Robert H. 1967. The ontogeny of social behavior in the gray squirrel (*Sciurus carolinensis*). Ph.D. Dissertation, University of Maryland. 209pp.
- Horwich, Robert H. 1972. The Ontogeny of Social Behavior in the Gray Squirrel (Sciurus carolinensis). Paul Parey, Berlin 103pp. A thorough study of development of young gray squirrels.
- Hosley, N.W. 1928. Red squirrel damage to coniferous plantations and its relations to changing food habits. ECOLOGY 9:43-48. During periods of deep snow in Massachusetts, Connecticut and central New York, when the usual food supply is restricted, the buds of some coniferous trees are eaten. This retards normal tree growth, the amount of injury varying directly with depth of snow and duration of snow cover. Scots pine terminal and lateral buds, Norway spruce terminal buds and lateral branch tips, European larch lateral branch ends, and white-pine terminal shoots are clipped off. Scots pine suffers most, with Norway spruce and white pine close behind. European larch recovers well. Red spruce and red pine are left alone.
- Howard, William Johnston. 1935. Apparently neutral relations of weasel and squirrel. J MAMMAL 16(4):322-326. A red squirrel eating meat from beef bones ran away when a weasel, *Mustela noveboracensis*, approached.
- Howell, A. Brazier. 1925. On the alimentary tracts of squirrels with diverse food habits. J WASH ACAD SCI 15(7):145-150. The digestive tract of the gray squirrel is compared to that of Citellus beldingi.
- Howell, Arthur H. 1929. Descriptions of a new red squirrel from North Carolina. J MAMMAL 10(1):75-76. A new subspecies, Sciurus hudsonicus abieticola is described from the high western portion of the state.

. 1919. Notes on the fox squirrels of southeastern United States, with description of a new form from Florida. J MAMMAL 1(1):36-38. A new subspecies, *Sciurus niger avicennia*, is described from the mangrove area of Florida.

. 1936. Description of a new red squirrel from Isle Royale, Michigan. OCCAS PAP MUS ZOOL UNIV MICH, Ann Arbor, 338. ppl-2. Tomiasciurus regalis - new species. . 1936. Descriptions of three new red squirrels (Tamiasciurus) from North America. PROC B IOL SOC WASH 49:133-136. New: T. hudsonicus preblei. T. hudsonicus columbiensis

- 1. nuasonicus columpiensis
- T. huasonicus kenaiensis

. 1942. A new red squirrel from North Dakota. PROC BIOL SOC WASH 55:13-14. New: T. hudsonicus pallescens

. 1943. A new red squirrel from Minnesota. PROC BIOL SOC WASH 56:67-68. New: T. h. murii

Hubbard, John P. and Richard C. Banks. 1970. The types and taxa of Harold H. Bailey. PROC BIOL SOC WASH 83(30):321-332. Recommends that S.c. macumbei be placed in the synonymy of S.c. extimus. S.n. cinereus.

Hudson, Bruce W., Martin I. Goldenberg, J. Doublas McCluskie, Harvard E. Larson, C. David McGuire, Allan M. Barnes, and Jack D. Poland. 1971. Serological and bacteriological investigations of an outbreak of plague in an urban tree squirrel population. AM J TROP MED HYG 20(3):255-263.
A 6-year-old Denver, Colorado girl developed bubonic plague in July 1968, apparently acquired from a fox squirrel. 81 of 768 fox squirrels examined were found positive for plague. Fleas (Orchopeas howardi) were also positive.

- Hugues, Albert. 1938. La reproduction de l'ecureu81. (Sciurus vulgaris L.) MAMMALIA, Paris 2(4):190.
- Hungerford, K.E. and N.G. Wilder. 1941. Observations on the homing behavior of the gray squirrel (*Sciurus carolinensis*). J WILDL MANAGE 5(4):458-460. Some squirrels returned when released as far as 14,800 feet from the capture site.
- Hunt, George S. 1950. Some methods of censuring fox squirrels, Sciurus niger rufiventer, Geoffroy. M.S. Thesis, University of Michigan.
- Hurrell, H.G. 1951. Second report of mammals. REP TRANS DEVON ASSOC ADVMT SCI 83:79-81. New records of *S. carolinensis* in Devon.
- Hutterfield, R.T. 1962. Eight steps to more squirrels. W VA CONSERV 26(9):5-8.
- Ingles, Lloyd G. 1947. Ecology and life history of the California
 gray squirrel. CALIF FISH GAME 33:139-158.
 A general account.

. 1965. Mammals of the Pacific States. Stanford University Press. 506pp. Contains information on introductions of fox and gray squirrels plus habitat preferences.

- Ingram, William M. 1940. Red squirrels chased by robins. J MAMMAL
 21(2):219-220.
 Red squirrels seem not to be a serious predator on robin nests.
 Robins attack when squirrels get within 10 to 15 feet of the
 nest. No instances of robins striking squirrels were seen.
- Irving, Frank D., J.R. Beer and O.F. Hall. 1956. Sugar maple bark /-6
 injury by gray squirrels in a Minnesota woodlot. MINN FOR NOTES
 No. 54. 2pp.
 About 1/3 of the sugar maple trees examined showed some squirrel
 damage. Damage occurs in late winter and early spring from
 chipping off the outer bark and eating the inner layers, phloem
 and cambium tissues.
 - and James R. Beer. 1963. A six-year record of sugar maple bark stripping by gray squirrels in a Minnesota oak-maple stand. J FOR 61(7):508-511.

A comparison of gray squirrel density and bark stripping frequency shows no direct relationship. Bark stripping cannot be predicted by counting leaf nests. A comparison of acorn supply and bark stripping also shows no direct relationship. A comparison of leaf nest counts and acorn supply estimates shows that population denstiy follows food supply trend.

- Ispolatov, E. 1907. Wie das Eichhörnchen seine Jungen forträgt Jestestv. i geog. Moskva 12(10):66-67. Sciences naturelles et géographie; Journal scientifique popularie et pedogogique. Moscove.
- Issel, C.J., S. Pantuwatana, T.M. Yuill, R.P. Hanson. 1975. Selection for plague variants of two California group arboviruses, Jamestown Canyon and La Cross by passage in natural vertebrate hosts. ACTA VIROL. (Prague) (Engl. Ed.) 19(4):318-326. S. carolinensis.
- Ivlieva, L.F. 1973. Vestibular nuclei of brain stem in mammals with different locomotion. ZOOL SH 52(7):1104-1107. (In Russian with English summary). Sciurus vulgaris.
- Jackson, Hartley H.T. 1921. A recent migration of the gray squirrel in Wisconsin. J MAMMAL 2(2):113-114. Gray squirrels swam across the Mississippi toward Minnesota in the early fall of 1914 or 1915 near Pepin, Wisconsin. Another migration from Wisconsin to Minnesota took place in the autumn of 1905.

. 1932. The red squirrel, chatterer of the spruces. HOME GEOG MON 2(3):19-24.

. 1961. Mammals of Wisconsin. University of Wisconsin Press. S. carolinensis, S. niger, T. hudsonicus.

Jackson, Ralph C. 1935. Migration of gray squirrels. SCIENCE 82(2136):549-550.

As many as 2000 dead squirrels were picked up in 1935 between Albany and the Rip Van Winkle Bridge on the west side of the Hudson River. Up to 98% of the gray squirrels handled by the author during the past years have been "emasculated" by red squirrels. The red squirrel does this by jumping onto the bark of an unsuspecting gray and with a quick twist pinning the gray on its side. This takes less than ten seconds.

- Jackson, V.W. 1940. Occurrence of grey squirrel in Manitoba. CAN FIELD-NAT 54(5):75.
- Jacobs, Gerald H. and David Birch. 1975. Increment-threshold functions for different rodent species. VISION RES 15(3):375-378.
 The retina of S. griseus appears to become dominated based on behavior experiments involving increment-threshold measurements.

Jacobs, Leon, Anastasia M. Stanley and Carleton M. Herman. 1962. Prevalence of Toxoplasma antibodies in rabbits, squirrels, and raccoons collected in and near the Patuxent wildlife research center. J PARASITOL 48(4):550. Gray squirrels had a lower prevalence rate (2 of 24) and the positives had a lower antibody titers than did raccoons and rabbits.

- Jacobson, H.A. and R.L. Kirkpatrick. 1973. The use of insecticidegenerating collars for the investigation of parasitic diseases in wildlife populations. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 27:344-345. No adverse effects were detected in S. carolinensis wearing collars for 30 to 90 days.
- Janzen, Daniel H. 1971. Escape of juvenile Dioclea megacarpa (Leguminosae) vines from predators in a deciduous tropical forest. AM NAT 105(942):97-112. S. variegetoides in Costa Rica gnaws through the walls of the immature seed pods and eats one or two seeds per pod. The remaining seeds (4 per pod) usually mature normally. Squirrels are not capable of regulating the abundance of adult vines for they cannot consume more than a small amount of seeds at a time since these contain canavanine, a toxic amino acid (up to 5-10% dry weight). Canavanine is an arginine competitor in protein synthesis.

- Jeffrey, Lisle. 1937. A preliminary study of the southern gray squirrel, *Sciurus c. carolinensis* Gmelin, in Missouri. A.M. Thesis, University of Missouri.
- Jellison, W.L. and R.R. Parker. 1944. Rodents, rabbits, and tularemia in North America: Some zoological and epidemiological considerations. AM J TROP MED HYG 25:349-362.

Jenkins, David H. 1951. Squirrels. MICH CONSERV Lansing 20(3):21-24.

- Jennings, W.L. 1950. What happened to the cat squirrel? FLA WILDL 4(3):6-7, 17.
- . 1951. A study of the life history and ecology of the gray squirrel, *Sciurus c. carolinensis*, Gmelin in Gulf Hammock, Florida. M.S. Thesis, University of Florida.
- Jensen, A.S. 1923. Frøaar og Egernvandring. Relations between the seeding of *Picea abies* and the wandering of the squirrel. VIDENSK MEDDR DANSK NATURH FOREN 76:123-140. (In Danish.) Seed failures of red spruce, *Picea abies*, cause red squirrels to move into Scots pine forests. Red spruce is their main food in Denmark but they do not store winter food. They also nip off terminal shoots of red spruce to consume basal buds. Red squirrel densities fluctuate greatly in Denmark.

. 1946. Bog og Egern, Bokvikler og Musvitter. BIOL MEDDR 20(3):1-14.

(Beech nuts and squirrels, beech tortricids, and titmice.) Squirrels open beech nuts by ripping off the flattest side whereas the great tit pecks a jagged hole in any one side. Squirrels consume the nutmeat whereas the tit consumes the larval moth.

. 1948. Chermes abietis galls and squirrels. BIOL MEDDR København 20(13):3-15.

S. vulgaris is beneficial because it destroys spruce galls.

- Jentink, F.A. 1883. List of specimens of squirrels in the Lyden Museum. Notes Lyden Mus 5:91pp. The zoological record refers to this as almost a monograph of the genus Scrurus.
- Johnson, C.E. 1924. A red squirrel's Christmas dinner. CAN FIELD-NAT 38:137.

Johnson, Frank M., Jack Stubbs and Ralph A. Klawitter. 1964. Rodent repellent value of Arasan-Endrin mixtures applied to acorns. J WILDL MANAGE 28(1):15-19. A mixture of Arasan 75 and Endrin 50 W, used to treat acorns, protected them from gray squirrels when other acorns were also available. It was not effective when treated acorns were the only food available.

- Johnson, Morris D. 1957. Movements, recapture frequencies and duration of residence of fox squirrels released in a new habitat. M.S. Thesis, University of Missouri.
- Johnson, Ned K. 1954. New mammal records for Nevada. J MAMMAL 35(4):577-578. S. griseus first record for Nevada.
- Johnson, Nels Ivar. 1953. The value of acorns as wildlife food in southern Michigan. M.S. Thesis. University of Michigan.
- Johnson, W.C. 1973. Gray squirrels at the Kellogg Bird Sanctuary. JACK-PINE WARBLER 51(2):75-79.
- 1969 Johnson, W.J. 1970. Food habits of the Isle Royale red fox and population aspects of three of its principal prey species. Dissertation Abstr Int B Sci Eng. 30(11):5295-B-5296-B. T. hudsonicus. Surdue Univ. Ph. D. dementation 293 pp.
- Jones, J. Knox, Jr. 1964. Distribution and taxonomy of mammals of Nebraska. UNIV KANS PUBL MUS NAT HIST 16:356pp.
- Jones, J. Knox, Jr. and Gary L. Cortner. 1960. The subspecific identity of the gray squirrel (*Sciurus carolinensis*) in Kansas and Nebrasks. TRANS KANS ACAD-SCI 63(4):285-288.

and Hugh H. Genoways. 1971. Notes on the biology of the Central American squirrel, *Sciurus richmondi*. AM MIDL NAT 86(1):242-246. This squirrel lives in the rain forests of Nicaragua. At higher elevations it is replaced by *S. deppei*.

, Ticul Alvarez and M. Raymond Lee. 1962. Noteworthy mammals from Sinaloa, Mexico. UNIV KANS PUBL MUS NAT HIST 14(12):145-159. Extension of range of *Sciurus*.

Jones, John C. 1949. Squirrels can be pests. PEST CONTROL ///O 17(11):8-14. The best way to reduce or eliminate damage by squirrels is to eliminate the offenders and live trapping is the preferred method.

. 1961. Squirrel problems and what to do about them. PEST CONTROL 29(8):14, 16, 18-20, 22. Control methods are squirrel-proofing, use of repellants, removal and population reduction.

Jones, N.E. 1898. The squirrel hunters of Ohio. Robert Clarke Co. Cincinnati. 168pp.

- Jones, Robert E. 1970. Analysis of a Delaware gray squirrel population. TRANS NORTHEAST SECT WILDL SOC 27:97-106.
- Jordan, James S. 1971a. Dispersal period in a population of Eastern fox squirrels (*Sciurus niger*). U S FOR SERV RES PAP NE-216:8pp. Dispersal seemed greatest among juvenile fox squirrels, somewhat less among subadults and least among adults.
 - . 1971b. Yield from an intensively hunted population of Eastern Fox squirrels. U S FOR SERV RES PAP NE-186. 8pp. 139 fox squirrels were harvested during one hunting season from a 68 acre woods.
- Joseph, Thomas. 1969. The Coccidia of the grey squirrel, *Sciurus* carolinensis with descriptions of two new species. Ph.D. Thesis, Boston University.
 - . 1972a. Coccidial immunity studies in the grey squirrel. PROC INDIANA ACAD SCI 81:341. Gray squirrels do not develop immunity to Eimeria lancasterensis, but will become immune to E. confusa probably because E. confusa penetrates more deeply into the host tissues.
 - . 1972b. Eimeria lancasterensis Joseph, 1969 and E. confusa Joseph, 1969 from the grey squirrel, Sciurus carolinensis. J PROTOZOOL 19(1):143-150. Forty gray squirrels from Massachusetts were examined for coccidia and E. lancasterensis was found in all of them. E. confusa was found in one of these squirrels and E. ontarioensis was found in three of them.

. 1972c. Observations on the endogenous stages of *Eimeria confusa* Joseph, 1969 from the gray squirrel *Sciurus carolinensis*. J PROTOZOOL 19(3):408-413. Stages in the endogenous cycle of *Eimeria confusa* are compared with those of *E. lancasterensis*.

. 1973. Eimerians occurring in or infective to both the fox squirrel, Sciurus niger rufiventer and the gray squirrel, S. carolinensis. J PROTOZOOL 20(4):509. Abstract only. Most of the Eimeria spp. described from gray squirrels either occur naturally in fox squirrels or are transmissible to them. The following species were found in northern Indiana: E. lancasterensis, E. ascotensis and E. ontarioensis.

. 1974. Hymenolepis diminuta in a gray squirrel from Indiana. J WILDL DID 10(2):164-165. A sing 45 cm. long tapeworm was recovered from the mid-portion of the small intestine.

. 1975. Experimental transmission of Eimeria confusa Joseph, 1969 to the fox squirrel. J WILDL DIS 11(3):402-403. Jotter, W.V. 1914. Squirrels and sugar pine reproduction. PROC SOC AM FOR 9(1).

- Judd, W.W. 1955. Gray squirrels feeding on samaras of elm. J MAMMAL 36(2):296. Squirrels in London, Ontario fed on American elm samaras lying on the ground.
- Kaas, J.H., R.W. Guillery and J.M. Allman. 1973. Discontinuities in the dorsal lateral geniculate nucleus corresponding to the optic disc: a comparative study. J COMP NEUROL 147(2):163-180. The blind spot of the retina is represented in the lateral geniculate nucleus of the brain by a small cell free zone. This has been found in the gray squirrel and other mammals.
- , W.C. Hall and I.T. Diamond. 1972. Visual cortex of the gray squirrel (*Sciurus carolinensis*): architectonic subdivisions and connections from the visual thalamus. J COMP NEUROL 145(3):273-305. Compared to the average mammal the disproportionate increase in the size and differentiation of the occipital and temporal areas of the brain of the gray squirrel and tree shrews is primarily the consequence of an increased reliance on vision.
 - , J.K. Harting and R.W. Guillery. 1974. Representation of the complete retina in the contralateral superior colliculus of some mammals. BRAIN RES 65(2):343-346.
- Kang, Yung Sun, and Jin Kim Yung. 1963. Studies on chromosomes of the Korean mammals. I Karyotypes of squirrels and others. ZOOLOGICA (Seoul) (2):1-8. S. vulgaris.
- Karpukhin, I.P. 1969. The biological foundations for the efficient use of squirrel stocks. TR KIROV S-KH INST 21(46):3-16. Translated from REF ZH BIOL 1970, No. 71747.

. 1972a. Development of definitive adaptations in postnatal ontogenesis of *Sciurus vulgaris*. ZOOL ZH 51(10): 1547-1554. Russian with English summary. Linear measurements and weights of growing young squirrels are

given and compared between subspecies.

. 1972b. Development of definitive adaptations in postnatal ontogenesis of *Sciurus vulgaris*. ZOOL ZH 51(10):1547-1554. (In Russian with English summary).

, and N.M. Karpukhina. 1971. Eye lens weight as a criterion of the age of *Sciurus vulgaris*. ZOOL ZH 50(2):274-277. (In Russian with English summary.) Dry lens weight cannot be used as a criterion of age due to wide variability.

6-15

- Kartman, L. 1970. Historical and ecological observations on plague in the United States. TROP GEOGR MED 22(3):257-275. The United States harbors a vast and persistent focus of wild rodent plague. Potentially it may break out among humans, possibly as secondary plague pneumonia and develop into a pneumonic epidemic. Although the absolute number of plague cases is very small there is a definite epidemic potential in the United States. There is a tendency on the part of public health authorities almost to forget that plague exists. A six year old girl acquired plague from a fox squirrel in Denver, Colorado in June, 1968.
- Katz, Julius S. 1938. A survey of the parasites found in and on the fox squirrel (*Sciurus niger rufiventer* Geoffroy) and the southern gray squirrel (*Sciurus c. carolinensis* Gmelin) in southern Ohio. M.S. Thesis, Ohio State University.
 - ______. 1939. An annotated bibliography of references concerning parasites of squirrels (family Sciuridae). OHIO WILDL RES STA REL 131. 21pp.
- Kautz, L. 1940. The utilization of the 1939 crop of acorns and hickory nuts by squirrels in Franklin County, Ohio. M.S. Thesis, Ohio State University.

Keith, James O. 1956. The Abert squirrel (Sciurus aberti aberti) and its relationship to the forests of Arizona. M.S. Thesis, University of Arizona. 106pp. Ponderosa pine is the principal food. The inner bark is eaten during winter and ovulate cones are eaten during the summer. Growth buds and staminate cones are also eaten, as are fleshy fungi, carrion, bones and Gambel oak acorns. The average home range of five animals was 18 acres but with snow cover the average range was five acres. Gestation is about 42 days and the average litter is 3.4 young.

. 1965. The Abert squirrel and its dependence on Ponderosa pine. ECOLOGY 46(1/2):150-163. The Abert squirrel occurs throughout the ponderosa pine belt in central Arizona and is ecologically dependent on this tree. Fluctuations in squirrel numbers may be caused by reproductive cycles in pines.

- Kellogg, R. 1937. Annotated list of West Virginia mammals. PROC U S NAT MUS 84(3022):443-479.
- Kelson, Keith R. 1952. The subspecies of the Mexican red-bellied squirrel, Sciurus aureogaster. UNIV KANS PUBL MUS NAT HIST 5(17):245-250.
- Kelway, Phyllis. 1939. Breeding red squirrels. FIELD, London 174(4531):865.

______. 1939. The grey squirrel. GAME GUN ANGLER MONTHLY (London) 16(162):159-162.

. 1941. The bombing squirrel. GAME GUN 18(186):102-104.

Kemmerer, Jack B. 1968. City of the white squirrels. NATL WILD 6(2):30-31.

Approximately 800 albino gray squirrels live in Olney, Illinois together with normal colored squirrels. According to legend a hunter captured a pair of baby albino squirrels in 1902 which after a short life in captivity were released and became the ancestors of the present population.

- Kemp, Gerald A. and Lloyd B. Keith. 1970. Dynamics and regulation of red squirrel (Tamiascuurus hudsonicus) populations. ECOLOGY 51(5):763-779. It is suggested that red squirrels respond reproductively to the amount of available flower buds of spruce. If red squirrels exhibit increased reproductive rates before a medium-to-heavy cone crop it would permit a higher over-winter survival. Such a mechanism would maximize the red squirrels ability to utilize a widely fluctuating food supply.
- Kempski, W. and T. Losinski. 1972. Animal rabies in the Poznan-Voivodeship during the 1966-1970 period, and epidemiological aspects of its several unusual foci. MED WETER 28(8):456-457 (In Polish). Rabies was not found in squirrels.
- Kenly, Julie Closson. 1934. "Grunts": the amazing story of an altogether amazing squirrel. NAT MAG 23(3):111-114, 146. Illustrated. Popular account of a pet gray squirrel.
- Kennicott, John. 1857. The quadrupeds of Illinois injurious and beneficial to the farmer. U S PAT OFF REPT AGR for 1856:54-67.
- Kerr, R. 1792. The Animal Kingdom, or Zoological System of the celebrated Sir Charles Linnaeus; Class I Mammalia...being a translation of that part of the Systema Naturae as lately published, with great improvements by Professor Gmelin of Goettingen. London. 400pp.
- Kettlewell, H.W. 1950. Grey squirrels. FIELD, London 196:1049. Records from London in 1897.
- Kidd, Joseph B. 1954. The fox and grey squirrels of Louisiana. LA CONSERV 7(1) Oct., 1954. p2-5.

. 1955. Squirrel Research. LA CONSERV 8(2):10-11, 21-22. Nearly 2 million squirrels were shot in Louisiana in 1954-54 and this probably represents about 8% of the population.

_____. 1958. Squirrel hunts on managed areas. LA CONSERV 10(12):4-5, 30.

. 1974. Squirrels...Louisiana's number one game animal. LA CONSERV 26(1/10):18-19.

and L.D. Soileau. 1965. The development of an efficient squirrel trapping and marking technique in Louisiana. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 16:113-119.

Kilham, Lawrence. 1953. Gray squirrels born and raised in captivity. J MAMMAL 34(4):509-510. Pregnant females caught in the wild and placed in small cages successfully raised their offspring in spite of handling from time to time.

. 1954a. Metastasizing viral fibromas of gray squirrels: pathogenesis and mosquito transmission. AM J HYG 61(1):55-63. Suckling squirrels were more susceptible than adults to development of fibromas following intracutaneous inoculation of virus. Of 120 wild squirrels tested, only one had neutralizing antibodies. (This one had skin lesions). Two species of mosquitoes, *Aedes aegypti* and *Anopheles quadrimaculatus*, transmitted fibromas under laboratory conditions.

. 1954b. Territorial behavior of red squirrel. J MAMMAL 35(2):252-253.

Territories enable red squirrels to collect food without interference and store it in easily guarded sectors. Periodic singing advertises occupancy of territories.

______. 1958. Red squirrels feeding at sapsucker holes. J MAMMAL 39(4):596-597.

T. hudsonicus was observed licking sap from holes in gray birches Betula populioj**é**lia).

. 1959. Virus tumors of gray squirrels. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:374.

, Carleton M. Herman and Edwin R. Fisher. 1953. Naturally occurring fibromas of grey squirrels related to Shope's rabbit fibroma. PROC SOC EXP BIOL MED 82(2):298-301. Six gray squirrels from Maryland had fibromas. The fibroma virus was carried through 2 passages in gray squirrels, 4 passages in woodchucks and from woodchucks for 2 passages in domestic rabbits. Cross-neutralization tests demonstrated relationship to Shope's fibroma virus. t

- Killackey, Herbert P. 1973. Anatomical evidence for cortical subdivisions based on vertically discrete thalamic projections from the ventral posterior nucleus to cortical barrels in the rat. BRAIN RES 51:326-331. The gray squirrel has a truly striated visual cortex.
- Kim, Ke Chung. 1966. The species of Enderleinellus (Anopleura, Hoplopleuridae) parasitic on the Sciurini and Tamiasciurini.
 J PARASITOL 52(5):988-1024.
 Twenty species of Enderleinellus parasitic on tree squirrels are described with keys to identification.
- King, James E. and Raymond A. Tallis. 1967. Maximum delayed response by fox squirrels. PERCEPT MOT SKILLS 24(1):302. Fox squirrels are highly capable performers on delayed response problems. They are superior to squirrel monkeys in performance on delayed response tests.

, Michael R. Flaningam and Willis W. Rees. 1968. Delayed response with different delay conditions by squirrel monkeys and fox squirrels. ANIM BEHAV 16(2/3):271-275. Fox squirrels performed better than did squirrel monkeys.

- King, John M., Alan Woolf, and James Shively. 1972. Naturally occurring squirrel fibroma with involvement in internal organs. J WILDL 5-3/ DIS 8(4):321-324. A gray squirrel with fibromatous skin lesions also had lesions in lung, liver, kidney and lymph nodes.
- Kirchstein, R.L., A.S. Rabson, L. Kilham. 1958. Pulmonary lesions produced by fibroma virus in squirrels and rabbits. CANCER RES 18:1340-1344.
- Kiris, I.D. 1937. Methode et technique pour la fixation de l'âge de l'écureuils d'apres l'âge. BYULL MOSK OBSHCH ISPYT PRIR Sect. Biol. 46:36-42. Russian with French summary. Age was determined for Sciurus vulgaris by wear on teeth.

. 1941. Methods for forecasting changes in population of the common squirrel (*Sciurus vulgaris* L.). TRANS CENT LAB BIOL GAME INDUSTRY 5:17-34. (In Russian).

______. 1958. Method of aerovisual survey of crop of squirrel food and of censuring several animals of economic value. Transactions of Russian Game Reports. CANADIAN WILDLIFE SERVICE 5:51-67.

_____. 1958a. Squirrel migration in the U.S.S.R. Part I. Transl Russ Game Repts. CAN WILDL SERV 5:91-145. 90.

1

. 1958b. Migrations of the squirrels in the USSR. Part II. TR VSES NAUCHNO-ISSLED INST SHIVOTN SYR'YA I PUSHN 17:21-69.

. 1959. On the theory of population numbers of economic wild animals and forecasting their "crops". Trans Russ Game Repts. CAN WILDL SERV 6:1-53.

. 1962. Abundance of the squirrel and measures for increasing its population and commercial exploitation. TR VSES NAUCHNO-ISSLED INST SHIVOTN SYR'YA PUSHN 19:3-153.

