Roof Rats in Southwest Georgia

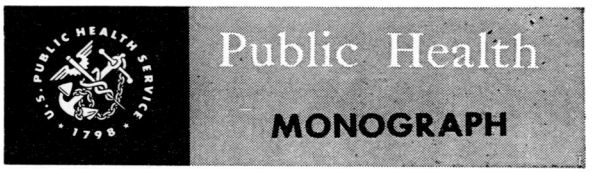
Two rodent species of the genus *Rattus* (*R. norvegicus* and *R. rattus*) have played important roles in the transmission of some of the earth's most serious diseases. The control of these rodents and of their ectoparasites has proved an effective means of combating these diseases. However, efficient control of rodents and/or their ectoparasites requires a thorough understanding of the animal's life history and habits.

Many good studies have contributed to a sound understanding of Norway rat populations, but the works are few which analyze the population dynamics of roof rats. The Georgia studies made efforts to increase understanding of the phenomena of the habits and population of roof rats. It is hoped that the reported findings will lead to more efficient control of roof rats and to a greater reduction in the diseases transmitted by this species.

The objectives of the study were (1) to determine the basic population units and the factors responsible for their well-being, (2) to develop methods for observing and detecting changes in density of rat populations, (3) to analyze mortality rates from catch-mark-release data, (4) to determine movement rates and distances traveled, and (5) to learn the extent to which rats maintain a feral existence.

The study was conducted in Brooks, Thomas, and Grady counties, Ga., from June 1951 through January 1953. Rats were live-trapped, marked, and released in five rural study areas. Trapping and marking methods are described. Some additional data were gathered from the steel trapping records of murine typhus surveillance programs.

Typical habitat and basic living requirements are described. Population changes are analyzed by comparison of trap-catch rates, by change in colony distribution, by farmer and trapper recollection, and by changes in age distribution. All methods of analysis point in the direction of a reduced rat population between 1947 and 1953.



No. 27

The accompanying summary covers the principal findings presented in Public Health Monograph No. 27, published concurrently with this issue of Public Health Reports. The author, formerly a wildlife research biologist with the Public Health Service Communicable Disease Center, is a public health biologist with the Santa Clara County (Calif.) Health Department.

Readers wishing the data in full may purchase copies of the monograph from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C. A limited number of free copies are available to official agencies and others directly concerned on specific request to the Public Inquires Branch of the Public Health Service. Copies will be found also in the libraries of professional schools and of the major universities and in selected public libraries.

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Ecke, Dean H.: Roof rat populations in southwest Georgia. Public Health Monograph No. 27 (Public Health Service Publication No. 373). 20 pages. Illustrations. U. S. Government Printing Office, Washington, D. C., 1955. Price 20 cents.

Mortality rates computed from retrapping data show that females live longer than males, and that over 95 percent of any given population could be expected to die within 12 months. A distinction is made between "disappearance rates" as directly observed in trapping records and "true mortality" rates. It is also shown that males attain greater size than females.

Rat movement was found to be quite restricted. Of 546 rats retrapped, only 4 were taken at distances greater than 500 yards from their original capture site. Twelve percent of captured rats moved between buildings at distances under 300 yards, and individual moves over 100 yards were rare.

No evidence could be found to substantiate local beliefs that rats migrated between fields and farm buildings during seasonal changes. Data from field trapping, absence of rat sign in fields, and stomach analyses of foxes combine to discount any appreciable population of feral rats in the vicinity of study.

technical publications

A Comprehensive Program for Water Pollution Control

The Minnesota River Basin

Public Health Service Publication No. 365 (Water Pollution Series No. 64). 1954. 26 pages; map and tables.

The Rainy River Basin

Public Health Service Publication No. 380 (Water Pollution Series No. 68). 1954. 6 pages; map and tables.

The Minnesota River Basin and the Rainy River Basin pollution control programs are summarized in these two publications of the water pollution control series.

The Minnesota River Basin consists of a watershed area of about 16,920 square miles, located in southwestern Minnesota, South Dakota, and Iowa. The principal tributaries are the Little Minnesota, Chippewa, Cottonwood, Redwood, Lac Qui Parle, Pomme de Terre, and Yellow Medicine Rivers. To protect the water of the basin against pollution, the report recommends construction of 64 new or enlarged municipal sewage treatment plants to serve about 100,000 people, plus new or improved waste treatment facilities at 19 industrial plants.

The water pollution control program for the Minnesota River Basin has been developed jointly by the water pollution control agencies of Iowa, Minnesota, and South Dakota with the cooperation of Federal water pollution agencies.

The Rainy River Basin lies in Ontario and in the north central part of Minnesota. The river forms a portion of the boundary between Canada and Minnesota and drains an area of approximately 21,000 square miles, 11,300 of which are in Minnesota.

The water pollution control program for the portion of the Rainy River Basin within the United States has been developed and put into operation by the Water Pollution Control Agency of Minnesota, which had the cooperation of other authorities during the planning period.

Health Manpower Source Book

Medical Record Librarians

Public Health Service Publication No. 263. Section 6, 1954. By Maryland Y. Pennell, Marion E. Altenderfer, and Olive G. Johnson. 43 pages; tables. 30 cents.

This sixth section of the health manpower source book series presents data on the number, characteristics, and distribution of medical record librarians. A survey by the American Association of Medical Record Librarians in 1953 gave information on employment status and educational background. Additional material was obtained from the association files and from the approved schools for the training of medical record librarians.

About 13 percent of the active medical record librarians have been graduated from approved schools for training in that field. In 1953–54, the 24 approved schools had a student capacity of 219 and an enrollment of 114. Of the 1,152 persons graduated from accredited schools during the period 1928–53, almost half are currently active in their profession.

This section carries announcements of all new Public Health Service publications and of selected new publications on health topics prepared by other Federal Government agencies.

Publications for which prices are quoted are for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Orders should be accompanied by cash, check, or money order and should fully identify the publication. Public Health Service publications which do not carry price quotations, as well as single sample copies of those for which prices are shown, can be obtained without charge from the Public Inquiries Branch, Public Health Service, Washington 25, D. C.

The Public Health Service does not supply publications issued by other agencies.