Kirkpatrick, Charles M. 1955. The testis of the fox squirrel in relation to age and seasons. AM J ANAT 97(2):229-255. There are seasonal cycles in testicular development but all testis stages are found at all seasons.

and Edward M. Barnett. 1957. Age criteria in male gray squirrels. J WILDL MANAGE 21(3):341-347. Bacculum weights and lengths are a reliable separation point between juveniles and adults. A cruder method of aging squirrels is offered by the cartilage plate between the epiphysis and diaphysis of leg bones.

and Roger A. Hoffman. 1960. Ages and reproductive cycles in a male gray squirrel population. J WILDL MANAGE 24(2):218-221.

Kirkwood, Tom. 1931. Tularemia from the fox squirrel: Report of case. J AM VET MED ASSOC 96(12):941-942. An Illinois woman developed tularemia after dressing a fox squirrel. Another person was infected in 1928 after handling a black tree squirrel in Kansas.

Kirschstein, Ruth L., Alan S. Rabson and Lawrence Kilham. 1958. Pulmonary lesions produced by fibroma viruses in squirrels and rabbits. CANCER RES 18(11):1340-1344. Lesions were produced in suckling squirrels inoculated with squirrel fibroma virus. Attempts to reproduce the lesion in suckling rabbits, hamsters and mice were unsuccessful. The demonstration of a viral lesion resembling pulmonary adenomatosis in squirrels suggests that a more intensive search for a viral etiology of pulmonary adenomatosis in man should be undertaken.

- Kellinert, Stanton J. and Paul E. Degurse. 1972. Mercury levels in Wisconsin fish and wildlife. WIS DEP NAT RESOUR TECH BULL 52:1-22. Mercury levels in 6 gray squirrel muscle samples varied from .01 to .22 ppm. A red squirrel had .14 ppm.
- Kline, Paul D. 1965. Iowa squirrels: hunting statistics, sex and age ratios, and the influence of mast and agriculture. PROC IOWA ACAD SCI 71:216-227.

91.

1

Klugh, A. Brooker. 1918. The behavior of the red squirrel. OTTAWA NAT 32:9-12.

Buds and seeds of sugar and soft maples were the main food of one individual. Sugar maple sap was consumed in March. Nuts and seeds were either buried individually or in caches, but meat, apples and other soft foods were arranged about in a tree. Tunnels were made in deep snow between the main tree and food sources.

_____. 1922. Wanted --Data on the red squirrel. J MAMMAL 3(2):118.

. 1927. The ecology of the red squirrel. J MAMMAL 8(1):1-32.

The red squirrel makes emigrations in the Adirondacks. A captive lived nine years. In the winter extensive tunnels are made beneath the snow. It eats many mushrooms including Amanita muscaria.

. 1929. Ecology of the red squirrel. REP SMITHSON INSN, for 1928. 2981:495-524.

- Klugh, R.T. 1942. The ecology of the red squirrel. J MAMMAL 23(1):18-24.
- Knipling, E.F. and Elery R. Becker. 1935. A coccidium from the fox squirrel, Sciurus niger rufiventer, Geoffroy. J PARASITOL 21(5):417-418.
 Oocysts of an Eimera are described and compared with Eimeria from other squirrel species.
- Kolb, Bryan E. and Robert E. Franken. 1973. Effects of preference on interspecies non-spatial habit reversal learning. PERCEPT MOT SKILLS 37(2):655-658.
 A comparison of the laboratory rat, T. hudsonicus and Tamas. Differences in learning characteristics cast doubt on the validity of such studies.
- Koller, P.C. 1936. Cytological studies of the reproductive organs. Chromosome behavior in the male gray squirrel (*Sciurus carolinensis leucotus*). PROC R SOC EDINB SECT B 56:196-208.
- Kilstoe, S.O. 1968. Chipmunks and tree squirrels. N D OUTDOORS 31(2):4-10.

Fox squirrels have moved into North Dakota since 1900.

Komarek, Edwin V. and R. Komarek. 1938. Mammals of the Great Smokey Mountains. BULL CHIC ACAD SCI 5(6):137-162. Red squirrels range throughout the park in both evergreen and deciduous forests. Grays are most common at lower elevations and are confined almost exclusively to deciduous forests. Fox squirrels occur adjacent to the park but not in the park. Formerly they were found in some areas within the park.

- Köppen, F.T. 1882. Das Fehlen des Eichhörnchens und das Vorhandensein des Rehs und des Eidelherches in der Krim, nebst Excursen uber die Verbreitung einige anderer Säugetiere in Russland. BEITR RUSS REICHES (2) 6.
- Korvenkontio, V. 1926. In favor of the squirrel. METSÄSTYS JA KALASTUS 15:352-358, 384-391. (In Finnish).
- Koshko, K. and P. Lissilzin. 1937. On the influence of food crop on the dynamics of the squirrel population. ZOOL ZH 16:130-134. (In Russian with English summary).
- Kowalski, Kazimierz. 1967. Rodents from the Miocene of Opole (Poland) ACTA ZOOL CRACOV 12(1):1-18. Several species of *Sciurus* are listed.
- Kozuch, O., M. Gresikova, J. Nosek, M. Lichord, and M. Seyeyova. 1967.
 The role of small rodents and hedgehogs in a natural focus of tickborne encephalitis. BULL WHO 36 (suppl 1):61-66.
 Antibodies found in sera of small mammals including S. vulgaris.
 2 of 12 squirrels were positive.
- Kramm, Kenneth R. 1973. Experimental prediction for theoretical timing map model. J INTERDISCIPL CYCLE RES 4(4):361-367. Daily activity in use of an exercise wheel was studied with captive *T. hudsonicus*.

. 1975. Circadian activity of the red squirrel, *Tamiasciurus hudsonicus*, in continuous darkness and continuous illumination. INT J BIOMETEOROL 19(4):232-245.

. 1975. Entrainment of circadian activity rhythms in squirrels. AM NAT 109(968:379-389. *T. hudsonicus* were exposed in the laboratory to combinations of total darkness and varying day lengths.

- , Donald E. Maki and Janice M. Glime. 1975. Variation within and among populations of red squirrels in the Lake Superior Region. J MAMMAL 56(1):258-262. Measurements of American red squirrels from six locations are compared.
- Krasnowski, Paul Vincent. 1969. Aspects of red squirrel (Tamiasciurus hudsonicus) population ecology in interior Alaska. M.S. Thesis, University of Alaska. 63pp.
- Kritz, J.J. 1962. Pennsylvania's black squirrels. PENN GAME NEWS 33(4):2-4.
- Kriz, John J. 1959. The ecology of the northern gray squirrel in the oak transition communities in Cameron County, Pennsylvania. M.S. Thesis, Pennsylvania State University.

6-19

- Krölling, O. 1921. Die akzessorischen geschlechtsdrlüsen und männlichen Kipulationsorgane bei Sciurus vulgaris. Z ANAT, München (Abt 1) 61:403-438.
- Krugman, S.L. and R.M. Echols. 1963. Modified tree hand to foil cone harvesting squirrels. U S FOR SERV RES Note PSW-35. 6pp.
- Krull, John N. 1970. Response of chipmunks and red squirrels to commercial clearcut logging. N Y FISH GAME J 17(1):58-59. The greatest deterrent to red squirrels on the clear cut area was by reduction of food producing red spruce. Yearly population fluctuations of red squirels are probably related to food cycles, with population highs occurring every 3 to 4 years.
- Kryzhanovskii, V.I. 1970. Seasonal changes in the wooly cover in Sciurus vulgaris exalbidus Pall. VESTN ZOOL 4(2):28-34. In Russian with English summary.
- Kuiper, K. 1929. Uber periodischen Farbenwechsel bei Sciurus finlaysoni. Z SAUGETIERKD 2:174-176.
- Kyles, Alan Lindsey. 1970. Arthropod fauna in nest boxes of the gray squirrel, Sciurus carolinensis carolinensis Gmelin. M.S. Thesis, North Carolina State University. 46pp.

. 1973. Biology of the gray squirrel flea, Orchopeas howardii (Baker). Ph.D. Dissertation, University of Georgia. 95pp.

- LaHart, David E. 1970. Adirondack red squirrels. ADIRONDAC 34(2):29-30.
- Lampe, Richard P., J. Knox Jones, Jr., Robert S. Hoffmann and Elmer C. Birney. 1974. The mammals of Carter County, southeastern Montana. OCCAS PAP MUS NAT HIST, UNIV KANS 25. 99pp. Fox squirrels have moved into the county, probably from the Missouri River valley.
- Lampio, Teppo. 1945. Coccidiosis of the squirrel as the most pernicious of the recent game diseases in this country. TUCKISKANGASKAUPPIAS 24. (In Finnish)

. 1948. Squirrel economy in Finland based on natural prerequisites. SUOM RIISTA 2:97-147. (Finnish with English summary).

. 1952. Squirrel hunting based on the ecology of the species. FINN GAME RES 8:44-49.

Mass movements occur when pine and spruce seed crops are low and the majority of the nomads seem to die off. Control of harvest is the only practical method for squirrel management. . 1957. Migrations of squirrels. AUOM RIISTA 11:48-58. Data on mass migration of *S. vulgaris* go back to the Middle Ages. In one area the squirrel population was reduced to 0.2 percent of the previous level following a migration. Most migrations take place in August, September and October in southern Finland while in Lapland there is also a minor migration in March, April and May.

. 1965. Sex ratios and the factors contributing to them in the squirrel, *Sciurus vulgaris*, in Finland. I. FINN GAME RES 25:90pp.

. 1967. Sex ratios and the factors contributing to them in the squirrel, *Sciurus vulgaris*, in Finland. II. FINN RES 29:69pp.

Lamprey, F.A. 1951. The range of grey squirrels. FIELD, London 197:988. Occurrence in Dimbartonshire.

Landon, Monro. 1941. Changes in the squirrel population of Charlottev ille Township, Norfolk County, Ontario, 1898-1940. CAN FIELD-NAT 55:102-103. Gray and red squirrels have decreased drastically since 1900 because of removal of forests and loss of chestnut trees from blight.

Lane, Ronald H., John M. Allman and Jon H. Kaas. 1971. Representation of the visual field in the superior colliculus of the gray squirrel (Sciurus carolinensis) and the tree shrew (Tupaia glis). BRAIN RES 26(2):277-292.

Lang, Herbert. 1925. How squirrels and other rodents carry their young. J MAMMAL 6(1):18-24. Mother squirrels carry their young by taking firm hold of the belly skin with their incisors. The tiny fore and hind limbs are placed about her neck. The tail of the young is bent up over the mother's back. Photographs show this clearly. Snyder's description (J MAMMAL, 1923) seems an improbable method for carrying young.

Lang, W.D. 1948. Report on Dorset Natural History for 1938. PROC DORSET NAT HIST ARCHAEOL SOC 70:121-216. Gray squirrels are established in west Dorset and red squirrels are declining.

______. 1950. Report on Dorset Natural History for 1949. PROC DORSET NAT HIST ARCHAEOL SOC 71:133-137. Gray squirrels are well established in S.W. Dorset and red squirrels are declining. There is some evidence of disease killing red squirrels.

- Lange, D. 1920. Notes on flying squirrels and gray squirrels. J MAMMAL 1(5):243-244 A description of a leaf nest with four young.
- Larned, William W. 1974. Life history studies of the gray squirrel in Connecticut. M.S. Thesis, University of Connecticut. 80pp.
- Larson, Joseph S. 1962. Notes on a recent squirrel emigration in New England. J MAMMAL 43(2):272-273.
 A, squirrel migration during September, 1960 was detected in Massachusetts and Connecticut by counting road-killed animals.
- Larson, M.M. and Gilbert H. Schubert. 1970. Cone crops of ponderosa pine in central Arizona including the influence of Abert squirrels. U S FOR SERV RES PAP RM58:1-12.
 Abert squirrels reduced ponderosa pine cone production by one fifth over a 10 year period. The size of cone crops can be predicted a year or more in advance based on data from conelet-twigs clipped by squirrels. Twigs are clipped in winter and spring, and cones are cut in summer and fall.
- Laughlin, Frederic J. 1945. Depredations of a gray squirrel. J MAMMAL 26(4):440-441. A gray squirrel which entered a cabin by the chimney could not get out and caused a fantastic amount of damage.
- Laurie, E.M.O.L. 1953. Rodents from British Honduras, Mexico, Trinidad, Haiti and Jamaica collected by Mr. I.T. Sanderson. ANN MAG NAT 12(6):382-394. S. variegatoides annalium is a valid subspecies.
- Lavallee, Andre and Gerard Bard. 1973. Observations sur deux roilles-tumeurs dup pingris (*Pinus banksiana*). (Observations on two globose gall rusts in jack pine (*Pinus banksiana*)). CAN J FOR RES 3(2):251-255. French with English summary. Damage caused by red squirrels can hasten degradation of jack pines by gall rusts.
- Lavender, Denis P. and Wilbur H. Engstrom. 1956. Viability of seeds
- from squirrel-cut douglas fir cones. ORE ST BOARD FOR (Salem) RES Note 27:1-19. Lavocat, Rene. 1956. Sur des dents de Sciuride du Miocene de
 - Beni-Mellal (Atlas Marocain). MUS NATL HIST NAT BULL Paris 28(1):153-154. The teeth of this squirrel, related to *Heterozerus*, are more primitive than those of *Sciurus chalaniati* from the Oligocene of Europe.

6-11

- Lavoipierre, M.M.J. 1964. Mange mites of the genus *Notoedres* (Acari: Sarcoptidae) with descriptions of two new species and remarks on notoedric mange in the squirrel and the vole. J MED ENTOMOL 1(1):5-17.
- Lawrence, Barbara. 1933. New name for Sciurus milleri J.A. Allen. J MAMMAL 14(4):369-370.
- Lawson, Helen and Bill. 1950. Mammal tracks. OHIO CONSERV BULL 14(9):8. A general article about gray and fox squirrels describing food habits, mating, rearing of young and melanism.
- Layne, James N. 1952. The os genitale of the red squirrel, Tamiasciurus. J MAMMAL 33(4):457-459. Small os genitale are described for both male and female red squirrels. Prior to this paper these bones were thought to be absent from Tamiasciurus.

. 1954a. The os clitoridis of some North American Sciuridae. J MAMMAL 35(3):357-366. Eight genera and 28 species were described. The bones would probably have little value as an age criterion, even though age differences can be demonstrated since the bones assume adult proportions and configuration at a time when age classes can still be discerned by more accessible features.

. 1954b. The biology of the red squirrel, Tamiasciurus hudsonicus loquax (Bangs) in central New York ECOL MONOGR 24(3):227-267. A comprehensive biological study.

and Glen E. Woolfenden. 1958. Gray squirrel feeding on insects in car radiators. J MAMMAL 39(4):595-596. Squirrels in Florida were seen removing and eating dragonflies, butterflies, grasshoppers and other insects from car radiators.

- Leavey, J.A. 1951. Swimming squirrels. FIELD, London 197:1045. Sciurus vulgaris.
- LeCompte, E. Lee. 1942. Bushy tail. MD CONSERV 19(4):8-9.
- Lederman, Dick. 1948. Too many red squirrels. OUTDOOR LIFE, New York 102(6):9.
- Le Duc, J.W., J.F. Burger, B.F. Eldridge and P.K. Russell. 1975. Ecology of keystone virus a transovarially maintained arbovirus. ANN N Y ACAD SCI Vol 266:144-151. S. carolinensis.

Lee, B. Butler. 1976. The mountain boomer. N CAROL WILDL 40(5):4-6.

- Lee, B.L. and R.S. Dorney. 1971. Eimeria ontarioensis n. sp., E. confusa Joseph, 1969 and Eimeria sp. (Protozoa: Eimeriidae) from the Ontario gray squirrel Sciurus carolinensis. J PROTOZOOL 18(4):587-592. E. ontarioensis and E. confusa would not infect the red squirrel, T. hudsonicus. Three species of Eimeria were found in 27 gray squirrels from Waterloo County, Ontario.
- Lee, J.M., Jr. 1972. Citizen participation in wildlife management and decision-making: the squirrel hunting season as an example. M.S. Thesis, Virginia Polytechnic Institute xi+164pp.
- Lee, M. Raymond and Donald F. Hoffmeister. 1963. Status of certain fox squirrels in Mexico and Arizona. PROC BIOL SOC WASH 76:181-190. S. apache, S. chiricahuae and S. nayaritensis are all subspecies of S. nayaritensis.
- Lemnell, Per Arne. 1970. Telemetrin som underlag for undersökning av en arts aktivitetsområde: någar exempel fran en undersökning på ekorre. (Telemetry as a method for studying the home range: Examples from a study of the red squirrel v.L.). ZOOL REVY (Stockholm) 32(2/3):51-56. (In Swedish with English summary.
- . 1973. Age determination in red squirrels (Sciurus vulgaris L.) CONGR GAME BIOL 11:573-580. Known age squirrels were examined for: 1. growth layers in tooth cementum. 2. periosteal growth layers in long bones. 3. ossification of distal epiphyseal cartilage of femur and 4. eye lens weight. The most satisfactory method was counting of annuli in tooth cementum. Periosteal growth layers were the least satisfactory.
- Lenggenhager, Christian. 1959. Seltene Beobachtungen an Eichhornchen. (Rare observations on squirrels) JBER NATURF GES GRAUBUNDENS NF 88:28-35.
- Lennette, Edwin H., Margaret I. Ota, Martha E. Dobbs and Alcor S. Browne. 1956. Isolation of western equine encephalomyelitis virus from naturally-infected squirrels in California. AM J HYG 64(3):276-280. WEE virus was isolated from three Sciurus griseus individuals.
- leStrange, E. 1950. Red squirrels on the increase? CTRY LIFE, Breeding in Norfolk.
- LeSueur, A.D.C. 1930. Grey squirrels. FIELD, London 156(4062):621. Habits in England.
- Levin, Ephraim Yale and Vagn Flyger. 1971. Uroporphyrinogen III cosynthetase activity in the fox squirrel (*Sciurus niger*). SCIENCE 174:59-60.

The activity of uroporphyrinogen III cosynthetase in extracts from fox squirrels is much less than in similar preparations from gray squirrels. Low activity of this enzyme explains the production of large amounts of uroporphyrin I by the fox squirrel.

and Vagn Flyger. 1973. Erythropoietic porphyria of the fox squirrel *Sciurus niger*. J CLIN INVEST 52(1):96-105. Fox squirrel bones are pink or red because of the accumulation of uroporphyrin I in the bones as well as in teeth, blood, soft tissues and urine. Fox squirrels do not display photosensitivity or hemolytic anemia. Uroporphyrinogen III cosynthetase activity is present in fox squirrel bone marrow at 1/10 the concentration in gray squirrel marrow.

- Levine, P.P. 1934. Pathological examination of game. REP N Y ST CONSERV DEP 286pp. Skin tumors are listed for one gray squirrel brought in for necropsy.
- Lewis, E., G.L. Hoff, W.J. Bigler and M.B. Jefferies. 1975. Public health and the urban gray squirrel. J WILDL DIS 11:502-504. Fungi representing 19 genera were recovered for hair and skin scrapings and from toenails. Some of these were potential human pathogens. One of the authors became infected with Trichophyton mentagrophytes from handling squirrels.
- Lewis, Robert Dean. 1962. Evaluation of squirrel nest boxes on selected experimental areas. N CAROL RES COMMISSION 10pp mimeo.
- Lichtenfels, J. Ralph. 1971. Citellinema grisei, sp.n. (Nematoda: Trichostrongylidae) from the western gray squirrel, Sciurus griseus.
 PROC HELMINTHOL SOC WASH 38(2):257-261.
 Two species of Citellinema were found in western gray squirrels from Oregon. One was a new species and the other was not identified to species.
- Lieberman, E. 1930. Beobachtungen bei der Aufzucht jungen Eichhornchen. NATUR MUS 60, 130-133.
- Ligon, J. Stokley. 1927. Wildlife of New Mexico. NEW MEXICO GAME COM-MISSION, Santa Fe. 212pp. S. aberti occurs in yellow pine forests between 6,500 and 8,500 ft. elevation. In the Black Mountain Range 85 percent of these squirrels are black phase. S. arizononensis feeds almost entirely on walnuts and does not occur outside the limits of Arizona sycamore.
- Lind, E.A. 1961. Observations on the behavior of young squirrels (Sciurus vulgaris) during the first days of leaving the den. SUOM RIISTA pp138-142.
- Lindsey, A.A., D.V. Schmelz, S.A. Nichols. 1969. Natural areas in Indiana and their preservation. Purdue University Press. 594pp. White S. carolinensis (some with pink and some with white eyes) are frequently seen in Daviess County in the area north of Odon.

Linduska, J.P. 1942a. A new technique for marking fox squirrels. J WILDL MANAGE 6(1):93-94.

Squirrels were marked by application of fingerling fish tags to the basal joint of the outer toe on the hind foot. Bird bands were no better and are more difficult to apply.

. 1942b. Winter rodent populations in field-shocked corn. J WILDL MANAGE 6(4):353-363.

Fox squirrels and red squirrels sometimes visit corn shocks in the winter for food.

- . 1947. Longevity of some Michigan farm game animals. J MAMMAL 28(2):126-129. The ages of some tagged wild fox squirrels were probably 5 years 6 months, 5 years 10 months, 5 years 2 months, 6 years 2 months and 4 years 6 months.
- Linnaeus, C. 1745. Olandska och Gothlandska Resa...1941. Stockholm and Uppsala. 344pp. Stories of squirrels using their tails as sails.
- Lint, J.B. 1974. Supplemental food supply on the reproductive attainment of the gray squirrel (Sciurus carolinensis). M.S. Thesis, Virginia Polytechnic Institute and State University. 73pp.
- Linzey, D.W. and A.V. Linzey. 1973. Notes on parasites of small mammals from Great Smokey Mountains National Park Tennessee and North Carolina. J ELISHA MITCHEL SCI SOC 89(1-2):120. S. carolinensis.
- Liscinsky, Stephen A. 1951. Life history and ecology of the Northern gray squirrel in relation to some plan communities in Center County, Pennsylvania. M.S. Thesis, Pennsylvania State College. 174pp.
- Little, Luther. 1934. Seeds of the eucalyptus tree: a new food for the Anthony gray squirrel. J MAMMAL 15(2):158-159. The small black seeds are eaten. The eucalyptus (Eucalyptus globulus) has become established over much the natural geographic range of this squirrel and may produce a substantial portion of the regular diet of this animal (S. griseus).
- Liu, Y., C. Yang and J. Li. 1965. Some observations on the electroretinogram of the pure-cone eye of a species of tree squirrel. ACTA PHYSIOL SIN 28:243-262.
- Lloyd, Daniel B. 1927. Squirrel shooting in southern Maryland in the seventies and eighties. MD CONSERV spring: 28. The shooting of fox squirrels, probably in Anne Arundel County, is mentioned.
- Lloyd, H. 1925. The acclimatization of the fox squirrel at Pelee Island, Ontario. CAN FIELD-NAT, Ottawa 39:138.

Lloyd, H.G. 1962. The distribution of squirrels in England and Wales, 1959. J ANIM ECOL 31(1):157-165. The red squirrel continues to decline as the gray squirrel advances. Red squirrels are most common in areas not yet colonized by gray squirrels and in areas only recently occupied by them. The rate of spread of gray squirrels is shown diagrammatically.

. 1968. Observations on nut selection by a hand-reared gray squirrel (*Sciurus carolinensis*). J ZOOL (Lond) 155(2):240-244. With experience empty nuts could be detected unerringly by smell alone.

_____, J.F. Schillito, and L.A. Tee. 1962. Grey squirrel (trapping)research REP FOR COMM (Forest Research) for 1961:63-64. A progress report.

- Lobko, P.I. 1972. Anatomy of solar plexus nodes and their relation in *Sciurus vulgaris* L. VESTNIK ZOOL 3:71-77. In Russian with English summary.
- Locher, G.J.S. 1933. Untersuchungen über den Farbensinn von Eichhornchen. TIJKSCHR NED KIERK VEREEN 3(3):167-218.
 Whether or not the European red squirrel can distinguish colors is not clear but it does not possess a color sense similar to that of man.
- Loew, E.R. 1975. The visual pigments of the gray squirrel Sciurus carolinensis leucotis. J PHYSIOL 251(1):47-49.
- Loewenstein, Karl Otto. 1938. Ueber das Vorkommen von Sinushaaren im Oberlid des Eichhornchen (*Sciurus vulgaris*). ZOOL ANZ 87(1-3):35-41. Description of hairs on the eyelids.
- Loewis, O. von. 1884. Schwarze Eichhornchen. ZOOL GART 202pp. The distribution of melanistic S. vulgaris is discussed.
 - . 1885. Uber das Vorkommen des schwarzen Eichhornchens in den Ostseeprovinzen. SBER DORPAT NATURF GES (Dorpat). 7:25-27. In some areas such as the high Alps squirrels are predominantly black during the summer. This color type occurs in scattered locations but not the Baltic states.
- Loftin, Robert W. 1970. The white squirrels of North Florida. FLA NAT 43(2):53.
- Long, Charles A. 1970. Mammals of central Wisconsin. WISC ST UNIV MUS NAT HIST, Faunal Rep 3:1-59.

and Joseph Captain. 1974. Investigations on the Sciurid manus: I. Some new taxonomic characters and their important in the classification of squirrels. Z SAEUGETIERKD 39(2):98-102. (English with German summary). The characters of the forefoot augment those of teeth and baculum in sciurid classification.

- Long, W.S. 1940. Notes on the life histories of some Utah mammals. J MAMMAL 21(2):170-180. The chickaree is common in fir and spruce forests but does not occur in any other types. They are so tame that they can be closely approached. One cache of cones was 20 feet in diameter and two feet deep.
- Longhurst, William M. 1940. The mammals of Napa County, California. CALIF FISH GAME 26(3):240-270. Sciurus griseus is present in forested areas throughout the county.
- Longley, William H. 1959. The problem of gray squirrels. THE CONSERV VOLUNT 22(127):56-61. At times gray squirrels damage trees especially sugar maple by stripping bark. Squirrel hunting is not very popular in Minnesota.

. 1963. Minnesota gray and fox squirrels. AM MIDL NAT 69(1):82-98. A general account of many aspects of squirrel biology. The annual harvest in the state is 200,000 to 400,000 per year.

- Lowery, G.H., Jr. and W.B. Davis. 19#42. A revision of the fox squirrels of the lower Mississippi Valley and Texas. OCCAS PAP MUS ZOOL LA ST UNIV 9:153-172.
- Lubimov, M.P., V. Knighe, I.A. Manteifel, M.N. Rasponov, Yu.A. Isakov, and M.K. Lubimov. 1935. Biology of Hares and Squirrels. Parasitic Diseases of Squirrels. Moskva-Leningrad.
- Lubnow, Ernst. 1966. Forbuntersuchungen an Eichhornchen aus verscheidenen Höhenlagen des Kamerungebirges. BONN ZOOL BEITR 17(1-2):45-52.
- Lucker, John T. 1943. A new trichostrongylid nematode from the stomachs of American squirrels. J WASH ACAD SCI 33(3):75-79. Bohmiella wilsoni from gray squirrels in West Virginia.
- Ludeman, John A. 1953. Tree squirrels and chipmunks their habits and controls. U S FISH WILDL SERV WILDL LEAF 355:5pp mimeo. Squirrels can be driven from building by using moth balls, paraichlorobenzine or napthaline flakes. Gnawing into buildings can be discouraged by using repellant paints or wood preservatives. Trapping, shooting and poisoning are also effective.

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. 1954. Before you control tree squirrels and chipmunks check state and local regulations. PEST CONTROL 22(9):16, 18, 20, 22, 50.

- Ludwick, Ronald L. 1966. Energy metabolism of the eastern gray squirrel. M.S. Thesis, Virginia Polytechnic Institute and State University. 61pp.
 - , J.P. Fontenot, and Henry S. Mosby. 1969. Energy metabolism of the eastern gray squirrel. J WILDL MANAGE 33(3):569-575.
- Luhring, R. 1928. Das Haarcleid von *Sciurus vulgaris* L. und die Verteilung seiner Farbvarianten in Deutchland. Z MORPHOL OEKOL TIERE. 2:667-762. Structure, pigmentation, and molt of hair.
- Lund, Harald H. 1962. Nalle Nød. Branner og Korch, Copenhagen. Denmark. 63pp. A fanciful account of a pet S. vulgaris with many good photographs. (in Danish).
- Lustig, Loren W. 1974. Maryland's endangered mammal -- the Delmarva fox squirrel. MD CONSERV 50(6):28-31. Popular article.
 - and Vagn Flyger. 1975. Observations and suggested management practices for the endangered Delmarva fox squirrel. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 29:433-440. Fox squirrels may be encouraged by removal of underbrush in forests and removal of competing gray squirrels.
- Luttich, Stuart, Donald H. Rusch, E., Charles Meslow and Lloyd B. Keith. 1970. Ecology of red-tailed hawk predation in Alberta. ECOLOGY 51(2):190-203. Red squirrels made up 2% of the prey species taken by red-tailed hawks.
- Lutz, H.J. 1956. Damage to paper birch by red squirrels in Alaska. J FOR 54(1):31-33. Damage consists of girdling, either partially or completely. Some trees had few girdles, others had many about 1/4 inch wide. Many trees died.
- Lynch, G. Robert and G. Edgar Folk, Jr. 1968. Distribution and habitat of the red squirrel. *Tamiasciurus hudsonicus* in the north central states. PROC IOWA ACAD SCI 75:463-466.
- Lyon, Marcus W., Jr. 1934. Distribution of the red squirrel in Indiana. AM MIDL NAT 15(3):375-376. Red squirrels are absent from the southermost counties.

. 1936. Mammals of Indiana. AM MIDL NAT 17(1):1-384. A general account of squirrel distribution and biology.

- MacClintock, Dorcas. 1970. Squirrels of North America. Van Nostrand, Reinhold Company. 184pp.
 This is a summary of Sciuridae found north of Panama giving distribution, description and general life history comments on 32 tree squirrels plus other members of the family.
- MacNamara, Charles. 1943. An apparently unrecorded food of the red squirrel. CAN FIELD-NAT 57(6):107. T. hudsonicus was seen eating winter buds of the staminate flowers of Thuja occidentalis.
- MacNamara, L.G. 1962. Survey of car-killed wildlife. NEW JERS OUTDOORS 13(4):23. Squirrels accounted for 18% of 476 mammals and birds found during one year on a 20 mile stretch of a New Jersey highway.
- MacPherson, A.H. 1886. Variation of colour in the squirrel. ZOOLOGIST
 (3):10:67.
- Madson, J. 1964. Gray and Fox squirrels. Olin Mathieson Corp., East Alton, Illinois. 112pp. A comprehensive general account.
- Mahrt, Jerome L. and Soo-Jeet Chai. 1970. Prevalence of coccidia in red squirrels (Tamiascuurus hudsonicus) in Alberta. CAN J ZOOL 48(3):606.
 Oocycts of Eimeria tamiasciuri and Eimeria toddi were found in 97% and 10% respectively of 171 red squirrels.
- and Soo-Jeet Chai. 1972. Parasites of red squirrels in Alberta. CAN J PARASITOL 58(3):639-640.
- Mailliard, J. 1931. Redwood chickaree testing and storing hazel nuts. J MAMMAL 12(1):68-70. A chickaree was able to detect wormy hazelnuts, apparently by smell.
- Maistre, E. 1934. L'apparition des ecureuils dans le Bas Langnedoc et la Montagne-Noir vers 1917. BULL SOC ACCLIM FR 81(6):266-280.
- Major, C.J. Forsyth. 1893. On some Miocene squirrels with remarks on the dentition and classification of the Sciuridae. PROC ZOOL SOC LOND pp179-215.
- Mansueti, Romeo. 1953. Comments of the fox squirrels in Maryland. MD NAT 22(3-4):30-41.

104.

- Marsh, Al. 1950. September breeder squirrel kill high. TENN CONSERV 15(4):10-12.
- . 1951. Percentage of breeder squirrel killed during the 1949 season and its effect upon setting the 1950-51 season. J TENN ACAD SCI 26(1):15-21. Results from the examination of 6,172 gray and fox squirrels collected during fall months in Tennessee.
- Marshall, Charles Mitchell. 1967. Appriasal of time-area account method with a semi-confined squirrel population. M.S. Thesis, University of Georgia. 44pp.
- Marshall, W.H. 1941. The fox squirrel in Idaho. J MAMMAL 22(1):86-87. A population of about 1000 fox squirrels lives in and near Boise. They were introduced from the midwest sometime after 1917.

Marstan, W.H. 1948. Damage by squirrels. J FOR COMM 19:101-102.

Martan, Jan, Z. Hruban and P. Brown. 1971. The formation and development of the cylindrical bodies in the mammalian epididymis. J REPROD FERTIL 27(1):115-117.

The spermatozoa in the cylindrical formations of the epididymal duct show perfect polarity and adhere to each other in characteristic masses.

- , Caroline S. Adams, Billie L. Perkins. 1970. Epididymal spermatozoa in two species of squirrels. J MAMMAL 51(2):376-378. Male fox and gray squirrels may be capable of breeding during most of the year.
- Martin, Robert E. and John R. Preston. 1970. The mammals of Harmon County, Oklahoma. PROC OK ACAD SCI 49:42-60. Fox squirrels are found along stream valley, shelter belts, and isolated wooded areas.
- Martinson, R.K. 1963. Fox and gray squirrel harvest. 1961. GAME RES OHIO, OHIO DEP NAT RESOUR. 2:49-60.
- Mass, A.M. 1976. Organization of the receptive fields of the superior colliculus neurons in the squirrel, *Sciurus vulgaris*.
 ZH EVOL BIOKHIM FIZIOL 12(3):272-279.
 In Russian with English summary.
- , E.V. Polkoshnikov and A. Ya Supin. 1973. Some properties of cortical and collicular visual units of the squirrel (*Sciurus vulgaris*). ZH EVOL BIOKHIM FIZIOL 9(1):98-101. Russian with English summary.
- Masterson, R.A., H.W. Stegmiller, M.A. Parsons, C.C. Croft, and C.B. Spencer. 1971. California encephalitis: An endemic puzzle in Ohio. HEALTH LAB SCI 8(2):89-96. Serologic evidence of infection with CEV predominates in fox, gray and red squirrels in Ohio.

Maxwell, H.A. 1953. Grey squirrels in Scotland. SCOTT FOR 7:92-94.

- Mayfield, Harold. 1948. Red squirrel nesting on the ground. J MAMMAL 29(2):186. A red squirrel nest with four young was found in June on the ground at the base of a pine tree in Michigan.
- Maynard, C.J. 1883. The mammals of Florida. QUART J BOSTON ZOOL SOC 2(1):1-8; (2):17-24; (3):38-43; (4):49-50. Fox squirrels are quite common in piney woods and are confined to the more northern portions of the state. Gray squirrels inhabit hummocks and seldom occur in pine woods. They are very common in the northern and central sections of the state and were not seen in the Keys.
- McCartney, Eugene S. 1937. Calling on the Kaibab squirrel. NAT MAG 29(5):271-272. Popular article.
- McClelland, E.H. 1948. Notes on the red squirrel in Pittsburgh. J MAMMAL 29(4):409-412. Observations on squirrels around the author's home over a 20 year period.
- McCloskey, Richard J. 1969. The chronology of reproduction in the fox squirrel in Iowa. M.S. Thesis, Iowa State University 100pp.
 - . 1975. Description and analysis of the behavior of the fox squirrel in Iowa. Ph.D. Dissertation, Iowa State University. 238pp.

and Paul A. Johs, Jr. 1966. Status and analysis report of squirrel project. QUART BIOL REP IOWA FISH GAME DIV 18(4):1-8.

and Paul A. Vohs, Jr. 1971. Chronology of reproduction of the fox squirrel in Iowa. PROC IOWA ACAD SCI 78(1-2):12-15. During 1966 and 1967 there was one period of reproduction per year with parturition occuring from January through August. Coccidiosis and mast shortage may have been the cause of population declines.

McClung, Robert M. 1951. The gray squirrel--nature's Johnny Appleseed anim kingdom 54:104-110, 127-128. Popular account.

. 1952. Three instances of tangled squirrel tails. /-// ANIM KINGDOM 55(2):46-47.

Seven adult gray squirrels were found with their tails knotted together at the New York Zoological Park in late December. Earlier that month five tail-tied squirrels were found in another part of the park. Three squirrels were found tail-tied and additionally tangled with Spanish moss in South Carolina in late March.

- McClure, H. Elliott. 1940. Notes on the western fox squirrel. NAT NOTES, Peoria, Illinois 7(6):159-161.
- McCulloch, W.F. 1937. Red squirrels attack Japanese larch. J FOR 35(7):692-693. Red squirrels in Michigan continuously cut off terminal leaves at the base of the new growth and cut off laterals about two inches from the main stems. European larch in the same plantation were not touched.
- McElhinney, Mark G. 1923. Note on a red squirrel. CAN FIELD-NAT 37:77.
- McFarland, James W. 1947. Chicharee harvests giant sequoia cones. YOSEMITE NAT NOTES 26(8):96.
- McGuire, Richard J. and Larry N. Brown. 1973. Cocoanut feeding behavior of the red-bellied squirrel on Elliott Key, Dade County, Florida. AM MIDL NAT 89(2):498. Fifty two percent of the cocoanuts examined were damaged by squirrels.
- McHenry, Donald Edward. 1949. Squirrel antics. YOSEMITE NAT NOTES 28(3):17-19.
- McKee, Edwin D. 1941. Distribution of the tassel-eared squirrels. PLATEAU (continuing MUS NOTEŠ). Flagstaff 14(1):12-20.
- McKeever, Sturgis, Joseph H. Schubert, Max D. Moody, George W. Gorman, and John F. Chapman. 1958. Natural occurrence of tularemia in marsupials, carnivores, lagomorphs, and large rodents in southwestern Georgia and northwestern Florida. J INFECT DIS 102(2):120-126. One of 40 S. niger examined had a significant blood titer to antigens of Pasteurella tularensis.
- McKinnon, J. Glynn, Gerald C. Hoff, William J. Bigler, and E. Charlton Prather. 1976. Heavy metal concentrations in kidneys of urban gray squirrels. J WILDL DIS 12(3):367-371. Concentrations of lead, zinc and cadmium were higher in urban squirrels than in rural squirrels. Squirrels from the less affluent sections of Jacksonville, Florida had higher levels of lead than did squirrels from the more affluent sections of the city.
- McLean, D.D. 1926. Gray squirrels are coming back. YOSEMITE NAT NOTES 5:24.
- McLean, Donald W. 1963. Powassan virus isolations from ticks and squirrel blood. FED PROC 22(2, Pt. 1):323. Powassan virus was isolated from ticks (*Ixoden marxi*) from red squirrels. Neutralizing antibodies were found in seven red squirrels, suggesting a cycle of infection between ticks and squirrels.

. 1973. California encephalitis virus endemicity in the Yukon territory. CAN J PUBLIC HEALTH 64(1): *T. hudsonicus*.

, S.R. Ladyman and K.W. Purvingood. 1968. Westward extension of Powassan virus prevalence. CAN MED ASSOC J 98(2):946-949. Neutralizing antibodies to Powassan virus were found in 20 of 271 *T. hudsonicus* from southeast British Columbia. Compliment fixation antibodies to California encephalitis was found in one of 73 *T. hudsonicus*.

, M.A. Chernesky, Sandra J. Chernesky, E.J. Goddard, S.R. Ladyman, R.R. Peers and K.W. Purvin-Good. 1969. Arbovirus 100(7):320-326.

29 of 132 T. hudsonicus had hemagglutinin inhibiting antibodies.

- McPherson, A.B. 1971. A new subspecies of the squirrel Sciurus variegatoides Ogilby from Costa Rica. REV BIOL TROP 19(1/2):191-194. Sciurus variegatoides loweryi n.sp.
- Mearns, Edgar A. 1898. Preliminary diagnosis of new mammals of the genera Sciurus, Castor, Neotoma and Sigmodon from the Mexican border of the United States. PROC U S NAT MUS 20(1132):501-505. Sciurus fossor anthonyi.
- Mehl. Reidar. 1971. Ectoparasites from the squirrel, Sciurus vulgaris, in Norway. FAUNA (Oslo) 24:69-83.
- Meinertz, Thydsen. 1942. Das superfizielle Facialisgebiet des Nager. 6 Die Sciuriden 1. Sciurus vulgaris L. Z ANA ENTWICKLUNGSGESH 112(1):105-135.
- Mellace, D.R. 1973. Hormonal induction of ovulation in captive gray squirrels (Sciurus carolinensis). M.S. Thesis, Virginia Polytechnic Institute. 81pp.
- , R.L. Kirkpatrick and P.F. Scanlon. 1974. Reproductive examination of gray squirrels by laparotomy. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 27:342-343. Fifty-two laparotomies were performed, of which 45 were successful.
- Mellor, J.E.M. 1954. The mammals of Herefordshire. TRANS HERTFORDSHIRE NAT HIST SOC FIELD CLUB 94-103. Status of S. vulgaris.
- Mengel, Robert M. and Marion Anne Jenkinson. 1971. A melanistic specimen of the red squirrel. AM MIDL NAT 86(1):230-231. A melanistic American red squirrel was collected in a burned area in the Yukon Territory, Canada.

- Merdivenci, Ahmet. 1964. New lungworm, Angiostrongylus sciuri n. sp. parasiting in the venae pulmonales of the squirrel, Sciurus vulgaris. ISTANB UNIV ORMAN FAK YAYINL 29(3-4):155-158.
- Merker, E. 1928. Die Sichtbarkeit ultravioletten Lichtes und die Fluoreszenz der Augenlinsen bei Wirbeltieren; eine vergleichende Studie. ZOOL JB ABT ALLG ZOOL PHSIOL TIERE 45:535-608. Describes yellow color in lens of Sciurus vulgaris.
- Merriam, C. Hart. 1950. A nest of the California gray squirrel (Sciurus griseus). J MAMMAL 11(4):494. A nest found in the branches of a tan-oak tree had a rough outer covering of oak leaves and twigs. The inside of the nest proper consisted of long strips of redwood bark with an inner chamber of finely divided redwood bark. The inner chamber had a felted base extending as a vestibule, also of finely divided and compacted redwood bark.
- Meyer, R. 1874. Ueber den Nestbau des gemeinen Eichhornchens. ZOOL GART 15(10):457-459.
- Meyer-Oehme, Detlef. 1956. Eichhornchenzucht in der Gefangenschaft ZOOL CART 21(5-6):386-387. A tame male and a wild female S. vulgaris kept in captivity produced a litter of three offspring. A rich and varied diet is suggested as necessary for breeding.
- Michael, Enid. 1936. Sierra chickaree (Sciurus douglasii albolimbatus). YOSEMITE NAT NOTES 15(1):4.

______. 1940. California gray squirrels coming back to Yosemite. YOSEMITE NAT NOTES 19(5):37-38.

- Michels, K.M., Gene G. Pittman, L. Hitchcock, Jr. and D.R. Brown. 1962. Visual discrimination: tree squirrels and quantified stimulus dimensions. PERCEPT MOT SKILLS 15(2):443-450. Captive S. carolinensis and S. niger were tested to determine how well they could learn to select variously shaped objects. The authors conclude that some shapes were more difficult to identify than others.
- Middleton, A.D. 1929a. The red squirrel in Ireland. IR NAT J 1-14 2:149-150. Red squirrels were abundant at the turn of the century but declined drastically over the whole of Ireland. In some counties they all but disappeared. They are on the increase again.

_____. 1929b. The red squirrel in Ireland. IR NAT J 2:149-150.

Red squirrel abundance has fluctuated greatly. Declines are not related to presence of gray squirrels but are most likely caused by disease. . 1930. The ecology of the American grey squirrel (Sciurus carolinensis Gmelin) in the British Isles. PROC ZOOL SOC LOND :809-843. The presence of the gray squirrel in Britain in mainly due to introductions from 1890 onward, but there is the possibility that some were introduced as far back as 1828. Their increase and spread is described. A sharp decline in abundance occurred in 1919, at which time many were found dead with symptoms of mange. The decrease in Eurasian red squirrels appears to have no connection with the spread of the gray.

. 1931a. The grey squirrel. EMP FOR REV 10:14-19.

. 1931b. The grey squirrel. The introduction and spread of the American grey squirrel in the British Isles, its habits, food and relations with the native fauna of the country. Sedgwick and Jackson Ltd. London 107pp.

. 1931c. Squirrels and forestry. FORESTRY 5:34-40.

. 1931d. The grey squirrel in the British Isles. J OF MINISTRY OF AGRICULTURE (Great Britain) 37(10):1069-1078. Leaders of conifers are frequently bitten off thus reducing the timber value. The destruction of fruit tree buds in spring affects the yield of fruit. In spring and early summer the succulent inner bark of young trees (especially beech and sycamores) is peeled off in large patches. The bark of Scots pine, a favorite food of the red squirrel, is little touched by the gray squirrel.

______. 1931e. The grey squirrel. BIRD NOTES NEWS, London 14(5):114-115.

. 1932. The grey squirrel (*Sciurus carolinensis*) in the British Isles, 1930-1932. J ANIM ECOL 1(2):166-167. During 1930-1931 gray squirrel numbers in Great Britain decreased, possibly because of infection with *Eimeria* (Coccidia).

_____. 1935. The distribution of the grey squirrel (*Sciurus carolinensis*) in Great Britain in 1935. J ANIM ECOL 4:274-2/6.

- Mikheeva, K.V. 1973. Dynamics of the change of the abundance of squirrels in the Sverdlovsk oblast. EKOLOGIYA 4(6):49-56. (In Russian).
- Milbank, F. 1951. The range of gray squirrels. FIELD, London 198:988. In County Durham, England.

- Millais, J.G. 1905. The Mammals of Great Britain and Ireland. Longmans, Green, and Company, London. 3 volumes. The name squirrel was first used by St. Hugh about 1200 A.D. In Scotland squirrels are most destructive to sycamores and also larch, plane tree and birch. Spruce is not injured much. Squirrels also take young birds and eggs. In Norway they are regarded as postmen of the forest carrying news between wild animals. In the past annual squirrel hunts were held in southern England on St. Andrews Day. In New Forest they were hunted using sticks weighted with lead which were hurled at the squirrels (called squoyles or scaggers). The squirrels were eaten. The fur of English squirrels never grows thick and soft like their Continental relatives. Squirrels are not native to Ireland but were introduced and have spread over most of the island.
- Millar, John S. 1968. The productive biology of the red squirrel. M.S. Thesis, University of British Columbia. 86pp.

. 1970a. Variations in fecundity of the red squirrel, Tamiasciurus hudsonicus (Erxleben). CAN J ZOOL 48(5):1055-1058.

Ovulation rates were extremely variable and appeared to be influenced by food supply. Preimplantation losses were higher in yearlings (22.7%) than in adults (7.4%) and totalled 11.3% of ova shed. Postimplantation losses totalled 7.7% of all implanted embryos. Litter size does not increase with higher latitudes.

. 1970b. The breeding season and reproductive cycle of the western red squirrel. CAN J ZOOL 48(3):471-473. Male breeding periods varied from 2 to 6 months and their reproductive organs showed only one peak per year. All breeding females had two litters in 1966 but only one in 1967. Females did not breed during the year of their birth and in 1967 some failed to breed as yearlings. The onset of breeding occurs in February in British Columbia.

Miller, Gerrit S. 1907. Two new species of squirrels from Spain. ANN MAG NAT 7(2):429.

_____, Jr. and Remington Kellogg. 1955. List of North American recent mammals. Smithsonian Institution. U S NAT MUS BULL 205:954.

Miller, George. 1950. PENN GAME NEWS 20(11):13.

This is a short note telling about an unusual density of fox and gray squirrels seen in a woods in middle Lancaster during October 1950. This may have been an emigration.

- Miller, Howard A. and Llowell K. Halls. 1969. Fleshy fungi commonly eaten by southern wildlife. U S FOR SERV RES PAP SO 49:1-28.
- Miller, J.M. 1914. Cone borer vs. squirrel -- An important correction. FOR QUART 12(2):238-239.
- Mills, E.M. 1938. Tree injury by squirrels, in Leaf-feeding Insects of Shade Trees, by W.B. Becker. MASS AGRIC EXP STN BULL 353:79-80.

Most squirrel damage is done during winter and spring.

- Mills, Robert Harley. 1964. Squirrel habitat and population evaluation on Thistlethwaite game management area in south central Louisiana. M.S. Thesis, Louisiana State University 48pp.
- Milne, A. 1949. The ecology of the sheep tick, *Ixodes ricinus* L. Host relationships of the tick Part 2. PARASITOLOGY 39(3-4):173-197. Four Eurasian red squirrels from England were examined and all carried nymphal *Ixodes ricinus*.
- Minckley, W.L. 1968. Possible extirpation of the spruce squirrel from the Pinaleno (Graham) Mountains, south-central Arizona. J ARIZ ACAD SCI 5:110. S. aberti was introduced into the Pinaleno Mountains in 1941 and 1943 and has become well established at the expense of T. hudsonicus which has since disappeared from the region.
- Minser, William G. III. 1973. Ups and downs of gray squirrel populations. TENN CONSERV 39(6):13-14. The 1968 gray squirrel mass movement resulted in low numbers for several years in Tennessee.
- Miranda, Ribeiro Alipio de. 1941. Sobre dois novos sciurideos do Brazil. CAMP RIO DE J 12(139):10-11. New: Sciurus aestuans henseli Sciurillus pusillus hoehnei.
- Mitchell, P.C. 1911. On longevity and relative viability in mammals and birds with a note on the theory of longevity. PROC ZOOL SOC LOND p425. Captive gray squirrel attained age of 15 years.
- Miyao, Takeo. 1971. Absence of the third upper premolar and the order of the eruption of the cheek teeth of *Sciurus lis*. J MAMMAL SOC JPN 5(4):142-143. (In Japanese with English summary).
- Moffat, C.B. 1923a. Food of the Irish squirrel. IR NAT DUBLIN 32:77-82.
 - ______. 1923b. Is the squirrel a native of Ireland? IR NAT, Dublin 32:33-35.

. 1927. The squirrel. IR NAT J I(13):250-252. Red squirrels were present in Ireland in the 13th, 14th, 15th and early part of 18th centuries but seem to have disappeared in the early 19th century. They are now present in all but 4 counties of Ireland. The red squirrel does not make food caches in Ireland. They eat many items but rely on Scots fir as a winter staple. Squirrels like to eat the leaf stalks of beech. Squirrels became rare between 1908 and 1912 in many parts of Ireland.

. 1938. The mammals of Ireland. PROC R IR ACAD B 44:61-128.

The red squirrel was formerly indigenous, but is not introduced. It occurred in all counties of Ireland by 1910. The gray squirrel was introduced in 1911 and has now spread into three counties.

- Moffitt, James. 1931. Diseases reducing tree squirrel populations in Southern California. CALIF FISH GAME 17(3):338-339. S. griseus were found dying in numbers in Los Angeles and Santa Barbara counties. Mites and coccidia were implicated.
- Mohr, Carl O. 1965. Home area and comparative biomass of the North American red squirrel. CAN FIELD-NAT 79(3):162-171. Biomass totalled 640 gm per hectare on a college campus and 158 gm per hectare in a nearby hemlock grove. Red squirrel territories appear to be small, dispersed in the home range, and to consist of places which are used regularly as nests and food caches.

Mollenhauer, Wm. Jr. 1939. Table Mountain pine--squirrel food or timber tree. J FOR 37(5):420-421. Table mountain pine trees are characterized by a heavy litter of branch stubs and cone scales underneath. Sometimes 50 to 100% of the limbs have been pruned by red squirrels. The occurrence of cones in whorls is probably the cause of the squirrel habit of pruning i.e. to drop the sessile and heavily prickled cones. He obtains several cones at a time. Squirrels have a marked effect on the growth and form of the trees and in central Pennsylvania the tree is referred to as squirrel pine.

Montgomery, Samuel D. 1973. Energy dynamics of a woodlot gray
squirrel population. M.S. Thesis, Virginia Polytechnic Institute.
89pp.

, R.F. Haynes, J. Hedge, H.S. Mosby. 1972. Digestibility of a high ration and a low fiber ration by the gray squirrel. VA J SCI 23(3):114. Abstract.

, James B. Whelan and Henry S. Mosby. 1975. Bioenergetics of a woodlot gray squirrel population. J WILDL MANAGE 39(4):709-717.

Gray squirrels restrict food intake in winter. Squirrels consumed 32% of the available food during the year. Available food energy declined during the winter to less than that required to meet minimum caloric requirements. This caloric inadequacy resulted in a decline in average weight. Mooney, Frank. 1968. Floating for squirrels. N CAROL WILDL 32(10):10-11. Story of hunting from a canoe on a small stream.

- Moore, A.W. 1940. Wild animal damage to seed and seedlings on cut-over Douglas fir lands of Oregon and Washington. U S DEP AGRIC TECH BULL 706:1-27. Squirrels are of little importance in forest reproduction. They do little harm and plan an insignificant role in conifer reforestation.
- Moore, George C. 1941. Prey chases predator. J MAMMAL 22(2):198. A young gray squirrel was observed attacking a 5 ft. snake, Elaphe obsoleta.

. 1942. Squirrels just gotta get food. That tells the story of their 1939 mass magration from Bankhead Forest. ALA CONSERV 14(5):7, 15. This article is difficult to interpret but a "migration" of gray squirrels occurred during either 1939 or 1940 in Alabama.

. 1943. Food habits of squirrels. MO CONSERV 4(9):14.

Moore, Joseph Curtis. 1946. Mammals from Welaka, Putnam County, Florida. J MAMMAL 27(1):49-59. S. carolinensis is confined to larger live oak hammocks, the river swamp and some of the bayheads. S. niger inhabits flatwoods, turkey oak and bayheads.

. 1954. Fox squirrel receptionists. EVERGLADE NAT HIST 2(3):153-160. Distribution of S.n. avicenna.

. 1956. Variation in the fox squirrel in Florida AM MIDL NAT 55(1):41-65. Three subspecies and five color phases occur in Florida fox. squirrels. Sciurus niger shermani is described as a new subspecies.

. 1957. The natural history of the fox squirrel, Sciurus niger shermani. BULL AM MUS NAT HIST 113(1):1-71. This squirrel frequently uses the burrows at the base of stumps or of the gopher tortoise. This is a comprehensive study of this Florida squirrel.

. 1959. Relationships among living squirrels of the Sciurinae. BULL AM MUS NAT HIST 118(4):153-206. Descriptions and classification of tribes, subtribes, genera and subgenera as well as evolution are discussed. . 1960. The relationship of the grey squirrel, Sciurus carolinensis, to its nearest relatives. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:356-363.

. 1961a. The spread of existint diurnal squirrels across the Bering and Panamanian land bridges. AM MUS NOVIT 2044:1-26.

Sciurus and Tamiasciurus dispersed from Eurasia to North and South America.

. 1961b. Geographic variation in some reproductive characteristics of diurnal squirrels. BULL AM MUS NAT HIST 122(1):32pp.

. 1968. Sympatric species of tree squirrels mix in mating chase. J MAMMAL 49(3):531-533. S. niger and S. carolinensis. A male gray and male fox squirrel pursued a female gray squirrel in a mating chase.

Moran, Richard J. 1952. A refuge squirrel population in southern Illinois. MIDWEST WILDL CONF 14:7pp. Data are given on hunter success, number bagged per acre, proportion of gray and fox squirrels, condition of squirrels, sex ratios, and reproductive success.

. 1953a. A study of a refuge population of the southern gray squirrel *Sciurus carolinensis carolinensis* Gmelin, and western fox squirrel *Sciurus niger rufiventer* southern Illinois. M.S. Thesis, Southern Illinois University. 76pp.

. 1953b. Trapping and marking squirrels on a refuge in southern Illinois. TRANS ILL ACAD SCI 46:258-262. Two fifths of ear tags were lost and nearly all toes which were ringed with bands were amputated.

. 1953c. Squirrel management in southern Illinois ILL WILDL 8(4):5-6.

A September season resulted in a heavy kill of pregnant and lactating females.

- Morgan, Banner Bill. 1941. Additional notes on North American Physalopterinae (Nematoda). PROC HELMINTHOL SOC WASH 8:63-64. An unidentified species of Physalopterinae was recorded for S.n. niger - geographical location not given.
- Morgan, Banner Bill. 1949. Tularemia in Wisconsin. TRANS WIS ACAD SCI ARTS LETT 39:1-19. Four cases of tularemia were traced to contact with squirrels.

115.

Morris, R.F. 1948. The land mammals of New Brunswick. J MAMMAL 29(2):165-176. The gray squirrel may have been introduced and is locally distributed in or about towns in the southern part of the province. Black squirrels are rare. The red squirrel occurs throughout the province.

- Morris, W.A. 1953. A study of rodent damage to lead-covered telephone cables with particular reference to grey squirrels. M.S. Thesis, University of Massachusetts.
- Morrison-Scott, T.C.S. and A.H. Bishop. 1952. The coat colour of the grey squirrel (*Sciurus carolinensis*) with other notes. PROC ZOOL SOC LOND 121:773-775.
- Mortensen, Poul Hald. 1965. Egernets indvandung nord for Limfjorden. The immigration of the red squirrel (Sciurus vulgaris) in North Jutland. FLORA FAUNA, SILKEBORG 71(8):73-79. After the turn of the century squirrels in Jutland spread widely among the developing conifer plantations. To the northwest this dispersal was stopped at the Limfjord. The first records of squirrels north of the Limfjord were in 1951 near Aggersund and from there they have spread to Thy and into Vendsyssel.

Mosby, Henry S. 1969. The influence of hunting on the population dynamics of a woodland gray squirrel population. J WILDL MANAGE 33(1):59-73. The removal by hunting of 38% of a squirrel population did not adversely affect recruitment, had no significant influence on the average mortality rate and probably removed a segment of the population that would have been lost to "natural losses".

Mossman, H. 1933a. The fetal membranes of the Sciuridae and their significance. ANAT REC 55(4):30. Squirrels exhibit a highly specialized type of implantation while their fetal membranes represent a primitive rodent type. They have a well developed true yolk-sac placenta, followed by incomplete inversion of germ layers.

. 1933b. Implantation, fetal membranes, and placentation in the squirrels (Sciuridae). ANAT REC 55(4):68-69. In tree squirrels implantation occurs by the trophoblast replacing the uterine epithelium over a wide area.

. 1940. What is the red squirrel? TRANS WIS ACAD SCI ARTS /-/7LETT 32:123-134. The reproductive tract of *Tamiasciurus*, both male and female, is so different anatomically from other Sciuridae that perhaps this species does not properly belong in this family. ______, John W. Lawlah, and J.A. Bradley. 1932. The male reproductive tract of the Sciuridae. AM J ANAT 51(1):89-155. A characteristic of the male reproductive tract of the Sciuridae is the bulbar gland and penile duct. Part of the Cowper's duct is modified into a gland unlike the Cowper's gland itself. In *Tamiasciurus* there is complete absence of the bulbar gland and penile duct plus the penis and Cowper's glands are very different from other squirrels. S. vulgaris is almost identical to S. niger and S. carolinensis. The anatomy is compared with other species of the genus.

_____, A.M. Katz, and L.H. Rubnitz. 1933. Changes in the testes and accessory glands of the gray and fox squirrel (*Sciurus carolinensis* and *niger*) during their seasonal reproductive cycle. ANAT REC 55(4):69.

The state of activity of individual males may be determined from examination of histological preparations of their testes. Active squirrel testes give a picture of spermatogenesis while inactive testes result in atrophy of accessory glands.

, R.A. Hoffman and C.M. Kirkpatrick. 1955. The accessory genital glands of male gray and fox squirrels correlated with age and reproductive cycles. AM J ANAT 97(2):257-301. All the male accessory genital glands undergo marked seasonal cycles. Degeneration of glands and testes is extreme in late summer and early autumn, but less common and less extreme between the winter and summer peaks. Changes are most obvious in the prostate and Cowper's glands and least in the seminal glands.

- Moulton, Daniel W. and Wayne H. Thompson. 1971. California group 2-20 virus infections in small, forest-dwelling mammals of Wisconsin: Some ecological considerations. AM J TROP MED HYG 20(3):474-482. Antibodies to California encephalitis virus (probably LaCrosse virus) was found in gray and fox squirrels.
- Mozgovoi, D.P. 1971a. Variability in the sizes of the skull and internal organs of *Sciurus vulgaris bashkiricus*. BIOL NAUKI 14(5):17-21. Skull proportions are different between sexes.

. 1971b. Distribution and population dynamics of squirrels in Bashkir. ABORNIK TRUDOV BASHK GOS ZAPOVEDNIKA 3:82-103.

. 1971c. Ecology of the Bashkir squirrel. ABORNIK TRUDOV BASHK GOS ZAPOVEDNIKA 3:28-82.

Mueller, Paul and Indulis Vesmanis. 1971. Eine neue Subspezies von Sciurus ingromi (Rodentia: Sciuridae) der Insel von Sao Sebastiao (Staat Sao Paulo, Brasilien). (A new subspecies of Sciurus ingromi (Rodentia: Sciuridae) from the island of Sao Sebastiao (Sao Paulo, Brazil).) SENCKENB BIOL 52(6):377-380. (in German)

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Mumford, Russell E. 1969. Distribution of the mammals of Indiana. INDIANA ACAD SCI MONOGR 1:1-114. Gray squirrels are found throughout the state but are least abundant in the northern one-third. About 300,000 are killed annually by hunters. Fox squirrels were less abundant than grays before settlement by European man but now they are much more plentiful. The yearly harvest of fox squirrels is 1,136,000. The red squirrel is found in scattered woodlands in the northern two-thirds of the state.

Munro, J.A. 1929. The spread of the black squirrels in the Toronto region and Victoria, Ontario. CAN FIELD-NAT 43:108.

Murie, Adolph. 1935. Mammals from Guatemala and British Honduras. MISC PUBL MUS ZOOL UNIV MICH 26:1-30. Sciurus deppei and Sciurus yucatensis were collected.

. 1936. A predator eliminates a sick animal. J MAMMAL 17(4):418. A house cat captured a sick *S. griseus*. The animal was mangy, lacked most of its body hair and half its tail was gone.

Murie, Olaus J. 1927. The Alaska red squirrel providing for winter. J MAMMAL 8(1):37-40.

Murray, Walter J.C. 1944. Grey squirrels. CAN NAT, Toronto 5(3):104-105.

Mursaloglu, B. 1973. New records for Turkish rodents (Mammalia). COMMUN FAC SCI UNIV ANKARA SER C SCI NAT 17(1):213-219. New records, distribution maps for S. vulgaris.

Musacchia, X.J., C.G. Wilber and T.W. Gorski. 1955. Hematological studies of mammals from Alaska. J MAMMAL 36(3):362-368. Size of red cells, total red and white cell counts and differential white cell counts for red squirrel are given.

Musser, Guy Graham. 1967. A systematic study of the Mexican and Guatemalan gray squirrel, Sciurus aureogaster F. Cuvier (Rodentia: Sciuridae). Ph.D. Thesis, University of Michigan. 246pp. The Middle American gray squirrels Sciurus aureogaster, S. poliopus, S. socialis, S. griseoflavus and S. nelsoni are considered but one species, S. aureogaster.

. 1968. A systematic study of the Mexican and Guatemalan gray squirrel, *Sciurus aureogaster* F. Cuvier (Rodentia: Sciuridae). MISC PUBL MUS ZOOL UNIV MICH 137:1-112.

. 1970. Identity of the type-specimens of Sciurus aureogaster F. Cuvier and Sciurus nigrescens Bennet (Mammalia, Sciuridae). AM MUS NOVIT 2438. 1-19, Illus. S. nigrescens is considered a subspecies of S. aureogaster. Nadler, Charles F. 1963. The application of chromosomal analysis to taxonomy of some North American Sciuridae. PROC IN CONGR ZOOL 16(4):111-115. Abstract only.

and Dallas A. Sutton. 1962. Mitotic chromosomes of some North American Sciuridae. PROC SOC EXP BIOL MED 110(1):36-38. *Tamiasciurus fremonti* has a diploid chromosome number of 46.

and D.A. Sutton. 1967. Chromosomes of some squirrels (Mammalia-Sciuridae) from the general *Sciurus* and *Glaucomys*. Experientia (Basel) 23(4):249-251.

Four species of Sciurus: niger, carolinensis, griseus and aberti have a 2n chromosome number of 40. S. griseus differs from the others by the absence of an acrocentric Y and the presence of secondary constrictions in two of the autosomes. These unique features are considered tentative species characters for S. griseus.

and R.S. Hoffmann. 1970. Chromosomes of some Asian and South American squirrels (Rodentia: Sciuridae). EXPERIENTIA (BASEL), 26(12):1383-1386. The 2 n of S. anomalus is 40 but for granatensis is 42. Both species of Tamiasciurus have 2n= 46.

Nagel, W.O. 1944. Squirrels and squirrel hunting. MO CONSERV 5(9):1, 10-11.

Nakamura, M. 1950. A survey of *Pasteurella tularensis* infections in the animals in the Jackson Hole area. ZOOLOGICA (35(3):129-131. *T. hudsonicus*.

Nares, R.L. 1950. Grey squirrels. FIELD, London 195:562. Early breeding date in Berks.

Naumov, N.P. 1934a. Determining the age of the squirrel (Sciurus vulgaris L.) SCI REP MOSCOW ST UNIV No. 2: 275-290. (In Russian)
 Age determination was from wear on upper molars. The composition of hunters' bag by age classes includes animals up to 6 years of age. No known age specimens were used.

. 1934b. Symposium: The ecology of the squirrel. A.N. Formosov, N.P. Naumov, and I.D. Kiris. KOIZ, Moscow and Leningrad.

_____. 1934c. Biology of reproduction in the squirrel. DOKL AKAD NAUK S.S.S.R. 3:53-95.

______. 1972. The Ecology of Animals (English Edition) University of Illinois Press.

- Necker, Walter L., and Donald M. Hatfield. 1941. Mammals of Illinois. BULL CHICAGO ACAD SCI 6(3):17-60. 15 figs.
- Neill, Wilfred T. 1952. Hoary bat in a squirrel's nest. J MAMMAL 33(1):113. A living bat, Lasiurus cinereus was found in a gray squirrel nest during November in Georgia.
- Nellis, Carl H. 1969. Sex and age variation in red squirrel skulls from Missoula County, Montana. CAN FIELD-NAT 83(4):324-330. Variability in red squirrel skulls is small but adult male skulls were slightly larger than those of females.
- Nelson, Bernard A. 1945. The spring molt of the northern red squirrel in Minnesota. J MAMMAL 26(4):397-400. The spring molt lasts from April 1 to August 14 starting around the nose, under the chin and on the front feet. It ends on the extreme posterior sides of the rump.
- Nelson, E.W. 1899. Revision of the squirrels of Mexico and Central America. PROC WASH ACAD SCI 1:15-106.
 - _____. 1900. The correct name for the eastern form of the fox squirrel. PROC BIOL SOC WASH 13:169-170.
 - _____. 1903. A new pigmy squirrel from Central America. PROC BIOL SOC WASH 16:121-122.
- Nelson, Julius. 1890. Descriptive catalogue of the vertebrates of New Jersey. REP NEW JERS GEOL SURV 2:489-824. Squirrels are not common in New Jersey. "In no county of the state could five hundred probably be found, during the proper shooting season."
- Nero, Robert W. 1958. Additional gray squirrel information. BLUE JAY, 16(2):80-81.

. 1958. Gray squirrel (*Sciurus carolinensis*) in Saskatchewan. BLUE JAY 16(1):33-35.

Newell, J.O. and R.L. Kirkpatrick. 1968. Seasonal reproduction in the female gray squirrel, *Sciurus carolinensis*. VA J SCI 19(3):181. Peak pregnancy for Blacksburg, Virginia is February and July. Peak lactation is May and October. Placental scar counts and fetal counts gave a winter-spring litter size of 2.50 and a

summer litter size of 2.90. Ovarian weights decreased progressively during lactation periods. Pituitary weights increased to lactation peaks and decreased following lactation and reached their lowest level in November. Newton, A. 1865. Note. ZOOLOGIST:9560. S. vulgaris digs up and eats truffles.

- Nice, Margaret M., Constance Nice and Dorothea Ewers. 1956. Comparison of behavior development in snowshoe hares and red squirrels. J MAMMAL 37(1):64-74. Red squirrel young have a relatively slow rate of development compared to ground squirrels.
- Nichols, John T. 1927. Notes on the food of the gray squirrel. J MAMMAL 8(1):55-57.

______. 1958. Food habits and behavior of the gray squirrel. J MAMMAL 39(3):376-380. Maple buds and seeds are important foods. Gray squirrels also ate seeds, honey locust seeds, horse chestnuts, elm buds, Pussywillow catkins, and buds of buttonwood trees.

- Nikitina, N.A. 1972. On the size of rodent home ranges of the USSR fauns. ZOOL ZH 51(1):119-126. English summary. The home range of S. vulgaris was 4.0 to 13.0 hectares and in exceptional cases up to 200.0 hectares.
- Nixon, Charles M. 1962. Harvest of gray and fox squirrels, 1959. GAME RES OHIO 1:46-48.

. 1963. Effects of timber management on squirrel and ruffled grouse population density and dynamics. Ohio Division Wildlife P-R. Project W-105-R-4. Job 24. 35pp.

______. 1964. Relative importance of spring and summer litters of gray squirrel harvest. Ohio Dep Nat Resour, Div Wildl GAME MANAGE INSERVICE NOTE 1: 2pp mimeo.

. 1965a. Squirrel management guidelines for wildlife areas. Ohio Dep Nat Res, Div Wildl INSERVICE DOCUMENT 55. 8pp mimeo.

. 1965b. Productivity rates of gray and fox squirrels in Ohio. Ohio Dep Nat Res, GAME RES OHIO 3:93-106.

______. 1967. Squirrel ecology. Ohio Division Wildlife P-R Proj. W-105-R-9. Job. 5. 12pp.

. 1970. Insects as food for juvenile gray squirrels. AM MIDL NAT 84(1):283. Juvenile squirrels were seen feeding on bark-dwelling insects. Young squirrels were found to have more insect remains than did older squirrels base^d on stomach analysis. and W.R. Edwards. 1965. Estimation of squirrel population parameters from trap-retrap data. TRANS MIDWEST WILDL CONF 26. 11pp.

, W.R. Edwards and L. Eberhardt. 1967. Estimating squirrel abundance from live trapping data. J WILDL MANAGE 31(1):96-101.

, Roger O. Beal and Robert W. Donohoe. 1968a. Gray squirrel litter movement. J MAMMAL 49(3):560. A radio transmitter was used effectively to track a female who moved her offspring 150 feet to a new nest when disturbed. The young gained slightly over 3 gm/day over a 22 day period.

and Robert W. Donohoe. 1968b. Squirrel management in Ohio. OHIO WOODLAND 6(1):8-9. Popular account. Gray squirrels prefer forests with shrubby

undergrowth, whereas fox squirrels prefer grazed woodlots.

, D. Michael Worley and Milford W. McClain. 1968c. Food habits of squirrels in southeast Ohio. J WILDL MANAGE 32(2):294-305.

and M.W. McLain. 1969. Squirrel population decline following a late spring frost. J WILDL MANAGE 33(2):353-375. Squirrels (gray and fox) in a southeastern Ohio forest attained a density of 1.3 sq/acre in 1966 when a severe spring frost reduced available food. By fall 1966 the population exhibited reduced reproductive rate, lower body weights and increased dispersal and/or mortality espectially subadults. Breeding virtually ceased between May 1966 and August 1967. The population in the fall of 1967 was only 1/6 as large as the fall of 1966.

and W.J. Harper. 1972. Composition of gray squirrel milk. OHIO J SCI 72(1):3-6. Composition is 9.0% protein, 12.1% fat, 3.0% lactose, 1.3% ash, 0.36% calcium, and 0.45% phosphorus.

, Robert W. Donohoe, and Tom Nash. 1974. Overharvest of fox squirrels from two woodlots in western Ohio. J WILDL MANAGE 38(1):67-80. Small woodlots on public hunting areas may be difficult to manage for fox squirrels because they can be overharvested.

and Milford W. McClain. 1975. Breeding seasons and fecundity of female gray squirrels in Ohi. J WILDL MANAGE 39(2)P426-438. Breeding activity occurred mainly from 2 to 25 January and 19 May to 18 June. Placental scar counts were higher in adult females compared to yearlings and from summer breeders compared to spring breeders.

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, Milford W. McClain and Robert W. Donohoe. 1975. Effects of hunting and mast crops on a squirrel population. J. WILDL MANAGE 39(1):1-25.

- Nukorbaeva, K.K. 1972. Materials on coccidia of squirrels *Sciurus vulgaris exalbidus* in Central Kazakhstan. TR INST ZOOL AKAD NAUK KAZ SSR 33:36-43.
- Nyholm, Eric S. 1961. The autumn molt and primeness of the fur of squirrel (*Sciurus vulgaris*). AUOM RIISTA pp95-105. Squirrels in northern Finland start and complete their molt earlier than do squirrels to the south.
- O'Connor, Patricia. 1962. The popular gray squirrel. ANIMALAND, STATEN ISLAND ZOOL SOC 29(5):5.
- O'Dell, W.S. 1925. Squirrels eating Amanita muscaria. CAN FIELD-NAT 39:180-181.

______. 1926. Further observations of squirrels eating Amanita muscaria. CANADIAN FIELD NATURALIST 40:184.

- Odum, E.P. 1949. Small mammals of the highlands (North Carolina) plateau. J MAMMAL 30(2) 179-192. Red squirrels are found only among conifers although some persisted for two years after all large conifers had been removed. Gray squirrels are uncommon at higher elevations but a pair was seen at 4100 ft. elevation.
- Ofcarcik, R.P. and E.E. Burns. 1971. Chemical and physical properties of selected acorns. J FOOD SCI 36:576-578. Tannin content of acorns is much lower in the white oak group than in the black oak group. Food qualities are significantly different within varieties at the species level. Lipid content is highest in the red oak group ranging at high as 34%.
- ______, E.E. Burns, and J.G. Teer. 1973. Acceptance of selected acorns by captive fox squirrels. SOUTHWEST NAT 17(4):349-355. There is an inverse relationship between tannin content and squirrel preference. Squirrels also preferred those acorns with lowest fat content. Previous food experience is a factor in food selection.
- Ofelt, C.H. 1975. Food habits of nesting bald eagles in southeast Alaska USA. CONDOR 77(3):337-338. *T. hudsonicus*.
- Ohio Division of Wildlife. 1955. High squirrel population in 1955 and its relation to longer season. GAME SURVEY NEWS 2(4):4.
- Oldham, C. 1936. Food of the gray squirrel (Sciurus carolinensis). TRANS HERTFORDSHIRE NAT HIST SOC 20(2):86-87.

. 1937. Melanic grey squirrels in the Berkhamsted district. TRANS HERTFORDSHIRE NAT HIST SOC FIELD CLUB 20(3):152.

- Oldham, J.N. 1961. Studies on parasites of the grey squirrel (Sciurus carolinensis Gmelin) from south eastern England. J HELMINTHOL 39:127-130.
 100 carcasses were examined with the following results: Cysticercus fasciolaris capsule in one liver; Ascaris lumbricoides in one small intestime; Trichostrongylus retortaeformis from 34 carcasses.
- Olekova, N.V. and K.A. Bashanov (eds). 1970. Bibliography of rodents and lagomorphs of Siberia and the Soviet Far East (1786-1967). KIZIL. 384pp. (3302 references in Russian).
- Olexik, William A. 1976. A correction in the literature on cestodes from *Sciurus carolinensis*. J PARASITOL 62(1):62.

, Alfred E. Perry and Walter E. Wilhelm. 1969. Ectoparasites and hemlinth endoparasites of the tree squirrels of southwest Tennessee. J TENN ACAD SCI 44:4-6.

- Olin, Gunnar Carl Oscar. 1934. Nouvelles recherches sur la tularemie en Suede. BULL OFF INT HYG PUB 26:890 S. vulgaris.
- . 1942. The occurrence and mode of transmission of tularemia in Sweden. ACTA PATH MICROBIOL SCAND 19:220-247. Tularemia has been found in hares, squirrels and lemmings.

Olmsted, Charles E. 1937. Vegetation of certain sand plains of Connecticut. BOT GAZ 99(2):209-300. Black oak invades many communities through burial of acorns by squirrels. Without dispersal by squirrels *Quercus velutina* would not enter many areas and even though acorns may be present the establishment of trees would not occur without burial.

- Olsen, Anna M. 1945. *Sciurus*, delight of the gastronome. IOWA CONSERV 4:154, 159.
- O'Neal, C.H. 1928. Troubles of a chickaree family. YOSEMITE NAT NOTES 7:68.
- Oosting, M. 1939. Oculoglandular tularemia contacted from the tree squirrel. OHIO ST MED J 35:730-732.

Orbach, Ruth. 1961. Ekorn the Squirrel. Albert Whitman and Company, Chicago, Illinois. This account was adapted from Ekorn by Haakon Lie, translated from the Norwegian by Claus Leonard Hultgren.

- Oregon Game Commission. 1973. Squirrel transplant. OREG STATE GAME COMM BULL 28(4):11.
- Oresse, Jean-Marie. 1971. L'écureuil (Sciurus vulgaris L.) Mamifère rongeur. REV VERVIETOISE HIST NAT 28(4-6):43-48.
- Osborne, Edwin A. 1923. Is the gray squirrel disappearing? NAT MAG 2(2):122-123. The gray squirrel has declined in Suffolk County on Long Island in New York State. Popular article.
- Osgood, Frederick L., Jr. 1939. The mammals of Vermont. J MAMMAL 19(4):435-441. In the fall of 1936 an east to west movement of gray squirrels occurred. A late frost in the spring of 1936 destroyed the nut crop. Damage to crops and power lines occurred in eastern New York State. Gray squirrels were reported drowned at Catskill, New York while attempting to swim the Hudson.
- Oxley, D.J., M.B. Fenton and G.R. Carmody. 1974. The effects of roads on populations of small mammals. J APPL ECOL 11(1):51-59. Gray squirrels were reluctant to venture onto road surfaces where distance between forest margins exceeded 20m. A 4-lane divided highway may be as effective a barrier to dispersal as a body of fresh water twice as wide.
- Pack, James C. 1966. Influence of the social hierarchy on gray squirrel behavior. M.S. Thesis, Virginia Polytechnic Institute. 61pp.

. 1967. Squirrel society. VA WILDL 28(1):8. A popular article on gray squirrel vocalizations and social hierarchy.

. 1970. Squirrel hunting weather. VA WILDL 31(1):7. Temperature or light rain does not affect squirrel activities but winds above 8 mph or heavy rains reduce activity.

, Henry S. Mosby and Paul B. Seige. 1967. Influence of social hierarchy on gray squirrel behavior. J WILDL MANAGE 31(4):720-728.

, H. Reed Sanderson, and Robert W. Donohoe. 1971. 5-5Comparison of gray squirrel census techniques. TRANS NORTHEAST SECT WILDL SOC.

Packard, Robert L. 1954a. Notes on the defensive behavior of gray /-9and fox squirrels while moving their young. TRANS KANS ACAD SCI 57(4):471-472. On several occasions adult squirrels have placed themselves between their young and danger (man or dog). In one case a male squirred threatened a dog and then carried a youngster into a den.

125.

6-8

. 1954b. Great horned owl attacking squirrel nests. WILSON BULL 66(4):272.

Three instances of great horned owls tearing apart fox squirrel nests are described.

. 1956. The tree squirrels of Kansas. Museum of Natural History and State Biological Survey. University of Kansas. 67pp.

- Page, F.J. Taylor. 1956. Underground activity by red squirrel. PROC ZOOL SOC LOND 126(1):164-165. A European squirrel cached pine cones in a mole tunnel. Another squirrel was seen digging in the ground to expose a bone which it then gnawed on.
- Palmer, Ralph S. 1954. The Mammal Guide. Doubleday and Co., Garden City, New York. 384pp.

Panting, P.J. 1972. Amphibians and reptiles. NAT WALES 13(1):54-56. S. vulgaris.

Pantuwatana, Somsak, Wayne H. Thompson, Douglas M. Watts, and Robert P. Hanson. 1972. Experimental infection of chipmunks and squirrels with La Crosse and Trivittatus viruses and biological transmission of La Crosse virus by Aedes triseriatus.
AM J TROP MED HYG 21(4):476-481.
4 of 5 gray squirrels infected with LAC virus developed high viremia levels. None of the 4 gray squirrels infected with TVT had a detectiable serological response.

Paradiso, J.L. 1969. Mammals of Maryland. NORTH AMERICAN FAUNA. 66:1-193.

Parker, E. 1949. Growing menace of the grey squirrel. FIELD, London 194:770-771. Damage is caused to cultivated plants and birds.

Parker, Harry C. 1939. A preliminary list of the mammals of Worcester County, Massachusetts. PROC BOSTON SOC NAT HIST 41(4):403-416. Gray squirrels used woodchuck holes for dens.

Parker, James C. 1968. Parasites of the gray squirrel in Virginia. J PARASITOL 54(3):633-634. Sixty-nine squirrels were examined. All were collected from Montgomery County, Virginia.

. 1971. Protozoan, helminth and arthropod parasites of the gray squirrel in southwestern Virginia. Ph.D. Thesis, Virginia Polytechnic Institute and State University. 262pp. and R.B. Holliman. 1971. Observations on parasites of gray squirrels during the 1968 emigration in North Carolina. J MAMMAL 52(2):437-441.

There seems to be a greater variety of nemotodes present in squirrels during emigration and also either higher percentages of ectoparasite infestation or higher numbers on the squirrels (or both). Parasites did not seem to have any influence upon the initiation of emigration.

and Rhodes B. Holliman. 1971. Notes on Gongylonema pulchrum Molin, 1857 (Nematoda: Spiruridae) in the gray squirrel in southwestern Virginia. J PARASITOL 57(3):629. Four S. carolinensis out of 168 examined were found to harbor adults of this parasite in the mucosal lining of the esophagus.

, R.B. Holliman, and M.M. Jones. 1972. A method for determining ectoparasite population densities on gray squirrels. VA J SCI 23(3):114.

The average population density of three species of lice were highest on the back and decreased to legs, head, underparts and tail respectively. *Neohaematopinus sciuri* was present in greatest density on the back; *Enderleinellus longiceps* was most abundant on the head and *Hoplopleura sciuricola* on the legs and back.

and Rhodes B. Holliman. 1972. A method for determining ectoparasite densities on gray squirrels. J WILDL MANAGE 36(4):1227-1234.

Parker, Richard Louis. 1952. Ecology and economics of the western fox squirrel, Sciurus niger rufiventer (Geoffroy) in Payne County, Oklahoma. M.S. Thesis, Oklahoma A.& M. College.

Parkinson, G.R. 1976. An observation plus some queries about a swimming grey squirrel. NAT WALES 15(1):36.

Parris, David C. 1969. Morphology and relationships of the Prosciuridae. GEOGR SOC AM. SPEC PAP 121:619.

Parsons, B.T. and A.D. Middleton. 1937. The distribution of the grey squirrel (Sciurus carolinensis) in Great Britain in 1937. J ANIM ECOL 6(2):286-290.

Parsons, F.C. 1894. On the myology of the sciuromorphine and histricomorphine rodents. PROC ZOOL SOC LONG 65:251-296. Descriptions of musculature.

Pass, Aaron. 1971. Out on a limb. GA GAME FISH 6(1):1-3. 2-14

. 1972. Squirrel hunting traditional style. GA GAME FISH 7(2):2-5.

Patton, Clyde R. 1939. Distribution notes on certain Virginia mammals. J MAMMAL 20(1):75-77. T. hudsonicus albieticola may be the subspecies present in the Allegheny and Blue Ridge mountains of Virginia. S.c. carolinensis occupies the southern half of the Piedmont Plateau and the entire Coastal Plain region, intergrading with S.c. leucotis on the north and northwest.

- Patton, David R. 1974a. Estimating food consumption from twigs clipped by the Abert squirrel. U S FOR SERV RES NOTE R M 272:1-4.
 - . 1974b. Characteristics of ponderosa pine stands selected by the Abert's squirrel for cover. Ph.D. Dissertation. University of Arizona. 40pp.
 - . 1975a. Abert squirrel cover requirements in southwestern ponderosa pine. U S FOR SERV RES PAP R M 145:1-12. The best cover conditions for *S. aberti* are uneven-aged, ponderosa pine stands with trees spaced in small even-aged groups within the stand. Such stands would have tree densities of 201 to 250 trees per acre with average tree diameter between 11 and 13 inches at breast height. The basal area of trees over 8 inches d.b.h. is between 151 and 200 square feet per acre. One or two Gambel oaks per acre in the 12 to 14 inch class would be found in the stand.
 - . 1975b. Nest use and home range of three Abert squirrels as determined by radio tracking. U S FOR RES SERV NOTE R M 281:1-3. Three S. aberti used 2, 5, and 6 nests in home ranges of 30,

10, and 85 acres respectively. There was overlap of ranges.

_____. 1977. Managing southwestern ponderosa pine for the Abert squirrel. J FOR 75(5):264-267.

S. aberti prospers in ponderosa pine forests with trees of all ages. Threes between 11 and 13 inches d.b.h. provide the best cover for nests and trees over 20 inches d.b.h. are the best cone producers. A method for habitat rating is described.

and Win Green. 1970. Abert's squirrels prefer mature ponderosa pine. U S FOR SERV RES NOTE R M 169:1-3. S. aberti preferred to feed in trees 11 to 30 inches in diameter while trees larger than this were not utilized as much.

, Thomas D. Ratcliff and Kenneth J. Rogers. 1976 Weight and temperature of the Abert and Kaibab squirrels. SOUTHWEST NAT 21(2):236-238. Average weight of males if 715 gm and 690 gm for females during October. Body temperature varies from 38.5°C to 42.7°C (mean 40.7°C).

- Paul, J.R. and T.L. Quay. 1963. Notes of the mammalian fauna of the Toxaway River Gorge, North Carolina. J ELISHA MITCHELL SCI SOC 79(2):124-316. The presence and ecological distribution of squirrels and other mammals.
- Payne, Ernest A. 1939. A gray squirrel moves its home. YOSEMITE NAT NOTES 18(9):100-101. Sciurus griseus.

. 1940. The return of the California gray squirrel. YOSEMITE NAT NOTES 19(1):1-2. Mange caused a decline in 1917 to 1926. The population has been increasing in the 1930s. There is some competition with T. douglasii.

- Payne, Neil F. 1976. Red squirrel introduction to Newfoundland. CAN FIELD-NAT 90(1):60-64. T. hudsonicus were introduced from Labrador in 1963 and since then have multiplied and dispersed.
- Pearce, John. 1938. Identifying tooth marks of some northeastern animals on forest vegetation. TRANS N AM WILDL CONF 3:690-694. Instead of the smooth cut characteristic of rodent clipped twigs, that made by squirrels is very ragged and may be confused with deer browzing.
 - . 1947. Identifying injury by wildlife to trees and shrubs in northeastern forests. United States Department of Interior, Fish and Wildlife Service, RESEARCH REPORT 13, 29pp. Squirrel teeth are less adapted to gouging out chips of wood than are other forest rodents and instead gnawing produces more of a scratching or rasping effect. The average width of incisor tooth marks is 0.01 inch, (both *S. carolinensis* and *T. hudsonicus*) which is considerably wider than in the case of mice, (0.04 inch).
- Peery, Charles H., III. 1948. Breeding potentialities of the gray squirrel at Blacksburg, Virginia. M.S. Thesis, Virginia Polytechnic Institute. 117pp. Los Market auge data
- Pellerdy, L. 1954. Contributions to the knowledge of the coccidia of the common squirrel, *Sciurus vulgaris*. ACTA VET ACAD SCI HUNG. 4(4):475-480.
- Pepperd, W.A. 1953. The squirrel menace. FIELD, London 201:126. Gray squirrels have spread in Somerset.
- Perry, Harold J. 1941. A case of peritoneal moniliformiasis in a fox squirrel. TRANS AM MICROSC SOC 60(3):375-377. Seven spring-headed worms (*Moniliformis*) were found encycted in the peritoneum and mesenteries of the body cavity.

Perry, Horace Randolph, Jr. 1974. Trap responses of the gray squirrel (Sciurus carolinensis carolinensis) raccoon (Procyon lotor totor) and opossum (Didelphi virginiana virginiana) to environmental factors in two swamp watersheds of northeastern North Carolina. Ph.D. Dissertation, North Carolina State University. 205pp.

Adjustments for environmental variation may be required to obtain accurate mark-recapture population estimates. More accurate population estimates will be made if individual sex-age segments are handled separately. Heterogeneous habitats should also be treated separately.

- , Garland B. Pardue, Frederick S. Barkalow, Jr., Robert J. Monroe. 1977. Factors affecting trap responses of the gray squirrel. J WILDL MANAGE 41(1):135-143. Population estimates based on trap-recapture data require adjustments for environmental differences while sex and age segments of the population should be handled separately.
- Perry, R.K. 1936. A summary of the grey squirrel (*Sciurus* carolinensis Gmelin) in Cheshire. REP LANCS CHESH FAUNA COMM 22:11-15.
- Peterka, H.E. 1937. A study of the myology and osteology of tree sciurids with regard to adaptation to arboreal, glissant, and fossorial habits. TRANS KANS ACAD SCI 39:313-332. A comparison is made between *Rattus norvegicus Glaucomys volans*, *Cynomys ludovicianus* and *S. niger* as to differences in muscles and bones.
- Peterle, Tony J. and William R. Fouch. 1959. Exploitation of a fox squirrel population on a public shooting area. MICH DEP CONSERV Report No. 2251:4pp mimeo. Hunters harvest from 50 to 65 percent of the population every year without reducing the reproductive potential.
- Petersen, C.J. 1925. Egernets Skraeling af Skovfyr. FRA SKOVEN OG TRAEMARKEDET, Copenhagen 7:85-86. The red squirrel can be a serious nuisance in Scots pine plantations by peeling bark from tree trunks. Much of this peelintg completely encircled the tree near the top resulting in the breaking off of 2-4 meter long top sections.
- Peterson, Randolph L. 1966. The Mammals of Eastern Canada. Oxford University Press. S. niger, S. carolinensis and T. hudsonicus.
- Petrides, George A. 1941. How Yosemite squirrels spend the winter. YOSEMITE NAT NOTES 20(1):1-3.

. 1941. Snow burrows of the red squirrel (Tamiasciurus) J MAMMAL 22(4):393-394. Red squirrels develop tunnels in the snow to and from feeding areas.

. 1942. Relation of hedgerows in winter to wildlife in central New York. J WILDL MANAGE 6(4):261-280. Red and gray squirrels utilize fencerows as a source of food and to travel extensive distances between woodlots.

. 1944. A gall insect food of the grey squirrel. J MAMMAL 25(4):410.

Gray squirrels opened galls and ate the larvae of the cynipid, Callirhytis seminator on white oaks.

. 1951. Notes on age determination in squirrels. J MAMMAL 32(1):111-112. Gray squirrel age was determined roughly by x-ray of wrists. The degree of closure of epiphyses and diaphyses determines age.

, Paul Parmalee and John E. Wood. 1953. Acorn production in east Texas. J WILDL MANAGE 17(3):380-382. Acorn yields of *Quercus stellata* and *Q. marilandica* were estimated by counting the acorns occurring on the first 25 twigs encountered on each sample tree. Acorn yield varied greatly from year to year.

Pfutzenreiter, F. 1958. Zur Ernährung des Eichhornchens (Sciurus vulgaris fuscoater). SÄUGETIERKD MITT 6(1):29. Squirrels opened galls and consumed the insects of Pemphigus spirothecae of poplar. Although other galls (Pemphigus bursarius and P. piriformis) occurred on the tree these were never touched. Squirrels also ate the receptacles of chestnut flowers and larch buds.

Pickens, A.L. 1928. Mammals of upper South Carolina. J MAMMAL 9(2):155-157. Fox squirrels have disappeared over much of this Appalachian area and on rare occasions may be found along the fall line.

Pike, G.W. 1934. Girdling of Ponderosa pine by squirrels. J FOR 32(1):98-99. Girdling in the Black Hills occurs from mid-December until late February when the sugar concentration in the sap is greatest, snow is deep and food is difficult to find. At this time squirrels peel the bark from young ponderosa pines and eat the succulent inner bark and cambium layer. (T. hudtonuus)

Pitt, F. 1948. Ladies in white. CTRY LIFE, London 103:1120-1122. Albinism in gray squirrels.

- Pocock, R.I. 1907. Exhibition of two young English squirrels (Sciurus vulgaris albicauda) with abnormally coloured fur. PROC ZOOL SOC LOND 78:516-517. Two young European red squirrels reared by a cat developed gray pelts rather than the normal red color.
 - . 1922. On the external characters of the beaver (*Castoridae*) and of some squirrels (Sciuridae). PROC ZOOL SOC LOND 1171-1213.
- _____. 1923. The classification of the Sciuridae. PROC ZOOL SOC LOND Pt. 2:209-246.
- Poole, Earl L. 1932. A survey of the mammals of Berks County, Pennsylvania. READING PUBLIC MUSEUM AND ART GALLERY BULLETIN No. 13.
 - . 1944. The technical names of the northeastern fox squirrels. J MAMMAL 25(3):315-317. The fox squirrel formerly in southeastern Pennsylvania, Delaware and Maryland's Eastern Shore is Sciurus niger neglectus.
- Poole, Fraser. 1949. A note on the squirrels of Yosemite. YOSEMITE NAT NOTES 28(4):28-30.
- Pope, Alton S. 1924. Swimming red squirrels. J MAMMAL 5(2):134. A red squirrel was seen swimming across a 50 yard wide river and another across a lake in Maine. The latter had swum about 3/4 mile before being helped the rest of the way.
- Portal, M. 1942. A foe to young trees. CTRY LIFE, London 91(2371):1235. S. carolinensis.
- Pososyan, A.R. and L.E. Oganesyan. 1973. Effect of mode of life on the structure and skeleton of the extremities of some rodent species. BIOL ZH ARM 26(6):69-74. An Armenian with Russian summary. S. persicus.
- Potter, Beatrix. 1972. The Tale of Squirrel Nutkin. Dover Publications. New York, N.Y. This illustrated childrens' fairy tale was originally published in 1903 by Frederick Warne and Company.
- Pournelle, George H. 1950. Mammals of a north Florida swamp. J MAMMAL 31(3):310-319. Gray squirrels built two types of nests, one of leaves and vines and the other of branches, twigs, Spanish moss and shredded cypress bark.

- Pousarques, E. de. 1893. Contributions a l'Étude de l'Appareil Génital Male de l'Ecureuil (*Sciurus vulgaris*). C R SOMM SOC PHILOMATHIQUE PARIS 12:1-8.
- Prasad, H. 1960. A new species of coccidia of the gray squirrel Sciurus (Neosciurus) carolinensis. J PROTOZOOL 7(2):135-139. Eimeria neosciuri is described from the small intestine of gray squirrels in England.
- Preble, Norman A. 1942. Notes of the mammals of Morrow County, Ohio. J MAMMAL 23(1):82-86. Gray squirrels seem to be absent now. Prior to 1925 they were gradually replaced by fox squirrels.
- Preno, William L. and Ronald F. Labisky. 1971. Abundance and harvest of doves, pheasants, bobwhites, squirrels and cottontails in Illinois 1956-1969. ILL DEP CONSERV TECH BULL No. 4:1-76. Hunters shot an average of 2.0 squirrels per hunting trip regardless of squirrel abundance. An average of 2,827,000 squirrels were harvested per year and consisted of 74 percent fox squirrels and 26 percent gray squirrels.
- Prescott, Kenneth W. 1967. Slate-colored junco killed by a gray squirrel. BIRD-BANDING 38(2):152. A gray squirrel killed a junco caught in a mist net.
- Preston, F.W. 1948. Red squirrels and gray. J MAMMAL 29(3):297-298. A red squirrel persistently pursued a gray for a minute and a half over the ground.
- Price, Donald L. 1962. Description of Dipetalonema interstitium
 n. sp. from the grey squirrel and Dipetalonema llewellyni n. sp.
 from the raccoon. PROC HELMINTHOL SOC WASH 29(1):77-82.
- Pritchett, H.D. 1938. Rabies in two gray squirrels. J AM VET MED ASSOC 45(4):563-564. Two squirrels from Charlotte, North Carolina were diagnosed as having rabies based on examination of brains.
- Progulske, D.R. 1955. Game animals utilized as food by the bobcat in the southern Appalachians. J WILDL MANAGE 19(2):249-253. Gray squirrel remains were found in 29 percent and fox squirrel remains in 4.5 percent of the bobcat scats examined.

Pruitt, Wm. O., Jr. 1960. Animals in the snow. SCI AM, JAN
pp60-68.
During the deep cold of subarctic winter the red squirrel
becomes active in tunnels beneath the snow. The critical
temperature which sends them below the snow is between
25⁰-30⁰ F.

Pryor, M.R. 1865. Black specimen of the common squirrel. ZOOLOGIST 23:9431.

Pudney, Jeffrey. 1968. Ultrastructural studies on the testes of the American grey squirrel, *Sciurus carolinensis* (Gmelin). PROC INT CONGR ANIM REPROD 6:179-182.

. 1976. Seasonal changes in the testis and epididymis of the American grey squirrel, *Sciurus carolinensis*. J ZOOL (Lond), 179(1):107-120.

Male gray squirrels as a group did not undergo a pronounced seasonal reproductive cycle but some individuals did demonstrate periods of reproductive inactivity which were not related to seasonal changes.

and D. Lacy. 1977. Correlation between ultrastructure and biochemical changes in the testis of the American grey squirrel. *Sciurus carolinensis*, during the reproductive cycle. J REPROD FERTIL 49:5-16. Spermatogenically active testes synthesized androgens from steroid precursor. During sexual regression androgen synthesis was drastically reduced but the production and progesterone and hydroxyprogesterone metabolites was increased.

Pulliainen, Erkki. 1973. Winter ecology of the red squirrel (Sciurus vulgaris L.) in northeastern Lapland. ANN ZOOL FENN 10(4):487-494. After a warming phase of 10-30 minutes squirrels could maintain a nest temperature 20-30°C higher than the ambient air temperature. Squirrel mobility was at its minimum during the shortest days and the coldest months of the year.

Pulling, Albert V.S. 1924. Small rodents and northeastern conifers. J FOR 22(7):813-14. Red squirrels in New York and New England may take 100% of the white pine cones even in good seed years. They may cut off all the cones even when green in a couple of days and shell out the seeds at any later time. Damage to spruce cones is not as extensive as it is to white pine cones.

- Quay, W.B. 1965. Comparative survey of the sebaceous and sudoriferous glands of the oral lips and angle in rodents. J MAMMAL 46(1):23-37. *Tamiasciurus hudsonicus* has medium sized sebaceous and small sudoriferous and mucous glands in the mouth region.
- Queal, L.M. and W.R. Houch. 1967. Results of first experimental early squirrel season. Rose Lake Wildlife Research Station, Michigan Department of Conservation Research and Development, Report No. 105.
- Racey, Kenneth. 1936. Notes on some mammals of the Chilcotin, British Columbia. CAN FIELD-NAT 50(2):15-21. Red squirrels were abundant everywhere and hundreds of nests were found mostly in jack-pines 12 to 15 ft from the ground.

Ramey, Craig Anthony. 1973. The movement patterns and coat color polymorphism of Abert's squirrel, *Sciurus aberti feneus*. Ph.D. Thesis, Colorado State University. 193pp.

and Donald J. Nash. 1971. Abert's squirrel in Colorado. SOUTHWEST NAT 16:125-126. Abert's squirrels occur in ponderosa pine stands in Elbert and El Paso Counties extending the known range in Colorado.

and D.J. Nash. 1976. Coat color polymorphism of Abert's squirrel, *Sciurus aberti* in Colorado. SOUTHWEST NAT 21(2):209-217.

- Rand, A.L. 1933. Notes on the mammals of the interior of western Nova Scotia. CAN FIELD-NAT 47(1):41-50. Gray squirrels are reported from time to time but may be escaped cage animals.
- Rankin, John S., Jr. 1946. Helminth parasites of birds and mammals in western Massachusetts. AM MIDL NAT 35(3):756-768. S. carolinensis was found with Cittotaenia pectinata americana.
- Rasmussen, D. Irwin. 1941. Biotic communities of Kaibab Plateau, Arizona. ECOL MONOGR 11(3):229-275. S. kaibabensis is found only in Pinus brachyptera not being limited to pure pine stands but wherever these trees exist on the Kaibab Plateau. The total population of this squirrel is about 2,900 individuals. The squirrel's diet is restricted almost entirely to year-old cambium and bark of terminal shoots of P. brachyptera. They also eat green pine cones, a small amount of herbage and some fungi.

. 1972. National and international interest in the Kaibab squirrel: A problem analysis. 91pp. (unpublished report prepared by Reg. 3 USDA Forest Service Albuquerque, New Mexico on file at Rocky Mt. Forest and Range Exp. Sta. Tempe, Arizona.)

, D.E. Brown and D. Jones. 1975. Use of ponderosa pine by Tassel-eared squirrels and a key to determine evidence of their use from that of red squirrels and porcupines. Arizona Game and Fish Department. 12pp. Terminal ends of ponderosa pine branches are cut off in a

characteristic manner by S. aberti and such cuttings found under trees can give an indication of squirrel abundance.

Raspopov, M.P. and Y.A. Isakov. 1935. On the biology of the squirrel. IN: P.A. Mantejfel. (ed.) The Biology of the Hare and the Squirrel, and Their Diseases. (In Russian with English summary). 6-12

- Ratcliff, P.W. 1950. Grey squirrels. FIELD, London 195:767. Early breeding record from Derbyshire.
- Ratcliff, Thomas D. 1974. Kaibab squirrel activities in relation to forest characteristics. M.S. Thesis, University of Arizona. 39pp.

______, David R. Patton and Peter F. Ffolliott. 1975. Ponderosa pine basal area and the Kaibab squirrel. J FOR pp784-787. Squirrel abundance was related to basal area of *Pinus ponderosa*.

, David R. Patton and Peter F. Ffolliott. 1975. Ponderosa pine basal area and the Kaibab squirrel. J FOR pp284-286. As density of pinyon pine increases, ponderosa pine density decreases and squirrel habitat is lowered in quality. The density of squirrel nests increased as the basal area of ponderosa pine increased. Squirrels fed on Douglas fir buds in early spring and the inner bark of terminal twigs of pinyon pine, but no evidence of feeding on pinyon pine seeds was found.

- Rathke, B.J., R.W. Poole. 1974. Red squirrel attacks a piliated woodpecker. WILSON BULL 86(4):465-466. *T. hudsonicus* made aggressive feints toward a Dryocopus pileatus and then jumped onto the bird's breast.
- Rau, A. Sub ba. 1925. Contributions to our knowledge of the structure of the placenta of Mustelidae, Ursidae, and Sciuridae. PROC ZOOL SOC LOND Pt. 3:1027-1069.
- Rausch, Robert. 1946. New records of *Macracanthorhynchus hirdinaceus* in Sciuridae. J PARASITOL 32(1):94. Found in 2 Ohio fox squirrels.

and Jack D. Tiner. 1948. Studies on the parasitic helminths of the north central states. I. Helminths of Sciuridae. AM MIDL NAT 39(3):728-747.

- Read, Harry. 1949. White squirrel town. NAT HIST 58(9):403. An account of the white squirrels of Olney, Illinois.
- Redington, Bryce C. and Leo A. Jachowski, Jr. 1971. Syngamy and sporogony of *Hepatazoon griseisciuri* Clark, 1958. (Sporozoa: Haemogregarinidae) in its natural vector, *Haemogamasus reidi* Ewing, 1925 (Acari: Mesostigmata). J PARASITOL 57(5):953-960.

and Leo A. Jachowski, Jr. 1972. Role of Haemogamasus reidi (Acari: Mesostigmata) in the life cycle of the gray squirrel protosoan, Hepatozoon griseisciuri Sporozoa: Haemogregarinidae. J PARASITOL 58(2):401-403. Only the adult female mites serve as vectors for Hepatozoon because of their ability to withstand desiccation at the tip of the squirrels's tail. Redmond, Howard R. 1949. The relation of gray squirrel populations to habitat conditions in Stone County, Mississippi. M.S. Thesis, Louisiana State University.

. 1950. Squirrel survey and investigation. MISS GAME FISH 14(3):3-4, 13.

. 1951a. Squirrel breeding studies and their relation to hunting season and gunning pressure with notes on habitat conditions. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 5:238-263.

. 1951b. Squirrel conditions in Mississippi. MISS GAME FISH 14(10):4-7, 10-11. Squirrel densities have declined slowly in recent years.

. 1953. Analysis of gray squirrel breeding studies and their relation to hunting season, gunning pressure and habitat conditions. TRANS N AM WILDL CONF 18:378-389. The estimated annual total kill in Mississippi was about 2,500,000 gray squirrels by 150,878 squirrel hunters or 79.8% of the total license holders. The Tick, *Dermacentor* was the most serious external parasite.

. 1954. Squirrel hunters' success. MISS GAME FISH 18(3):8-9.

Hunting success seems to correlate with mast crops. Perhaps the average annual kill of gray and fox squirrels could be raised from 2 1/2 million to 3 million by reducing the harvest of breeding females.

- Regnery, Russell Lawrence. 1976. Preliminary studies on an annual poxvirus of the Western gray squirrel (*Sciurus griseus griseus*) of North America. INTERVIROLOGY 5(6):364-366. Brick shaped virus particles from squirrel lesions resemble those of vaccinia and myxoma particles. Surface striations are distinctly characteristic of the squirrel pox virus. Squirrel tissue extracts cross-reacted with California myxoma virus but not with a South American myxoma virus.
- Reiber, R.J. and E.E. Byrd. 1942. Some nemotodes from mammals of Reelfoot Lake in Tennessee. J TENN ACAD SCI 17:78-89.
- Reilly, E.M., Jr. 1969. Squirrels on the move. N Y ST CONSERV 23(3):6.
- Renken, A.E. 1970. The plague of squirrels. MO CONSERV 31(11):16-17. A mass emigration of gray squirrels plagued Franklin County, Missouri in 1839. It was followed by enormous masses of fox squirrels.

- Reynolds, Hudson G. 1963. Western goshawk takes Abert squirrel in Arizona. J FOR 61(11):839. The goshawk may serve as a regulatory mechanism for stabilizing fluctuating populations of the Abert squirrel. These squirrels are a forest pest and cause an estimated increment loss of 10% in ponderosa pine.
- _____. 1965. Aberts' squirrel feeding on pinjon pine. J MAMMAL 47(3):550-551.
- Rhoads, Samuel N. 1903. The mammals of Pennsylvania and New Jersey. Published privately in Philadelphia. 266pp. The Delmarva squirrel seems more partial to swampy ground than does the gray. Old hunters had only known of them (Delmarva's) in the distant past.
- Rhodes, L. 1971. Delmarva peninsula fox squirrel study, Blackwater 5-2 Wildlife Refuge. United States Department of Interior, Bureau of Sport Fisheries and Wildlife. Final Report. Unpublished manuscript.
- Rice, Dale W. 1957. Sexual behavior of the tassel-eared squirrels. J MAMMAL 38(1):129.
- Richards, W.S. 1950. The distribution and biology of the harvest phite in Great Britain. (Thrombiculidae, Acarina). PARASITOLOGY 40(1-2):118-126. Trombicula autumnalis was found on gray squirrels in Great Britain.
- Richardson, F. 1954. Nevada mammal records. J MAMMAL 35(4):578-579. Sciurus griseus. Several records from Nevada.
- Richmond, Neil D. and Harry R. Rosland. 1949. Mammal survey of northwestern Pennsylvania. BULL PENN GAME COMM 67pp.
- Ridgway, M. Leighton. 1940. Hybrid squirrel. FIELD 176(4580):452. An unusually colored wild gray squirrel seen in Great Britain was assumed to be hybrid between S. vulgaris and S. carolinensis.
- Riley, K.S. 1950. Red squirrels. FIELD, London 196:186. S. vulgaris. Status in Cheshire.
- Ritchie, James. 1923. Spread of American gray squirrel in Scotland. SCOTT NAT 137-138:93-94.

Robinson, D.J. and I. Mc T. Cowan. 1954. An introduced population of the gray squirrel (*Sciurus carolinensis* Gmelin) in British Columbia. CAN J ZOOL 32(3):261-282. The gray squirrel has not accepted new foods but depends on two maples Acer circinatum and A. marophyllum. Black squirrels are predominant over grays (6.5 to 1). Males roamed over 50 acres while females covered 5 to 15 acres. Robinson, Judith. 1974. Where the red squirrel survives. FIELD 245(6350):830-821. S. vulgaris is common in the forests of Northumberland where the gray squirrel is still absent. The ratio of deciduous trees to evergreen trees is about one in four. The porthernmost limit of

evergreen trees is about one in four. The northernmost limit of gray squirrel distribution in Angland has not changed since 1945.

Robson, John A. and W.C. Hall. 1974. The afferent connections of the dorsal lateral geniculate nucleus of the grey squirrel (Sciurus carolinensis). ANAT REC 178(2):450.

, and W.C. Hall 1975a. The connections and synaptic organization of the pulvinar nucleus in the grey squirrel (*Sciurus carolinensis*). ANAT REC 181(2):464.

, and William C. Hall. 1975b. Connections of layer VI in striate cortex of the grey squirrel (*Sciurus carolinensis*) BRIAN RES 93(1):133-139.

, and William C. Hall. 1976. Projections from the superior colliculus to the dorsal lateral geniculate nucleus of the grey squirrel (*Sciurus carolinensis*). BRAIN RES 113(2):379-385.

- Roe, Eugene I. 1948. Effect of red squirrels on red pine seed production in off years. J FOR-46(7):528-529. In Minnesota red squirrels materially affect the number of maturing cones particularly in the years of lighter crops.
- Roecker, Robert Maar. 1950. The biology of the northern gray squirrel, Sciurus carolinensis leucotis (Gapper) in central New York. Ph.D. Thesis, Cornell University. 116pp.

_. 1951. Gray squirrel. N Y ST CONSERV 6(1):14-15.

Ross, R.C. 1930. California Sciuridae in captivity. J MAMMAL 11(1):76-78. California gray squirrels kept in cages reproduced and two of them

lived eleven years. The were tame but vicious to each other.

- Rouche, Berton. A small apprehensive child. The New Yorker Mag 70pp. 2-17 ^A This is a popular account of the 1967 epidemic of plague among fox squirrels in Denver, Colorado. One young girl became infected but recovered.
- Rowe, J.S. 1952. Squirrel damage to white spruce. SILVIC LEAFL DOM FOR SERV CAN 61:1-2.
- Rowe, Judith J. 1968. The grey squirrel and its control in Great Britain. Forestry Commission, London. 7pp.

______. 1973. Grey squirrel control. Great Britain LEAFL FOR COMM 53:1-17.

- Rovetto, Michael J. and J. Homer Ferguson. 1971. Effects of acclimation temperature on brown adipose tissue in the red squirrel (*Tamiasciurus hudsonicus*). COMP BIOCH 39(1A):39-44. The presence of brown adipose tissue could be a mechanism for adaptation to cold temperatures.
- Rowlands, I.W. 1938. Preliminary note on the reproductive cycle of the red squirrel (*Sciurus vulgaris*). PROC ZOOL SOC LOND 108A:441-443.
- Ruckel, James M. 1962. Squirrels black and white. W VA CONSERV 26(8):7-8. Black S. carolinensis are sometimes killed in Pocahontas and Webster Counties, West Virginia.

. 1963. Hunt the tree squirrels. W VA CONSERV 27:28-30. Squirrels (gray and fox) are the most sought after game species in West Virginia. Gray squirrels are found throughout the state while fox squirrels are most common along the Ohio River counties, the eastern panhandle, and along many of the major waterways of the state. They prefer scattered woodlots usually in farming country.

- . 1964. The northern gray squirrel its biology and relation to the transition forest communities in Cameron County, Pennsylvania. M.S. Thesis, Pennsylvania State University. 148pp.
- Rudasill, L.S. and Thurmon Houser. 1958. A new and easy way to make more homes for squirrels. MD CONSERV 35(2):16-19. A simple way to hang nest boxes on tree limbs is described.
- Runge, Ole. 1957. Foreløbig meddelelse om det fynske egern. FLORA FAUNA SILKEBORG 63:109-110. Almost all the squirrels on the Danish island of Fyn are black. There is one section where a brown form exists and several small areas where the red fox occurs.
- Rupes, Vaclav, Conrad E. Yunder, and Nixon Wilson. 1971. Zibethacarus n. gen and three new species of Dermacarus (Acari: Labidophoridae). J MED ENTOMOL 8(1):17-22. A new mite species, D. tamiasciuri, is described from a Michigan red squirrel.
- Rusch, D.A. 1970. Population ecology and behavior of red squirrels in central Alberta. M.S. Thesis, University of Wisconsin.
- Russell, C.P. 1929. Predacious pine squirrels. YOSEMITE NAT NOTES 8:68.

- Russell, Joyce Fitchett. 1967. Return of the squirrels. VA WILDL
 28(6):11.
 A litter of five baby gray squirrels were moved from a nest box
 to a leaf nest in the top of a cherry tree. Popular article.
- Rutledge, Archibald. 1921. Plantation Game Trails. Houghton Mifflin and Company. 300pp. Contains a short non-informative chapter on southern fox squirrel. The fox squirrel is more silent than the gray squirrel.
- Ruttledge, R.F. 1924. Note on the distribution of the squirrel in Ireland. IR NAT 33:73. S. vulgaris.
- Sage, B.L. 1935. The slow worm and the red squirrel in south Hertfordshire. TRANS HERTFORDSHIRE NAT HIST SOC FIELD CLUB 24:78. S. vulgaris.
- Sampson, Frank W. 1970. Post-season small game harvest mail survey 1969-70. Missouri Federal Aid Project 13-R-24, work plan No. 10 job No. 2. Multi 21pp. In 1969 there were 206,000 squirrel hunters in Missouri who harvested 2.8 million squirrels.
- Sanderson, G.C. 1954. Sex and age ratios of the squirrels in the bag and hunter-success as reported by hunters, 1953. QUART BIOL REP, Iowa St Conserv Comm 5(4):44-50. mimeo.
- Sanderson, H. Reed. 1975a. Den-tree management for gray squirrels. WILDL SOC BULL 3(3):125-131. One den per 2 acres is recommended for winter maintenance of one squirrel per 4 acres.

______. 1975b. Squirrel bibliography. Unpublished manuscript. 100pp.

and Larry A. Berry. 1973a. A 2-acre enclosure for tree squirrel research. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 26:298-300. An area was surrounded by a 7 1/2 ft. squirrel-proof fence. The tree canopy was removed from a 30 foot wide strip centered on the fence line. Reproduction occurred and a population of 10 to 12 seemed to be the optimum density.

and Larry A. Berry. 1973b. Gray squirrels reproduce in a 2-acre enclosure. U S FOR SERV RES NOTE NE-174:1-6. Squirrels confined in this enclosure reproduced. At population densities above 12 animals antagonistic behavior and fence-running increased.

141.

- Sanford, L.G. 1963. Geographic variation in the gray squirrel in Alabama. M.S. Thesis, Auburn University.
- Santiago, Lourdes and Adrian V. Rake. 1973. Rodent DNA reassociation kinetics. BIOCHEM GENET 9(3):275-282. Squirrels and other rodents have at least two distinct repeated DNA fractions, one group repeated about 300 times and the other about 50,000 times. The gray squirrel needs 30% of its DNA for control of development compared to the chipmunk (Tamias striatus) which needs only 13% of its total DNA for this.
- Sauer, Robert M. 1966. Cutaneous mucormycosis (phycomycosis) in a squirrel (Sciurus carolinensis). AM J VET SES 27(116):380-383. A generalized fungal lesion was probably superimposed on fibroma lesions.
- Saunders, William E. 1932. Notes on the mammals of Ontario. TRANS
 R CAN INST 18(Pt. 2, No. 40):271-309.
 Red and gray squirrels are abundant near London, Ontario. Fox
 squirrels were released on Pelee Island before 1927 but are rare.
- Schaack, K.H. 1967. Einige bemerkenswerte Beobachtungen an Spechten
 (Several remarkable observations on woodpeckers).
 LUSCINIA 40(2):52-53.
 Behavior of woodpeckers toward other species, including squirrels,
 is described.
- Schaanning, H.T.L. 1915. Dyrevandringer og kjøønsforhold. NORG JEGER FISK TIDSSKR 43.
- Schaefer, H.E., G. Huebner and R. Fischer. 1973. Specific microgranules in eosinophils: A comparative electron microscopic investigation of different mammals in an attempt at a characterization of a special form of granulation in eosinophilic granulocytes. ACT HAEMATOL (BASEL) 50(2):92-104. S. vulgaris and 19 other mammals including man possess these eosinophilic structures. In German.
- Schantz, O.M. 1929. Albino gray squirrels. NAT MAG 14(2):111. The white squirrels of Olney, Illinois originated from four white nestlings found and raised by a farmer in 1908. They were released in town and increased. Not all have pink eyes. Those with pink eyes have defective vision and are more often run over by automobiles.
- Schantz-Hensen, T. 1945. Red squirrel damage to mature red pine. Red squirrel damage to mature red pine. J FOR 43(8):604-605. Squirrels cut off tips of branches of mature red pine in Minnesota. They also strip bark from sampling jack pines.

142.

Scheffer, Theodore H. 1952. Spring incidence of damage to forest trees by certain mammals. MURRELET 33(3):38-41.

- Schiller, Everett L. 1959a. Experimental studies on morphological variation in the cestode genus Hymenolepis. IV. Influence of the host on variation in H. nana. EXP PARASITOL 8(6):581-590. H. nana not only attains greater size but also egg production seems to be considerably greater in S. carolinensis and T. hudsonicus than in murine rodent species.
 - . 1959b. Experimental studies on morphological variation in the cestode genus *Hymenolepis*. II. Growth, development and reproduction of the strobilate phase of *H. nana* in different mammalian host species. EXP PARASITOL 8(3):215-235. The growth rate of *H. nana* is more rapid in *S. carolinensis* than in either albino mice or albino hamsters.
- Schmidt, Egon. 1973. Über vom Blutspecht (Dendrocopus syriacus) verursachte Schäden an Mandelbäumen. (On almond tree damage caused by the Syrian woodpecker (Dendrocopus syriacus). BEITR VOGELKD 19(2):175-178. S. vulgaris and several birds damage almond trees.
- Schmidt, Hans Walter. 1964. Das Eichhorn als Freund und Feind des Forstmannes (The squirrel as friend and enemy of foresters). ALLEG FORSTZTG 75(23-24):280-281. In German.

Schmidt, Rex Gary. 1948. The fox squirrel. MO CONSERV 9(5):8-5.

- Schmidt, Wyman C. and Raymond C. Shearer. 1971. Ponderosa pine seed - For animals or trees? U S FOR SERV RES PAP INT - 112:1-14. T. hudsonicus harvests an average of 66% of the mature ponderosa pine cones.
- Schober, Wilfried and Kurt Brauer. 1968. Die untere Olive (Nucleus olivaris caudalis) verschiedener Saugetiere (Rodentia, Pteropus) (Nucleus olivaris caudalis of different mammals (Rodentia, Pteropus)) ACTA ANAT 69(4):497-519. Illustrated. The relative enlargement of the principal olive in S. vulgaris has a parrallel in the high degree of development of the paraflocculus.
- Schorger, A.W. 1947. An emigration of squirrels in Wisconsin. J MAMMAL 28(4):401-403.

A movement of fox and gray squirrels started in mid-August and continued until mid-September. Both species moved at random. Movement was caused by a shortage of acorns but squirrels were in good condition.

. 1949. Squirrels in early Wisconsin. TRANS WIS ACAD SCI ARTS LETT 39:195-247.

- Schotte, Gunnar. 1917. Larken och dess betydelse för Svensk skogshushällning. MEDDN ST SKOGSFORSANST 13/14:529-840.
- Schreitmüller, Wilhelm. 1953. Melanitische und albinotische Eichhörnchen (*Sciurus vulgaris* L.). Z SAÜGETIERKD Berlin 17(3):155-157.
- Schubert, G.H. 1953. Ponderosa pine cone cutting by squirrels. J FOR 51(3):202. By harvesting a large proportion of ponderosa pine cones squirrels may be a major deterrent to regeneration.
- Schueler, Ronald L. 1973. Cerebral nematodiasis in a red squirrel. JOURNAL OF WILDL DIS 9(1):58-60. Illustrated. S. granatensis with larval Ascaris columnaris in brain, lungs and heart.
- Schultz, Vincent. 1957. Status of the gray and fox squirrels in Tennessee. J TENN ACAD SCI 32(3):228-239. Fox and gray squirrels are found throughout the state and squirrels are the most sought after game animal in Tennessee.
- Schumacher, Siegmund. 1924. Eine "Lippenplatde" beim Eichhörnchen (Sciurus vulgaris L.). ANAT ANZ 58:75-80. A 3x6mm "cheek plate" occurs on the inner side of each cheek in the area above the diastema. This plate is formed of thickened epidermis underlain by a layer of connective tissue and well developed striated muscle. The function is probably to aid in transport of food from the front to the cheek teeth.
- Schuster, Ludwig. 1931. Ueber den Nestbau des Eichhörnchens. ZOOL GART n.f. 4(8-9):297-298.
- Schwartz, B. 1928. Occurrence of larval tapeworms in liver, lungs, spleen, kidneys, omentum and heart of a squirrel. J PARASITOL 15(1):67. Post-mortem examination of two gray squirrels (from Maryland and Virginia) revealed intense infections with cysticercoids.
- Seagears, Clayton. 1950. The red squirrel. N Y ST CONSERV 4(3):40-44.
- Seaman, Richard Nelson. 1975. A re-evaluation of nearctic sciurid phylogeny based upon biochemical, immunological and numerical taxonomic analysis. Ph.D. Dissertation, Colorado State University. 220pp.
- Sedgwick, Lindsay E. 1968. The squirrels of south Perth (Australia)
 WEST AUST NAT 11(1):1-4. Map.
 (Funambulus pennanti) escapees from local zoo became established
 in residential area of the city about 1898.

Seedorf, H.H., N. Blaedel and F.W. Braestrup. 1956. Egernet. (The Squirrel). Copenhagen. S. vulgaris.

Seegar, J.H.W. 1906. Merkwürdige Seitraulichkeit eines jungen Eichkätzchens. ZOOL BEOB 47:104-105.

Serebrennikov, M.K. 1930. La variabilité de croissance et le procés d'accroissement du crane de l'lécureuil (*Sciurus vulgaris* L.) EZHEG ZOOL MUZ L 31(3-4):399-418.

. 1931. Un the polychromatism and albinism of the Siberian squirrels. PROC ZOOL SOC LON Pt. 2 :493-495.

Seton, Ernest Thompson. 1920. Migrations of the gray squirrel
 (Sciurus carolinensis). J MAMMAL 1(2):53-58.
 No great migrations have been recorded since 1866. It is suggested

that either a buildup of parasites in nests or overpopulation might be the cause of these emigrations.

. 1921. Gray squirrels and nuts. J MAMMAL 2(4):238-239.

An account of a squirrel burying a nut in late January.

. 1920. Does the *Suterebra* ever emasculate its host? J MAMMAL 1(2):94-95.

It is unlikely that a *Cuterebra* in the scrotal area ever emasculates the host.

______. 1922. Bannertail, The Story of a Gray Squirrel. Charles Scribner and Sons. 265pp.

______. 1926. Lives of Game Animals. Doubleday, Page and Company.

Seymour, William. 1961. Grey squirrels. QUART J FOR 55(4):293-298.

- Shadbolt, L.P. 1933. The invasion of the grey squirrel. TRANS HERTFORDSHIRE NAT HIST SOC FIELD CLUB 19(3):163-170. Details of introduction of gray squirrels and descriptions of types of damage caused by grays.
- Shadle, Albert R. 1940. A source of meat for diets of wild rodents. J MAMMAL 21(4):460-461. A tree squirrel was seen feeding on a dead animal of the same species.

Shaefer, H. E., G. Huebner and R. Fischer. 1973. Specific microgranules in eosinophils. ACTA HAEMATOL (BASEL) 50(2):92-104. S. vulgaris eosinophile structure. In German with English summary. Shannon, B.J. 1922. Gray squirrel disease spreading. CALIF FISH GAME 8:52. S. griseus.

- Sharff, R.F. 1922. Is the squirrel a native Irish species? IR NAT 31:51-54. S. vulgaris.
- Sharp, Ward M. 1958a. Aging gray squirrels by use of tail-pelage characteristics. J WILDL MANAGE 22(1):29-34. Gray squirrels can be separated into three age groups on the basis of tail hairs: juveniles (less than 6 months old), sub-adults 6-16 or 18 months old) and adults. In the spring, molting of body fur starts on the head and progresses posteriorly. In the fall molt the sequence is reversed. The tail pelage is molted following the completion of the spring body molt.

. 1958b. The art and technique of live trapping gray squirrels. PENN COOP WILDL RES UNIT PENN ST UNIV SPEC REP 3:1-12.

- . 1959. A commentary on the behavior of free-running gray squirrels. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:382-387.
- and Jess Malcolm. 1955. Nuts to wildlife -- rodent feeding signs. PENN COOP WILDL RES UNIT. SPEC REP 2:1-6pp.
- Shaw, Samuel P. 1941. Gray squirrel studies during late winter and early spring at Amherst, Massachusetts. Unpublished manuscript. Massachusetts State College.
- Shaw, William T. 1936. Moisture and its relation to the cone-storing habit of the western pine squirrel. J MAMMAL 17(4):337-349. The red squirrel is commonly abroad during times of rain and fog, especially at mid-day in Idaho. Cones of lowland fir, *Abies gradis* are cached in springs and seepage areas. The Douglass squirrel also buries cones of sequoia and white fir in wet areas. Moisture is necessary to keep cones from opening. Red squirrels use underground dens in Saskatchewan Canada. Cones are not covered in caches. This storage in wet areas is reported from other localities and other conifer species.
- Shearer, Raymond C. and Wyman C. Schmidt. 1970. Natural regeneration in ponderosa pine forests of western Montana. U S FOR SERV RES PAP INT- 86:1-19.

and Wyman C. Schmidt. 1971. Ponderosa pine cone and seed losses. J FOR 69(6):370-372.

Tamiasciurus sp. in the western mountains removed 14% of developing cones before they mature. These squirrels also consume a large amount of ponderosa pine seeds. Losses from squirrels can be eliminated by banding trees with 20 inch wide metal strips.

- Sheffield, Sarah L. and F.S. Barkalow, Jr. 1970. North Carolina's 2-5 State mammal, the gray squirrel. WILDL NORTH CAROL 34(4):13-16. 2 1/2 to 3 1/2 million squirrels are harvested each year in North Carolina. A young gray squirrel was eaten by a black rat snake.
- Shepard, Paul, Jr. 1952. Our highways and wildlife. NAT MAG
 45(1):34-37.
 Contains accounts of squirrel migrations and highway mortality.
- Sherman, A.R. 1926. Fox squirrels' nests in a barn. J MAMMAL
 7(4):332.
 On two occasions fox squirrels built nests in a bird box in a barn.
- Sherman, F. 1937. Some mammals of western South Carolina. J MAMMAL 18(4):512-513.
- Shigo, Alex L. 1964. A canker on maple caused by fungi infecting wounds made by the red squirrel. PLANT DIS R 48(10):794-796. Annual cankers, caused by fungi that infect wounds made by the teeth of red squirrels, appear on many red and sugar maples throughout New Hampshire. In early spring, squirrels bite the bark and drink the sap flowing from the wounds. Many species of fungi, bacteria and yeasts infect these wounds. Possibly squirrels get drunk on fermented sap.
- Shipley, D.P. 1941. A study of the habits and management of the gray squirrel in southwest Virginia. M.S. Thesis, Virginia Polytechnic Institute.
- Shirley, L. 1953. Traps for squirrels. FIELD, London 201:1043. Live traps.
- Shivley, James N., Kathleen K. Moe, Alan Woolf and John M. King. 1972. Sprontaneous disseminated squirrel fibroma. J NAT CANC 49(3):919-921. Original descriptions of spontaneous squirrel fibromas included only cutaneous lesions. The present spontaneous disseminated squirrel fibroma indicates that squirrel pox virus, like vaccinia and sheeppox can produce lesions in internal organs under natural conditions. Two juvenile squirrels with typical skin lesions were found in the fall (gray squirrel? New York State?). Lesions were found in lung, liver and spleen of one squirrel.
- Short, Henry L. 1976. Composition and squirrel use of acorns of black and white oak groups. J WILDL MANAGE 40(3):279-483. Eleven Quercus species were tested and the white oak group was more palatable than the black oaks. Acorns supply adequate nitrogen and phosphorus. Crude fat content varied from 18.1 to 36.9% in the black oak group and 4.1 to 9.6% in the white oak group.

and William B. Duke. 1971. Seasonal food congumption and body weights of captive tree squirrels. J WILDL MANAGE 34(3):435-439. Captive gray and fox squirrels ate food at high rates in early autumn and at reduced rates in midwinter and midsummer. Body

weights cycled seasonally with food-consumption rates.

147.

Shorten, Monica R. 1945. Inheritance of melanism in grey squirrels. NATURE 156:46.

A gray male and female were shot in March and four nestlings were taken from the leaf nest they had been occupying. Of these one was black.

. 1946a. The distribution of the grey squirrel (Sciurus carolinensis Gmelin) and British red squirrel (Sciurus vulgaris leucourus Kerr) in Lincolnshire. TRANS LINCS NAT UN 2(3):108-114.

The gray squirrel is spreading while the red declines. The gray does much damage to forests, gardens, nesting birds; something for which red squirrels were blamed in the past when they were more abundant.

. 1946b. A survey of the distribution of the American grey squirrel (*Sciurus carolinensis*) and the British red squirrel (*S. vulgaris leucourus*) in England and Wales in 1944-5. J ANIM ECOL 15(1):82-92.

A survey, based on questionnaires, was made to ascertain the distribution of gray and red squirrels. There is an indication that after a period of 15 years or more the presence of gray squirrels results in the disappearance of the red species.

. 1948. Grey squirrels in Britain. NEW NAT 1:42-46.

. 1951. Some aspects of the biology of the grey squirrel (*Sciurus carolinensis*) in Great Britain. PROC ZOOL SOC LOND 121(2):427-459.

Squirrels bred in captivity after 3 1/2 years. Details on Growth of young and many other aspects of squirrel biology are given.

. 1953a. Notes on the distribution of the grey squirrel (Sciurus carolinensis) and the red squirrel (Sciurus vulgaris leucourus) in England and Wales from 1945 to 1952. J ANIM ECOL 22(1):134-140.

. 1953b. The grey squirrel in Britain. ZOO LIFE, London 8:54-58.

1954. Squirrels. Collins, London. 212pp.

. 1956. An unusual moult record for a young grey squirrel. PROC ZOOL SOC LOND 126(1):165-166.

A juvenile taken in early June was molting into a winter coat. There was no regular relationship between body weight and molt stage. One individual weighing 360 g. had milk in its stomach. . 1957a. Damage caused by squirrels in forestry commission areas 1954-6. FORESTRY, London 36(2):151-172. Sycamore and beech are attacked more than any other tree species by gray squirrels, who peel their bark. Conifers are more subject to damage by red squirrels than are decisuous trees.

. 1957b. Squirrels in England, Wales and Scotland. 1955. J ANIM ECOL 26(2):287-294.

Eighty percent of English and Welch forests which had gray squirrels in 1945 had no red squirrels by 1955.

1959a 1596

. 1962a. Squirrels, their biology and control BULL MINIST AGRIC FISH FD LOND 184:1-44.

. 1962b. Red squirrels. IN: L.H. Mathews (Ed.) ANIMALS OF BRITAIN 6:1-24. Sunday Times Book Publications.

and F.A. Coutier. 1955. A population study of the grey squirrel (*Sciurus carolinensis*) in May, 1954. ANN APPL BIOL 43(3):494-510.

Population estimates were made using a trap-recapture technique (recapture by shooting), counts of leaf nests, walking counts. The later method gave estimates one fifth that of the traprecapture method. Juvenile females had an average of 2.27 placental scars while adults had an average of 3.26 scars.

Shotts, E.B., Jr., C.L. Andrews, and T.W. Harvey. 1975. Leptospirosis in selected wild mammals of the Florida panhandle and southwestern Georgia, U.S.A. J AM VET MED ASSOC 167(7):587-589. Leptospira ballum was isolated from one of 26 gray squirrels and L. grippothyphosa from one of 27 fox squirrels.

Shufeldt, R.W. 1920. Fourt-footed foresters - the squirrels. AM FOR 26(1):37-44.

Sidorowicz, Jerzy. 1958. Geographical variation of the squirrel, Sciurus vulgaris L. in Poland. ACTA THERIOL 2.

. 1961. Craniometrical measurements of Scandinavian squirrels and their distribution. ACTA THERIOD 5:17.

. 1970. Problems of the subspecific taxonomy of the squirrel (*Sciurus vulgaris*) in the Palearctic. TRANS INT CONF GAME BIOL 9:861-864.

. 1971. Problems of subspecific taxonomy of the squirrel (*Sciurus vulgaris* L.) in Palaearctic. ZOOL ANZ 187(3/4):123-142. A review of subspecies.

Sierts, Werner. 1950. Os clitoridis von Zalophus californianus Less, und Sciurus vulgaris fuscoater Altum. Festchrift fur Dr. Berthold Klatt, ZOOL ANZ 145:938-939.

- Silver, J. 1924. Rodent enemies of fruit and shade trees. J MAMMAL
 5(3):165-173.
 Squirrels cause losses to pecan growers in Texas, Georgia and
 Florida and walnut growers in California. Colorado and Wyoming
 foresters considered them beneficial because of their large caches
 of selected tree seeds which serve as a source of seed for reforestation.
- Silver, Priscilla H. 1966. A Purkinje shift in the spectral sensitivity of grey squirrels. J PHYSIOL (LOND) 186(2):439-450.

. 1975. Grey squirrel dicromatic color vision shown by flicker photometry. J PHYSIOL (LOND) 25(1):47. S. carolinensis.

- Simon, Joseph and R.K. Bullard. 1973. Transmissible fibroma of grey
 squirrels (a case report). VET MED SMALL ANIM CLIN.
 A young gray squirrel with generalized cutaneous papillary-like
 eruptions also demonstrated pulmonary lesions.
- Simpson, Bernard. 1967. Rifles for bushytails. OUTDOOR W VA 31(7):27-28.
- Smetana, A., D. Malkova, and Z. Marhoul. 1966. Tahyna virus in squirrels Sciurus vulgaris L. J HYG EXP MI, Prague 10(4):523-524. Squirrels injected with Tahyna virus showed no symptoms and only a small amount of antibodies. No virus could be recovered. Squirrels apparently do not play a role in the circulation of Tahyna virus in nature.
- Smiley, Daniel. 1968. Gray squirrels on the move. CHIRP 15(11):1-2. mimeo.

_. 1972. /Gypsy moth. BIOSCIENCE 22(1):1-2. mimeo.

. 1972. Gypsy moth. BIOSCIENCE 22(1):4. Gray squirrels were observed systematically exploring bark crevices for gypsy moth pupae which they ate.

- Smith, Christopher Carlisle. 1963. Territorial behavior in the genus of squirrels, *Tamiasciurus*. M.S. Thesis, University of Washington. 68pp.
 - . 1968. The adaptive nature of social organization in the genus of tree squirrels, *Tamiasciurus*. ECOL MONOGR 38:31-63. Territories are defended throughout the year by individuals of either sex and not by pairs. The advertisement of territories by vocalization and their defense by chasing and calling are the same for both sexes and both species of the genus. Vagrant squirrels attempt to establish territories among existing territories by expanding small undefended areas between territories. Breakdown of territorial behavior in deciduous forests is related to the inability of *Tamiasciurus* to defend its caches from squirrels of the genus *Sciurus* which do not recognize territorial behavior.

. 1965. Interspecific competition in the genus of tree squirrels, *Tamiasciurus*. Ph.D. Dissertation, University of Washington, Seattle. 306pp. Both species of squirrels defend territories ranging from 1/2 to 3 acres throughout the year. Territories are defended by one squirrel, either male or female. Intraspecific and interspecific territorial behavior are the same in the genus. Females stop defending their territories against males only during the day that they are in heat.

. 1970. The coevolution of pine squirrels (Tamiasciurus) and conifers. ECOL MONOGR 40(3):349-371. In the process of maximizing their feeding efficiency, squirrels act as selective agents on several characteristics of plant reproduction. The competitive superiority of red squirrels in exploiting serotinous cones probably explains why the abrupt range abutment of red and Douglas squirrels corresponds to the transition between serotinous and nonserotinous cones of lodgepole pines in southern British Columbia.

and David Follmer. 1972. Food preferences of squirrels. ECOLOGY 53(1):82-91. 5-33Fox and gray squirrels have similar food preferences. Niche differences between the two species is probably related to differences in foraging behavior and predator escape behavior. As the lipid content of food increased, the percent of food metabolized increased. Hickory kernels are the most efficient food in fall and spring, while acorn kernels are the most efficient in winter.

Smith, Clarence F. and Shaler E. Aldous. 1947. The influence of mammals and birds in retarding artificial and natural reseeding of coniferous forests in the United States. J FOR 45(5):361-369. Red squirrels eat great quantities of jack pine seeds in Minnesota.

Smith, George A. 1947. Baby squirrels have urge to climb. SCI NEWS
LETT May 24:326.
Young gray squirrels a few weeks old have the urge to climb when
placed on the bark of a tree.

- Smith, Hanley K. 1970. A method of analyzing fox squirrel stomach contents. TEX PARKS WILDL DEP TECH SER 3:1-75. Descriptions and pictures of some of the squirrel food items from east Texas are intended to aid in the identification of fox squirrel stomach contents. Photomicrographs of plant tissues are distinctive.
- Smith, Michael C. 1967. Red squirrel (*Tamiasciurus hudsonicus*) ecology during spruce cone failure in Alaska. M.S. Thesis, University of Alaska. 68pp.

. 1968. Red squirrel responses to spruce cone failure in interior Alaska. J WILDL MANAGE 32(2):305-317. d it

- Smith, N.B. 1967. Some aspects of reproduction in the female gray 2-2 squirrel Sciurus c. carolinensis Gmelin in Wake County, North Carolina. M.S. Thesis, North Carolina State University. 92pp.
- and F.S. Barkalow, Jr. 1967. Precocious breeding in the gray squirrel. J MAMMAL 48(2):328-330. A wild pregnant female from a summer litter was bred when approximately 124 days old.
- Smith, Ned. 1965. Merry miser of the oak grove. PENN GAME NEWS
 36(10):3-6.
 A popular article on squirrels and squirrel hunting with some
 excellent drawings.
- Smith, R.L. 1965. Gray squirrel housing project. W VA CONSERV 29(6):18-22.
- Smokey, George. 1943. Some interesting habits of squirrels. S D CONSERV DIG 10(6)-7.
- Smyshlaev, M.I. 1972. The dynamics of polymorphism coloration and number changes in Sciurus vulgaris (1) populations in the territory adjacent to Lake Baikal. EKOLOGIYA 3(5):18-22. Polymorphic coloration of tail studied in 2 populations.
- . 1972. Color polymorphism dynamics and numerosity variation in populations of the red squirrel in the Lake Baikal region. SOV ECOL (ENGL TRANSL EKOLOGIYA) 3(5):401-404.
- Snedigar, Robert. 1963. Our Small Native Animals: Their Habits and Care. Dover Publishing Inc. 248pp. Nine pages on raising squirrels. Red squirrels are too nervous to become thoroughly tame and safe. Grays have a more calm temperament but retain a vigorous independence and may bits if restrained. The fox squirrel is the least excitable and most hardy in captivity.
- Snyder, L.L. 1923. A method employed by a black squirrel in carrying its young. J MAMMAL 4(1):59. Young squirrels being carried by the mother encircle her neck with their hind legs. The mother grasps the young by the back or nape.
- Sonenshine, Daniel E. and I. Jack Stout. 1971. Ticks infesting medium-sized wild mammals in two forest localities in Virginia Acarina: Ixodidae). J MED ENTOMOL 8(3):217-227. Gray squirrels were infested with Dermacentor variabilis and Amblyomanna americanum but not Ixodes texanus or Ixodes cookei.
- Soon, Bee-Ling and R.S. Dorney. 1969. Occurrence of Eimeria tamiasciuri in Ontario red squirrels (Tamiasciurus hudsonicus). CAN J ZOOL 47:731-732.

6-5

2-18

Soots, R.F., Jr. 1964. An analysis of the effects of artificial nest boxes on gray squirrel populations. M.S. Thesis, North Carolina State University. 111pp.

. 1965. A new live trap for capturing small mammals. WILDL N CAROL 29(6):24, 26-27.

- Soper, J. Dewey. 1923. The mammals of Wellington and Waterloo counties, Ontario. J MAMMAL 4(4):244-252. The black phase of S. carolinensis is four times as abundant as the gray phase. This species fluctuates in abundance.
- . 1942. Mammals of Wood Buffalo Park, northern Alberta and District of Mackenzie. J MAMMAL 23(2):119-145. The red squirrel is active underground during the cold short days of midwinter. In some cases they may form sociable colonies.
- . 1946. Mammals of the northern great plains along the international boundary of Canada. J MAMMAL 27(2):127-153. Tamiasciurus hudsonicus and Sciurus carolinensis.
- Sowerby, Arthur de C. 1921. Notes on the east Asiatic Members of the /-/9
 species, Sciurus vulgaris, Linn. with descriptions of two new
 subspecies. ANN MAG NAT HIST Series 9(7):249-254.
 Description of S. vulgaris coreae sp. n. and S.v. chiliensis
 sp. n. with notes on 4 other subspecies.
- Spalding, David A.E. 1966. Red and grey squirrels in the Sheffield 1-5 area. NATURALIST, Hull (England) #899:119-121. The red squirrel has gradually disappeared as the gray squirrel has become more numerous.
- Spärck, R. 1936. Bidrag til dansk zoogeographi og faunistik IV om egernets (Sciurus) udbredelse og hyppighed i Danmark. VIDENSK MEDDR DANSK NATURH FOREN 99:267-281.
- Speers, R.T. 1950. The mountain "boomer". VA WILDL 11(12):16-17, 26. Tamiasciurus hudsonicus.
- Spiers, James Kennen. 1973. A microscopic key to the hairs of Virginia land mammals. M.S. Thesis, Virginia Polytechnic Institute and State University. 106pp.
- Spittle, R.J. 1952. The Coleopterous fauna of grey squirrels' dreys. ENTOMOLOGIST'S MON MAG. 88:163-164. Thirty-five species of beetles were found in squirrel nests. Ten additional species were found in nests built on birds nests in Great Britain.
- Spreadborough, William. 1919. Notes on some of the more common animals and birds of the Canadian Rockies. CAN ALP J 10:51-68. Includes observations on *T. hudsonicus*.

- Squillace, A.E. 1953. Effect of squirrels on the supply of ponderosa pine seed. NORTHERN ROCK MT FOR RANGE EXP STA 131:1-4. mimeo Squirrels cut 60 to 89 percent of the cones in poor and fair seed years.
- Squires, Susan K. 1924. Notes on gray squirrel in New Brunswick. CAN FIELD-NAT 38:158-159.
- Squires, W.A. 1946. Changes in mammal populations in New Brunswick. ACADIAN NAT 2:26-44. The first reference to gray squirrels in early literature was 1832, and in the late 1800s, Adams and Chamberlain both reported it as being present in southwest New Brunswick.
- Stachrovsky, W.G. 1932. Zur Biologie des Eichhörnchens in der Gefangenschaft. ZOOL ZH 11(1):82-104. (In Russian with German summary). Sciurus vulgaris.
- Stains, Howard J. 1963. Unusual behavior of a fox squirrel. J MAMMAL 44(2):274. A fox squirrel rolled and rubbed itself with wild onions.
- Stanley, A.J. 1916. Grey squirrels in the Plumas National Forest. CALIF FISH GAME 2(2) S. griseus.
- Stefanski, R.A., and J.B. Falls. 1972. A study of distress calls of song, swamp, and white-throated sparrows (Aves: Fringillidae). I. Intraspecific responses and functions. CAN J ZOOL 50 (12):1501-1512. When recorded distress calls of young white-throated sparrow were played in the presence of a *T. hudsonicus* some adult sparrows swoop-dived at the squirrel while others gave ground displays.
- Steinbacher, G. 1940. Schwimmendes Eichhörnchen. ZOOL GART 12(4/6):335.
- Stephens, F. 1892. Notes on *Sciurus fossor*, Peale. ZOE, 3:118-119. This squirrel should probably be called *S. leporinus*.
- Stephenson, R.L. 1974. Seasonal food habits of Abert's squirrels, Sciurus aberti. ARIZ ACAD SCI 18:53.
- . 1975. Reproductive biology and food habits of Abert's squirrels in central Arizona. M.S. Thesis, Arizona State University 66pp.
- Stevenson, Donald D. 1938. Squirrel damage to sample plot tags. J FOR 36(12):1242-1243. Squirrels gnawed and destroyed aluminum tags on trees.

Stewart, P.A. 1972. The plight of wood ducks in the Carolinas. CHAT 36(2):48-58. S. niger.

- Stienecker, Walter E. 1977. Supplemental data on the food habits
 of the western gray squirrel. CALIF FISH GAME 63(1):11-21.
 Stomach analyses demonstrated that the bulk of the food of
 S. griseus is underground fungi, acorns, pine seeds, and fruit of
 California bay (Umbellularia californica). There are pronounced
 seasonal variations in feeding patterns.
- and Bruce M. Browning. 1970. Food habits of the western gray squirrel. CALIF FISH GAME 56(1):36-48. The stomach contents of 399 S. griseus were examined. The major food items were underground fungi, pine seeds, acorns, fruit of California bay (Umbellularia californica) and green leaves mostly of forbs. Oak and pine mast may be the most critical foods by providing high-energy foods for overwintering. Underground fungi were the staple food utilized throughout the year.
- Stillinger, C.R. 1944. Damage to conifers in northern Idaho by the Richardson red squirrel. J FOR 42(2):143-145.
- Stinetorf, Louise A. 1969. Harassment of squirrels by red-headed woodpeckers. IND AUDUBON QUART 47(3):88.

Stoddard, H.L. 1920. Nests of the western fox squirrel. J MAMMAL
1(3):122-123.
A typical nest in a tree branch is round or oval in shape of woven
fresh tough twigs. Inside is a thick wall of compacted large
leaves which make a smooth tough windproof lining. The nest
proper is made of sof inner bark, shredded leaves and other
material.

- Stone, J.H. 1922. Gray squirrel disease spreading. CALIF FISH GAME 8:52.
 - S. griseus.
- Stone, Ward B., Jr., Eugene Parks, Bruce L. Weber and Frances J. Parks. 1972. Experimental transfer of sarcoptic mange from red foxes and wild canids to captive wildlife and domestic animals. N Y FISH GAME 19(1):1-11. Sarcoptes scabiei is not transmissible to gray squirrels.
- Stone, Witmer. 1907. The Mammals of New Jersey. Report of the New Jersey State Museum 33-110. The red squirrel is the most common tree squirrel in New Jersey and the fox squirrel, though formerly distributed over most of the state, is extinct.

Stoner, Dayton. 1918. An unusual example of incisor growth in the western fox squirrel. PROC IOWA ACAD SCI 25:105-106.

Stonoff, Bob. 1966. Squirrel. ARIZ WILDL SPORTSM 37(12):11.

- Storch, Gerhard, Jens Larenz-Franzen and Franz Matec. 1973. The Lower Pleistocene mammalian fauna (Mammalia) from Hohensulzen near Worms. senckenb lethaea 54(2-4):311-343. (In German with English summary). S. vulgaris was found together with 20 other rodent species, 11 insectivores, and 4 larger mammals.
- Storer, F.H. 1875. Cherry blossoms destroyed by squirrels. NATURE
 13:26.
 Red squirrels destroy cherry blossoms by eating ovaries of freshly
 opened flowers. They also destroy pears which are opened for the
 seeds. (In New England).
- Storer, Tracy I. 1922. The young of the California gray squirrel. J MAMMAL 3(3):188-189. Two baby squirrels were kept alive for a few days on diluted condensed milk. They developed constipation followed by profuse diarrhea. Necropsies showed the caecum bloated with gas.
- Stott, Ken, Jr. 1954. Baby food for thought. ZOONOOZ 27(6):5. S. niger bred for two generations at the San Diego Zoological Garden.
- Strecker, John K. 1928. A preliminary list of the mammals of Caddo and De Soto parishes, Louisiana. CONTR BAYLOR UNIV MUS 15:10-15. Both fox and gray squirrels are common in these parishes. Many black and two white fox squirrels were reported.
- Streubel, D.P. 1968. Food storing and related behavior of red squirrels (*Tamiasciurus hudsonicus*) in interior Alaska. M.S. Thesis, University of Alaska. 56pp.
- Stuart, Glen. 1926. Appeal for the squirrels (Letter). MD CONSERV
 3(4):14.
 Request for change in opening date of hunting season.
- Stubbs, Frederick J. 1923. Remarks on the squirrels of Epping
 Forest. ESSEX NAT 20(4):205.
 No gray squirrels occur in the forest but red squirrels with
 black fur or with red tails have been seen. These were possibly
 introduced from the continent.
- Stuewer, F.W. 1955. Fox squirrel sketches. MICH CONSERV LANSING 24(5):12-14.
- Sturdevant, Glen E. 1927. The Kaibab and Abert squirrel. ARIZ WILDL 1(3).

6-2

Styan, K.E. 1946. Squirrel with a toadstool. FIELD, London 187:49.

- Sukhomlynov, B.F. and N.B. Sukhomlynova. 1973. Comparative study of physiocochemical properties and chemical structure of hemoglobin and myoglobin in *Sciurus vulgaris*. UKR BIOKHIM ZH 45(2):122-127.
 - , N.B. Sukhomlynova and H.I. Horchakova. 1973. Study of the myoglobin N-terminal amino acid sequence of the squirrel (Sciurus vulgaris) and the otter (Lutra lutra). UKR BIOKHIM ZH 45(5):539-542.
- Sulimski, Andrezej. 1964. Pliocene lagomorph and rodential from Wezel (Poland). ACTA PALAEONTOL POL 9(2):149-244. New: Sciurus warthae.
- Surber, T. 1944. Our pert neighbors: grey, red, fox and flying squirrels. CONSERV VOLUNT 7(40):39-42.
- Surkov, V.S., N.S. Timofeeva and N.G. Suchkova. 1972. Natural sources of erysipeloid in Sakhalin. ZH MIKROBIOL EPIDEMIOL IMMUNOBIOL 49(7):3-5. Russian with English summary. Erysipelothrix rhusiopathiae from birds, mammals and insects, including S. vulgaris.
- Svihla, A. 1931. Change of colour pattern in a captive red squirrel. AM NAT 65:92-95.
- Sivhla, R.D. 1930. Development of young red squirrels. J MAMMAL 5-32ll(l):79-80. Two pregnant red squirrels gave birth shortly after capture. Unnaturally confining and disturbing conditions under which one litter was raised retarded growth and caused delay in opening of their eyes.
 - . 1931. Captive fox squirrels. J MAMMAL 12(2):152-156. Four nestlings were raised by hand and kept in captivity for slightly over two years. Mating occurred but no offspring were produced.
- Sviridenko. P.A. 1971. Role of Sciurus vulgaris L. in the distribution of walnut. VESTN ZOOL 5(1):87-88. (In Russian with English summary). S. vulgaris is a natural distributor of walnuts. They bury walnuts 6-8 cm deep in loose soil.
- Swainson, Laurance. 1932. Menace of grey squirrels. Some results of the first year's campaign. FIELD, London 159(4142):733.
- Swalm, Tod and Neal. 1948. Bushy-tailed Babes. FLA WILDL 2(7):12-13. Pet squirrels.
- Swanson, Gustav, Thaddeus Surber, and Thomas S. Roberts. 1945. The mammals of Minnesota. MINN DEP CONSERV TECHN BULL 2:1-108.

- Swanson, Harvey T. 1970. The reproductive cycle of the male red squirrel, Tamiasciurus hudsonicus. NORTHWEST SCI 44(1):70. Abstract only. Only one period of sexual activity occurs per year in the vicinity of Moscow, Idaho and the reproductive state of the male appears to be correlated with photoperiod.
- Swarth, Harry Schelwald. 1921. The red squirrel of the Sitkan district, Alaska. J MAMMAL 2(2):92-94. A new subspecies, Sciurus hudsonicus picatus, is described.

. 1922. Birds and mammals of the Stikine River region of northern British Columbia and south-eastern Alaska. UNIV CALIF PUBL ZOOL 24:125-314. Describes characteristics of *T. hudsonicus hudsonicus* and *T. h.* picatus.

- Tackle, David. 1957. Protection of Ponderosa pine cones from cutting by the red squirrel. J FOR 55(6):446-447. Red squirrel damage (cutting of seed cones and branches) was effectively reduced by nailing 20 inch wide sheets of smooth aluminum in a continuous band around the trunk of trees 5 to 7 feet above the ground.
- Tansley, K., R.M. Copenhaver, and R.D. Gunkel. 1961. Spectral sensitivity curves of diurnal squirrels. VISION RES 1:154-165.
- Tarrajat, A. 1967. L'écureuil (Sciurus vulgaris). BULL MEUN FR /-/3 36(2):70-73. Popular account.
- Tate, George. 1868. Note of the red or common squirrel (Sciurus vulgaris, Linn). HIST BERWICKSH NAT CLUB 440-442.
 Red squirrels have been spreading northward into Northumberland from adjoining counties where they are also comparatively recent newcomers. They were introduced into south Scotland in the early 1800s by the Duchess of Buccleuch. The squirrels are destructive to evergreens.
- Taylor, Gary J. 1974. Present status and habitat survey of the Delmarva fox squirrel (*Sciurus niger cinereus*) with a discussion of reasons for its decline. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 27:278-289.
- and Vagn Flyger. 1974. Distribution of the Delmarva fox squirrel (*Sciurus niger cinereus*) in Maryland. CHESAPEAKE SCI 15(1):59-60.
- Taylor, Jan C. 1966. Home range and antagonistic behavior in the grey squirrel. SYMP ZOOL SOC LOND 18:229-235.

______. 1968. The use of marking points by grey squirrels. J ZOOL 155:246-247.

Gray squirrels gnaw patches of bark from trees and scent-mark these patches with urine. Both sexes do this but the scrotal hairs of males become brown from urine stains during the two breeding seasons.

. 1969. Social structure and behavior in a gray squirrel population. Ph.D. Dissertation, University of London. 217pp.

- , H.G. Lloyd and J.F. Shillito. 1968. Experiments with warfarin for grey squirrel control. ANN APPL BIOL 61(2):312-321. Summary of damage and control methods given. Squirrels are very sensitive to warfarin. Wheat soaked in an aqueous solution was the best bait but squirrels did cache wheat. About 150-250 gm of wheat containing 0.025% warfarin is needed to kill a squirrel. In several trials squirrel numbers were successfully reduced.
- Taylor, John W. 1974. Endangered species report: the Delmarva Fox Squirrel. VA WILDL 35(6):22. Popular article.
- Taylor, K.D. 1963. Some aspects of gray squirrel control. Proceedings of the Association for Applied Biologists 1962. ANN APPL BIOL 51(2):334-338.

and H.G. Lloyd. 1970. Research on grey squirrel control in Britain. PROT ORGAN: PUBL SER A 58:185-196. Shooting, even by experts, is an inefficient method of killing squirrels. Trapping is more effective but small woodlands are quickly recolonized after the population has been reduced.

______, Monica Shorten, H.G. Lloyd and F.A. Courtier. 1971. Movements of the grey squirrel as revealed by trapping. J APPL ECOL 8:123-146. The average maximum distance moved by adult males caught more than once was 479m. and by adult females 261m. There was increased movement of males in June. There was no evidence that numbers of squirrels moved toward attractive food sources.

Taylor, W.L. 1954. Squirrels in Great Britain. FORESTRY 27:63-68.

- Taylor, Walter P. and W. Davis. 1974. The mammals of Texas. TEX GAME FISH OYSTER COMM BULL 27:1-79.
- Teal, Ralph. 1928. More notes on moving chickarees. YOSEMITE NAT NOTES 7:80.
- Temperley, George W. 1951. The range of grey squirrels. FIELD, London 198:1103. In County Durham.

. 1953. The past and present status of squirrels in Northumberland and Durham. TRANS NAT HIST SOC NORTHUMBERL DURHAM NEWCASTLE UPON TYNE 10:153-164. S. vulgaris has declined in numbers during the last quarter century and the gray squirrel has only just entered south Durham.

- Teplov, V.P. 1952. Computation of the common squirrel. In Manual: Methods of computing the abundance and geographic distribution of terrestrial vertebrates. Izd An SSSR, M.
- Terres, J. Kenneth. 1939. Gray squirrel utilization of elm. J WILDL MANAGE 3(4):358-359. In early spring squirrels feed on samaras and flower buds of elms.
- Terrill, Harold V. 1941. A preliminary study of the western fox squirrel, *Sciurus niger rufiventer* (Geoffroy), in Missouri. M.S. Thesis, University of Missouri. 164pp.

and Bill T. Crawford. 1946. Using den boxes to boost squirrel crop. MO CONSERV 7(8):4-5.

Texas Game, Fish and Oyster Commission. 1945. Principal Game Birds and Mammals of Texas: Their Distribution and Management. Austin. 149pp. Gray squirrels are found only in the bottom lands of rivers and larger streams in the timbered region of eastern Texas. Fox squirrels are more tolerant of habitat deferences and are adapted to a wider variety of habitat conditions than are gray squirrels. Fox squirrels have extended their range westward while the range of gray squirrels had declined.

Thoma, Ben L. and William H. Marshall. 1960. Squirrel weights and populations in a Minnesota woodlot. J MAMMAL 41(2):272-273. S. carolinensis and S. niger.

Thomas, Oldfield. 1896. The seasonal changes in the common squirrel. ZOOLOGIST 20:401-407.

. 1908. On the generic position of the groups of squirrels typified by "Sciurus" berdmorei and pernyi respectively, with descriptions of some new oriental species. JOUR BOMBAY NAT HIST SOC 18:244-249. These squirrels are no longer considered to be in the genus Sciurus.

. 1915. The penis or baculum as a guide to the classification of certain squirrels. ANN MAG NAT HIST 15, Series 8 (88):383-387.

. 1926. On some mammals from the Middle Amazons. ANN MAG NAT HIST 9(17):635-639.

New: Sciurus pyrrhonotus taparius Sciurus pyrrhonotus juralis Sciurus igniventis fulminatus

Thompson, Donald C. 1976a. Accidental mortality and cannibalization of a nestling gray squirrel. CAN FIELD-NAT 90(1):52-53. A mother gray squirrel transporting her offspring from one nest to another dropped one of the babies which was killed by the fall. Later on she ate the head of the baby.

______. 1976b. Behavior and population dynamics of the grey squirrel (*Sciurus carolinensis*) in Toronto. M.S. Thesis, University of Toronto.

Thompson, G.B. 1934. The parasites of British birds and mammals. I. Notes and records. ENTOMOL MON MAG 20:133-136.

______. 1935. The parasites of British birds and mammals. V. Records of mammal parasites. ENTOMOL MON MAG 21:214-219.

Thompson, G.H. 1954. Animal populations and forestry. NATURE, London 174:813-815.

Gray squirrels were first seen in Great Britain in 1828. They are injurious to forests especially hardwoods, girdling and killing stems at ground level and also destroying leading shoots. Barking usually occurs in late spring or early summer when sap slow is most active.

Thompson, Harry V. and T.R. Peace. 1962. The grey squirrel problem. /-/6 QUART J FOR 56(1):33-41. The most serious damage is to forestry, particularly hardwoods, and, in comparison, damage to agriculture and horticultural crops is minor. Bounties are not a satisfactory control method. Trapping is the best means of control.

Thompson, Richard Lee. 1962. An investigation of some techniques for measuring availability of oak mast and deer browse. M.S. Thesis, Virginia Polytechnic Institute. 65pp.

Thoms, C.S. 1922. Are squirrels bird enemies? BIRD-LORE 24(4):206. A red squirrel pounced on a nesting mourning dove, which escaped. The squirrel then ate the eggs. Another red squirrel was seen throwing young featherless orioles out of their nest.

Thompson, G. 1947. Grey squirrel in Somerset. COUNTRYSIDE. Kingston-on-Thames. N.S. 14(6):179.

Thompson, Rex Merlin. 1952. The raccoon, squirrel, rabbit and opossum population in a 56-acre oak-maple woods. M.S. Thesis, University of Illinois.

Thornburg, Ross and Florence. 1946. Tuft-eared squirrels. NAT MAG 39(10):523-524. Two young squirrels raised for three weeks were released in the

wild and survived at least for a short time. Popular article.

- Tigges, J. 1970. Retinal projections to subcortical optic nuclei in diurnal and nocturnal squirrels. BRAIN BEHAV EVOL 3(1):121-134.
- Tiner, Jack D. 1951. The morphology of Ascaris laevis Leidy 1856 and notes on ascarids in rodents. PROC HELM SOC WASH 18:126-131.
 - . 1953. Fatalities in rodents caused by larval Ascarius in the central nervous system. J MAMMAL 34(2):153-167. Ascaris cysts were found in the thoracic viscera of 8 of 12 fox squirrels examined. In order to fatally infect gray squirrels it was necessary to give experimental doses of about 2,000 larvae.
- Tinsley, Russell. 1972. Bashful Bushytails. FLA WILDL 26(3):16-19. Fox squirrels have declined in Florida because of removal of hardwood trees.
- Tittensor, A.M. 1968. Population size and dispersion of red squirrels in pine forest. BULL MAMMAL SOC (London) 30:2-3.

. 1970. Red squirrel dreys. J ZOOL 162(4):528-533. Drey appearance, construction materials, height, etc. are described.

Topsell, Edward. 1967. The History of Four-footed Beasts and Serpents and Insects. Vol. 1: The History of Four-footed Beasts. De Capo Press, New York. 586pp. originally published in 1658 in London. Squirrels use their tails to sail across rivers on rafts and also use the tail to keep off the hot sun or as a blanket in cold weather. They are harmful because they eat woolen garments. Only black squirrels are considered wholesome to eat. If squirrels get a taste of garlic they will never bite and by this means can be tamed. Squirrel fat applied in the ear will stop earache.

Torcea, Stefan. 1973. Contributions a l'étude du tube digestif sous-diaphragamatique de l'écureuil de Roumanie (Sciurus vulgaris L., 1758). TRAV MUS HIST NAT 'GRIGORE ANTIPA' 13:431-436. (In French with English, Romanian, and Russian summaries.

Trippensee, R.E. 1941. A new type of bird and mammal marker. J WILDL MANAGE 5(1):120-124. A method for marking animals by means of plastic discs of various colors applied in the ear was tried on rabbits and suggested for squirrels. _____. 1948. Wildlife Management. Vol I. NcGraw Hill, Inc. 479pp.

Contains a chapter on life history of S. niger and S. carolinensis.

Trouessart, E.L. 1881. Revision of the genus Sciurus. BULL U S GEOL GEOGR SURV 6(2):301-307.

______. 1906. Sur les sous-espèces de l'Écureuil d'Europe. BULL MUS HIST NAT Paris: 360-366.

- Trowbridge, A.H. and L.L. Lawson. 1942. Abert squirrel-ponderosa pine relationships at the Fort Valley Experimental Forest, Flagstaff, Arizona. Arizona Cooperative Wildlife Research Unit. Tucson. 38pp. Mimeo.
- True, Frederick W. 1894. Diagnosis of new North American mammals. PROC U S MUS 17(999):241-243. Sciurus aberti concolor, a new subspecies from Colorado is described.
- Tufts, R.W. 1973. Is the grey squirrel invading Nova Scotia? CAN FIELD-NAT 87(2):175-176. A gray squirrel was captured in King's County, Nova Scotia in 1972.
- Tullberg, T. 1899. Uber das System der Nagetiere. NOVA ACTA R SOC SCIENT UPSAL Series 3 18:
- Turner, Ronald W. 1974. Mammals of the Black Hills of South Dakota and Wyoming. UNIV KANS MUS NAT HIST MISC PUBL 60:1-178. S.n. rufiventer and T.h. dakotensis are found in the Black Hills.
- Turner, William J. 1937. Studies on porphyria I. Observations on the fox squirrel, Sciurus niger. J BIOL CHEM 118:519. Fox squirrels have pink bones due to accumulation of uroporphyrin.
- Twigg, G.I. 1966. Notes on the invertebrate fauna of some grey squirrel dreys (Siphonaptera, Acarina, Coleoptera, Aranae, Conodentia, Diptera, Lepidoptera, Collembola). ENTOMOLOGIST 99(1233):51-53.

Tye, Marvin. 1969. Target in the treetops. GA GAME FISH 4(12):5-6.

Tyrrell, W.B. 1943. Squirrels as guests. NAT MAG 36(5):255-256. Pictures of a pet squirrel.

Tyzzer, Ernest Edward. 1942. A comparative study of Grahamellae, Haemobartonellae, and Eperythrozoa in small mammals. PROC AM PHILOS SOC 85(4):359-398. Haemobartonella sciuri was found in a spenectomised gray squirrel from Massachusetts. Uhler, F.M., Clarence Cottam and T.E. Clarke. 1939. Food of snakes of the George Washington National Forest, Virginia. TRANS N AM WILDL CONF 4:605-622. S. carolinensis remains were found in four of 253 (1.5%) rattlesnake stomachs (Crotalus horridus) and in 2.27% of stomachs from Elephe obsoleta.

Uhlig, Hans G. 1949. Squirrels hold first place. W VA CONSERV 12(11):9.

______. 1952. Some results of squirrel hunting on West Virginia State Lands. PROC NORTHEAST FISH WILDLIFE CONF 8.

. 1954. Our number one target. W VA CONSERV 18(7):24-26, + back cover.

______. 1955a. Use of the breeding season curve in gray squirrel investigations. PROC NORTHEAST FISH WILDL CONF 11:6.

______. 1955b. Weights of adult gray squirrels. J MAMMAL 36(2):293-296.

Weights of 4050 adult gray squirrels are compared with weights from other states. Northern animals tend to weigh more than southern ones.

. 1955c. The determination of age of nestling and subadult gray squirrels in West Virginia. J WILDL MANAGE 19(4):479-483.

. 1955d. The gray squirrel: its life history, ecology and population characteristics in West Virginia. W VA CONSERV COMM Final Report. 181pp.

A comprehensive report on many aspects of gray squirrel biology and management.

______. 1956a. Effect of legal restrictions and hunting on gray squirrel populations in West Virginia. TRANS N AM WILDL CONF 21:330-338.

Only 13% of the squirrel population on state owned forest land of West Virginia was removed by hunters. Natural mortality seems to be three or four times the hunter harvest.

______. 1956b. A theory on leaf nests built by gray squirrels on Seneca State Forest, West Virginia. J WILDL MANAGE 20(3): 263-266.

Juvenile gray squirrels approximately 18 weeks old build the majority of leaf nests. Most nest building activity occurred in July, late October and early November.

. 1956c. The gray squirrel in West Virginia. CONSERV COMM 83pp. A popular comprehensive account. . 1957a. Gray squirrel populations in extensive forested areas in West Virginia. J WILDL MANAGE 21(3):335-341. Annual fluctuations in populations appeared to depend primarily upon the number of juveniles in the autumn population and not upon the survival of adults, which varied comparatively little. There was a distinct parallel in trend between the juvenile population density and mortality during the following year. A correlation also was found between the total population density in the fall and subsequent mortality during the following year.

. 1957b. Squirrels -- A \$40 million business. W VA CONSERV 21(1):12-14.

Squirrels are the most popular game animal in West Virginia. There are about 215,000 squirrel hunters. Squirrel habitat has an estimated value of \$8.00 per acre.

. 1959. Squirrel management and research. PROC ANNU CONF SOUTHEAST ASSOC GAME FISH COMM 13:387-392.

Daily and seasonal bag limits seem to be of little importance in management but the date of opening the hunting season on squirrels may be important in reducing the proportion of warbles (Cuterebra) found and proportion of nursing females killed.

and H. Lee Wilson. 1950. More than 1,000,000 pounds in state's annual squirrel crop. W VA CONSERV 14(4):6, 29, 30.

and H. Lee Wilson. 1952. A method of evaluating an annual mast index. J WILDL MANAGE 16(3):338-343. An annual mast index for West Virginia was based upon completed questionnaires sent in by field observers.

- Ulrich, J. and E. Graham. 1941. The animal parasites of the fox squirrel, Sciurus niger rufiventer and the gray squirrel, Sciurus carolinensis carolinensis. ANAT REC 81(4):65.
- Van der Byl, C. 1949. A black squirrel. FIELD, London 194:588. Melanism in S. vulgaris in Hampshire.
- Van Dersal, William R. 1940. Utilization of oaks by birds and mammals. J WILDL MANAGE 4(4):404-428. Many animals eat acorns.
- van Keyningen, Ruth. 1973. The glucoside of 3 hydroxykynurenine and other fluorescent compounds in the human lens. Ciba Foundation Symposium No. 19. The Human Lens in Relation to Cataract. Elsevier, New York, New York. pp151-171. Ultraviolet absorption curves and spectral transmission of the eye lens from gray squirrels, man and other animals are compared. The conjectural metabolic pathway of N-acety1-3hydroxy-1-kynurenine in the gray squirrel lens is given.

- Van Rossem, A.J. 1936. The type locality of *Sciurus apache* Allen. J MAMMAL 17:416-417.
- Van Zyllae de Jong, Constantinus G. 1966. Food habits of the lynx in Alberta and the Mackenzie District, N.W.T. CAN FIELD-NAT 80(1):18-23. Stomach contents of 75 lynx showed mostly snowshoe hares but red squirrels were also found. Red squirrels made up 2% of the diet of lynx in winter and 9% in the summer.
- Vartio, E. 1946. The winter food of the squirrel during cone and cone failure years. SUOM RIISTA 1:49-74.
- Venables, L.S.V. 1976. Anglesey red squirrels. NAT WALES 15(2):88.
- Vianden, Jacob. 1952. Schwimmendes Eichhörnchen. ZOOL GART (N.F.) 19(1):57.

A S. vulgaris was seen to swim across a 50 meter wide river.

Virkki, Nilo. 1953a. Über die Verknocherung einiger Schadelsuturen beim Eichhornchen, Sciurus vulgaris L. ARCH SOC ZOOL-BOT FENN "VANAMO" 7(2):83-93.

Ossification of skull sutures is so variable as to be meaningless. The effect of age and hereditary is not known.

. 1953b. Über die Schadelmasse des finnischen Eichhörnchens. ARCH SOC ZOOL-BOT FENN "VANAMO" 7(2):94-99. (In Finnish with German summary).

The differences between skull sizes in various parts of Finland do not demonstrate as great a variation as found between the more extensive areas of the Soviet Union. The skulls of Finnish squirrels appear to be about the same size as the skulls of squirrels from Northwest Russia.

Vizoso, Alberto D. 1969. A red squirrel disease. SYMP ZOOL SOC LOND 24:29-38. Two viruses were isolated, one a myxovirus and the other an encephalomyocarditis virus. The former virus seemed responsible for a lethal disease.

, and Robert Hay. 1964a. Antibodies to viruses of Columbia SK group in Sciuridae in Britain. NATURE 204(4953):56-57. Columbia SK virus, an RNA virus, designated RS 3 was isolated from one red squirrel and 5 gray squirrels. The animals had no antibodies and infection must be common (considering the small number examined). Gray squirrels inoculated intranssally with RS 3 (or EMC which is closely related) developed limb paralysis and died. Squirrels were tested for antibodies to EMC and GS 8 (another Columbia SK virus). , Monica R. Vizoso, and Robert Hay. 1964b. Isolation of a virus resembling encephalomyocarditis from a red squirrel. NATURE 201(4921):849-850. Sick and dying red squirrels were found in Norfolk, England with symptoms including paralysis of the hind legs. (No gray squirrels are known in this area). An RNA virus (possibly a picornavirus EMC) was isolated. 6 of 9 gray squirrels had antibodies against the EMC virus. When inoculated into gray squirrels it was fatal and demonstrates the ability of apparently healthy red squirrels to carry a virus capable of killing gray squirrels.

- Vizoso, Monica (Monica Shorten). 1967. Squirrel populations and their control. FORESTRY 49 (supplement):15-21.
- Voipio, Paavo. 1952. Some results of investigations on the fur quality of the Finnish squirrel with notes on practical problems involved. SUOM RIISTA 6:128-135., 191-192. In Finnish with English summary.

______. 1956. Some remarks on the taxonomy of Finnish squirrels. ARCH SOC ZOOL-BOT FENN "VANAMO" 11(2).

. 1957. Uber die Polymorphie von Sciurus vulgaris L. in Finnland. ARCH SOC ZOOL-BOT FENN "VANAMO" 18(7):1-24. The European red squirrel occurs in three color phases in Finland. The relative frequency of these phases varies distinctly from one region to another and is related to climate (mainly temperature) and forest type.

. 1969. Some ecological aspects of polymorphism in the red squirrel *Sciurus vulgaris* L. in northern Europe. OIKOS 20(1):101-109. The proportion of red, brown and dark color phases changes in some years in a few areas. It seems likely that population movements are the cause of these changes.

______. 1970. Polymorphism and regional differentiation in the red squirrel (*Sicurus vulgaris* L.) ANN ZOOL FENN 7(2):210-215. Three color phases (red, brown, dark) occur in winter pelts. The red phase composes 1/3 of the squirrels in Sweden and in Finland varies from 30% in the north to less than 2% in the south.

. 1972. Problems of cold adaptation in the red squirrel, Sciurus vulgaris. REP KEVO SUBARCT RES STN 9:44-49.

and Raimo Hissa. 1970. Correlation with fur density of color polymorphism in *Sciurus vulgaris*. J MAMMAL 51(1):185-187. Two color phases, red and dark with intermediates occur almost throughout the range. The dark phase has the most hairs per unit of skin area.

- Von Burg, G. 1920. Von den schweizerischen Eichhornchen. WEIDMAN (Bürlach-Zurich) 48:387.
- _____. 1920. Das boralpen Eichhornchen. WEIDMAN (Bürlach-Zurich) 51:408. Remarks on Sciurus vulgaris subalpinus.

Von Turcek, F.J. 1959. Zur Nahrung des Eichhörnchens - Sciurus vulgaris fuscoater Altum 1876 in der Slowakei. (Food of the squirrel, Sciurus vulgaris fuscoater Altum 1876 in Slovakia.) WALDHYGIENE 3(1/2):50-53. In German. The consumption of tree seeds by red squirrels is not of importance to forest management except in parks or arboretums. The effect of eating buds is not clear.

Vorob'eva, N.F. 1972. Mast cells in rodents. I. Content, distribution and size of mast cells in the skin and in the subdermal connective tissue. IZV SIB OTD AKAD NAUK SSSR SER BIOL-MED NAUK 1:90-96. Russian with English summary. S. vulgaris has a relatively lower number and smaller mast cells than do other rodents.

- Vorontsov, N.N. and E.A. Liapunova. 1972. Cytogenetical evidence for transcaucasian-sonoran disjunction in ranges of certain mammals. ZOOL ZH 51(11):1697-1704. Russian with English summary). The identify of karyotypes of Sciurus persicus, S. niger, S. carolinensis and S. griseus serve as cytogenetic evidence of tertiary connection between these species.
- Wade, Otis. 1935. Notes on the northern tuft-eared squirrel, Sciurus aberti ferreus True, in Colorado. AM MIDL NAT 16(2):201-202.

and P.T. Gilbert. 1940. The baculum of some Sciuridae and its significance in determining relationships. J MAMMAL 21(1):52-63. Bacculum structure indicates affinities relating the eastern gray squirrels and fox squirrels on the one hand and the tuft-eared squirrels and western gray squirrels on the other.

Wagg, J.W. Bruce. 1964. Viability of white spruce seed from squirrelcut cones. FOR CHRON 40(1):98-110. Seed from cached cones showed a higher percentage of viability than seeds from cones collected directly from trees.

Waggoner, D.W. 1946. The gray squirrel in western Vilas County. WIS CONSERV BULL 11(6):3-5. During January, February and March of 1946 gray squirrels attacked red and sugar maples stripping bark from the upper branches of large trees and from the top to the base of smaller trees. Some smaller trees were completely stripped. Gray squirrels were first introduced into this county in 1934.

- Walker, Ernest P. 1923. The red squirrel extending its range in Indiana. J MAMMAL 4(2):127-128. Between 1909 and 1921 red squirrels moved into the area near Sheridan while fox squirrels seemed to decline.
- Wallace, Earl. 1947. Gray squirrel has withstood hunters' fire, predation, to be hailed as planter of forests. KY HAPPY HUNT GROUND 2(2):8-9.
- Walls, Gordon L. 1931. The occurrence of colored lenses in the eye lenses similar to the European diurnal snake, Malpolon monspessulanis. This color increases visual acuity by absorbing the highly refrangible violet light and reducing chromatic aberration.
- Ward, Freddy D. and Robert G. Leonard. 1968. Rodents drown in improved mast traps. J MAMMAL 49(3):530.
 Fox and gray squirrels were sometimes found in 55 gallon drums with collected rainwater. Placing sticks in these drums to permit squirrels to climb out eliminates the problem.
- Warren, Edward R. 1932. A somewhat unusual kitchem midden of Fremonts' squirrel (*Sciurus fremonti fremonti*). J MAMMAL 13(3):278.
- Washburn, Mel. 1949. We're planting squirrels now. LA CONSERV 2(4):4-5, 21, 22.
- Watt, Hugh Boyd. 1923a. On the American grey squirrel (Sciurus carolinensis) in the British Isles. ESSEX NAT 20(4):189-204. Many of the squirrel colonies in Great Britain originated from the Duke of Bedford's colony at Woburn from which they were distributed to people asking for them.

. 1923b. American grey squirrel in Yorkshire. NATURALIST (London) 221.

. 1923c. American grey squirrels in Ireland. IRISH NATURALIST, Dublin 32:95.

. 1926. Observations on the American grey squirrel in Britain. SCH NAT STUDY 21(82):1-3.

and W.H. St. Quintin. 1924. American grey squirrel in Yorkshire. NATURALIST 805:62-63. Gray squirrels have spread while the reds have declined. Grays peel bark from young sycamore trees in July.

Watts, R.L. 1942. Squirrel talk. PA GAME NEWS 12(11).

. 1945. Bushytails like butternuts. PA GAME NEWS 15(12):15.

- Weale, R.A. 1955. Bleaching experiments on eyes of living grey squirrels (*Sciurus carolinensis leucotis*). J PHYSIOL (LOND) 127(3):587-591.
- Webb, James W., Jr. 1970. A literature review of the diseases and parasites of the gray squirrel (Sciurus carolinensis Gmelin). Unpublished manuscript University of Georgia. 41pp.
 A list of the ectoparasites and endoparasites of the gray squirrel are given. Coccidial, fungal and viral diseases in squirrels are summarized. Rabies has been found several times but apparently has been reported but once.
- Webb, John. 1940. Identification of rodents and rabbits by their fecal pellets. TRANS KANS ACAD SCI 43:479-481. Fox squirrel pellets are oval shaped, very hard and compact, shiny black, and 7-8mm in diameter.
- Webster, J.M. 1960. Investigations into the coccidia of the gray squirrel Sciurus carolinensis Gmelin. J PROTOZOOL 7(2):139-146.
- Weidanz, William P. and K.E. Hyland. 1958. The occurrence of Hepatozoon sciuri in gray squirrels in New England. J PARASITOL 44(1):97. From Rhode Island.
- Welter, Wilfred A. and Dwight E. Solberger. 1939. Notes on the mammals of Rowan and adjacent counties in eastern Kentucky. J MAMMAL 20(1):77-81. S. carolinensis and S. niger.
- Wemer, P. 1904. Die Nahrung unseres Eichhornchens. JBER WESTF PROVVER WISS KUNST 31:217-221.
- West, Roger W. and John E. Dowling. 1975. Anatomical evidence for cone and rod like receptors in the gray squirrel, ground squirrel and prairie dog retinas. J COMP NEUROL 159(4):439-459.
- Wharton, Charles H. 1968. Distribution of the red squirrel in Georgia. J MAMMAL 49(1):153-155. Red squirrels occur in the extreme north east corner of Georgia and were more abundance seventy years ago than they are today.
- Whistance, Geoffrey R., Frederick E. Field, and David R. Threlfall. 1971. Observations on the biosynthesis of ubiquinones by animals. EUR J BIOCHEM 18(1):46-52. Some of the precursors of ubiquinone present in plants, bacteria and protozoa were not present in squirrels (or other mammals) suggesting another pathway for biosynthesis.

- Whitaker, H.L. 1939. Fox squirrel utilization of Osage orange in Kansas. J WILDL MANAGE 3(2):117.
- Whitaker, John O. 1967. Habitat and reproduction of some of the small mammals of Vigo County, Indiana, with a list of mammals known to occur there. OCCAS PAP C C ADAMS CENT ECOL STUD WEST MICH UNIV 16:1-24.
 - , and Nixon Wilson. 1974. Host and distribution lists of mites (Acari), parasitic and phoretic, in the hair of wild mammals of North America north of Mexico. AM MIDL NAT 91(1):1-67.
- White, F.H., G.L. Hoff, W.J. Bigler and E. Buff. 1975. A microbiologic study of the urban gray squirrel. J AM VET MED ASSOC 167(7):603-604.
 A survey based on 180 gray squirrel specimens from Jacksonville, Florida revealed alpha-hemolytic streptocci and nonhemolytic streptocci in the oral cavities. No evidence was found of Leptospriosis, arboviruses, or Salmonella. Urban gray squirrels are relatively free of bacterial and viral agents.
- White, G. 1789. The Natural History and Antiquities of Selborne
 (lst ed) London. 305pp.
 A young squirrel was nursed by a cat. The squirrel opens hazel
 nuts by rasping off the small end and then splitting the shell in
 two with its incisors. (S. vulgaris.)
- White, P.A. 1948. Gray squirrel damage to lead-covered telephone cables. M.S. Thesis, University of Massachusetts. 175pp.
- Whitesell, Dale E. 1951. The fox squirrel. OHIO CONSERV BULL 15(8):1.
- Whitten, B.K. and R.J. Faleschini. 1972. Comparative hypoxic tolerance in the hibernating and non-hibernating sciurids. FED PROC 31(2):376.
- Wilbur, Charles G. 1946. Mammals of the Knik Rivery Valley, Alaska. J MAMMAL 27(3):213-216. T. hudsonicus - This was the most numerous species seen. Almost every spruce grove had at least one or two animals. Many appeared quite tame.
- Wild, A.E. 1965. Serum proteins of the grey squirrel (Sciurus carolinensis). IMMUNOLOGY 9(5):457-466.
 At least 17 proteins, differing antigenically, can be distinguished by electrophoresis. Unlike other mammalian sera, squirrel serum is relatively rich in pre-albumin components, of which there are two. Of the many proteins classed as & 2 globulins, two are macroglobulins.

. 1971. Transmission of proteins from mother to conceptus in the grey squirrel (*Sciurus carolinensis*). IMMUNOLOGY 20(5):789-797.

Maternal gamma globulin is transferred to fetal circulation.

. 1974. Protein transport across the placenta. IN: Sleigh, M.A. and D.H. Jennings (eds.), Sumposia of the Society for Experimental Biology No. 28. Transport at the Cellular Level. Cambridge University Press, London. pp521-546. S. carolinensis.

Wildash, J.T. 1949. Grey squirrels at Savernake. J FOR COMM 20:181.

Wildash, P.C.T. 1950. Black squirrels. FIELD, London 195:680. Black varieties of *Sciurus* in Europe.

Williams, Essie W. 1923. Young gray squirrels at Hudson, Wisconsin. J MAMMAL 4(2):128. A mother squirrel accepts her small blind baby after it had been kept from her for a full day.

Wilson, J.H. 1967. A test for homing in the gray squirrel. M.S. Thesis, Virginia Polytechnic Institute. 43pp.

Wingard, Robert. 1950. The life history and habitat of the northern gray squirrel in relation to some forest communities in Huntington County, Pennsylvania. M.S. Thesis, Pennsylvania State College.

_____. 1952. The low-down on "Sciurus carolinensis". PA GAME NEWS 22(11):9-13.

and C.R. Studholm. 1967. Gray squirrel. PA WILDL RES LEAFLET 311:1-4.

Winkler, William G. 1966. Rodent Rabies. PROC NAT RABIES SYNP. NAT COMM DIS CENT pp34-36. In the years 1956 to 1965 seventy-four cases of laboratory rabies were confirmed from squirrels in the United States this includes both tree and ground squirrels.

. Nathan J. Schneider and William L. Jennings. 1972. J WILDL DIS 8(1):99-103. Gray squirrels are susceptible to rabies infection. Squirrels are much less susceptible to infection with bat rabies than strains from raccoons. Half of the infected squirrels died with no demonstrable clinical illness. The other half displayed signs of furious rabies of the most extreme type.

Wise, John Sergeant, Jr. 1968. The whole body burden of cesium 137 in the gray squirrel in seven physiographic provinces. M.S. Thesis, University of Georgia. 24pp.

- Wobeser, G. 1969. Tetanus in a gray squirrel. BULL WILDL DIS ASSOC. 5(1):18-19. A paralyzed gray squirrel from Ontario, Canada was found to be infected with Clostridium tetani.
- Wohlgemuth, Dean. 1968. Squirrels move to find food. GA GAME FISH 3(11):15.
- Woitkewitsch, A.A. 1945. Sexual cycle in *Sciurus vulgaris* L. stimulated by means of light. DOKL AKAD NAUK SSSR 47(1):71-72.
- Wolf, Thomas F. and Aryan I. Roest. 1971. The fox squirrel (Sciurus 5-9 niger) in Ventura County. CALIF FISH GAME 57(3):219-220. Fox squirrels occur near walnut and orange orchards in tall eucalyptus trees. The eucalyptus trees provide nest sites and the orchards provide food. Squirrels eat walnuts during the summer and fall and oranges throughout the year. They also eat avocados, strawberries, tomatoes and eucalyptus pods in mid-winter.

Wood, Bob. 1969. High plains bushytails. KANS FISH GAME 26(1):14-15.

_____. 1970. To skin a squirrel. KANS FISH GAME 24(4):12-13.

- Wood, David A. 1976. Squirrel collars. J ZOOL 180(4):513-518. Collars made of plastic tubing and various color combinations remained on S. carolinensis for up to eight months. Collars with radiotransmitters weighed 25 gm. and two types of radios were used - one kind for determination of location and the other for monitoring of activity.
- Wood, Thomas J. 1965. Albino red squirrel collected in Wood Buffalo Park. BLUE JAY, Saskatchewan Natural Historical Society 23(2):90.
- . 1967. Ecology and population dynamics of the red squirrel (*Tamiasciurus hudsonicus*) in Wood Buffalo National Park. M.S. Thesis, University of Saskatchewan. 97pp.
- Woods, Gordon T. 1941. Mid-summer food of gray squirrels. J MAMMAL 22(3):321-322. The stomach contents of two squirrels shot in July (Massachusetts) were filled with cherry pulp in one case and apple in the other case.
- Woolsey, Thomas A., Carol Welker, Richard H. Schwartz. 1975. Comparative anatomical studies of the SMI face cortex with special reference to the occurrence of "barrels" in layer IV. J COMP NEUROL 164(1):79-94. Cytoarchitectonically identifiable groups of cells occur in the cortex of the grains of gray squirrels and other mammals. These cell groups are called barrels and are directly related to facial whiskers.

- Wrigley, Robert E. 1974. Mammals of the sandhills of southwestern Manitoba. CAN FIELD-NAT 88(1):21-29. Gray and fox squirrels have expanded northward into Manitoba within the last 100 years.
- , Heinz-Eberhard Drescher and Sabine Drescher. 1973. First records of the fox squirrel in Canada. J MAMMAL 54(3):782-783. Fox squirrels were found in southern Manitoba. The northward spread of gray and fox squirrels in North Dakota, Minnesota and Manitoba is described.
- Wunder, Bruce A. and Peter R. Morrison. 1974. Red squirrel metabolism during incline running. COMP B IOCHEM PHYSIOL A COMP PHYSIOL 48(1A):153-161. The oxygen consumption of running red squirrels is 1.4 - 2.8 times greater than that of resting squirrels. Speed, angle of inclination and ambient temperature also affect metabolic rate.
- Wunz, Jerry. 1969. Squirrel exodus. PA GAME NEWS 40(10):18-21. An account of the 1968 "migration" of gray squirrels in Pennsylvania.
- Wylie, John. 1968. October, squirrels, boys, et cetera. CONSERVA-TIONIST MO DEP CONSERV 29(10):4-5. Hunting story.
- Yamashita, J. and Y. Azuma. 1964. On two new species of nematodes of weasels and squirrels in Hokkaido. JPN J PARASITOL 13:344-345. (In Japanese).
- Yamatani, Kiyoshi. 1969. On the breeding habits of Sciurus vulgaris orientis in captivity. J MAMMAL SOC JPN 4(4-6):121-124. (In Japanese). photos
- Yazan, Y.P. 1970. Relation of the martin, sable and kidas, with the squirrel as a prey. TRANS INT CONGR GAME BIOL 9:530-538.

Yeager, Lee E. 1936. Fox squirrel seriously damages elm tree. J MAMMAL 17(4):417-418. A fox squirrel pulled bark from an elm and in another case from a catalpa for nesting material. Such activity seems to be rare for the fox squirrel. 6-21

_____. 1937. Cone-piling by Michigan red squirrels. J MAMMAL 18(2):191-194.

Red squirrels in three Norway spruce stands (about 5 acres total) accumulated 32.4 bushels of cones in 8 caches. Assuming that red squirrels eat two grams of spruce seed per day this would provide enough food to carry a population of 65 squirrels through the 5 coldest winter months (November-March). Such caches are useful in providing a source of seed for forest nurseries.

. 1954. Bushytails - beyond the law. VA WILDL 15(9):5-7, 12, 24.

______. 1959. Status and population trend in fox squirrels on Fringe Range, Colorado. J WILDL MANAGE 23(1):102-107.

and Lyndale Dunn. 1956. Colo squirrels. COLORADO OUTDOORS MAG 5(4):16-17.

- Yoakum, C.S. 1902. Some experiments on behavior of squirrels. J COMP NEUROL 19:541-568.
- Yocum, Charles F. 1950. Fox squirrels in Asotin County, Washington. MURRELET 31(2):34.
- Yolton, Robert L., Diane P. Yolton, John Renz and Gerald H. Jacobs. 1974. Pre-retinal absorbance in sciurid eyes. J MAMMAL 55(1):14-20.
- Youatt, W.G., L.D. Fay, D.L. Howe and H.D. Harte. 1961. Hematologic data on some small mammals. BLOOD 18(6):758-763. Erythrocyte diameters, hemoglobin, hematocrit, red blood cell counts, mean corpuscular volume, mean corpuscular hemoglobin, mean corpuscular hemoglobin concentration and white blood cell counts are given for S. niger and T. hudsonicus.
- Young, John W. 1930. Grey and red squirrels. FIELD, London 156(4045):25.
- Young, R.T. 1908. Notes on the distribution of Colorado mammals with description of a new species of bat (*Eptesicus pallidus*) from Boulder. PROC NAT ACAD SCI 60:403-409. S.n. rufiventer was introduced at Greeley from Oklahoma.

Zachary, M. 1965. Grey squirrels. QUART J FOR 59(1):82.

Zaitsev, V.S. 1974. Effect of squirrels on seed bearing of Sukachev's larch in pine forests of the forest-steppes of the trans-Ural region. EKOLOGIYA 5(1):102-103. (In Russian) In some years S. vulgaris can destroy up to 84% of the cones.

- Zawidska, Ewa. 1958. Geographical distribution of the dark phase of the squirrel (*Sciurus vulgaris fuscoater* Altum) in Poland. ACTA THERIOL 2(8):159-174.
- Zelley, R. Alan. 1971. The sounds of the fox squirrel, Sciurus niger rufiventer. J MAMMAL 52(3):597-604.
- Zimmerman, F.R. 1939. Squirrels need management. WIS CONSERV BULL 4(10):40-43.
- Zirul, D.L. and W.A. Fuller. 1970. Winter fluctuations in size of home range of the red squirrel (*Tamiasciurus hudsonicus*). TRANS N AM WILDL NAT RES CONF 35:115-127.
- Zeahlen, Robert. 1975a. Die lokomotorsche Aktivität des Eichhornchens (Sciurus vulgaris). OECOLOGICA 22(1):79-98. English summary. Activity of squirrels in outdoor cages is at a minimum in winter and greatest in September in Switzerland. Activities may begin before sunrise but usually end before sunset.
 - . 1975b. Ein Beitrag zur Ernahrungsokologie und zum Schadverholten des Eichhornchens. JAHR NATURHIST MUS STADT BERN 5:223-244.

S. vulgaris near Bern, Switzerland feeds mostly on seeds of spruce, beech and pine. In winter spruce buds are important. Food seems to be least abundant in May. Squirrels on occasion cause serious damage to larches, firs, spruce and pine trees by bark peeling.