

swollen and lacking distinct ridges. Antennal sheaths 0.4 mm long, 0.5 mm wide. Anterior orbital setae on small tubercles; posterior orbital setae not tuberculate. Vertical tubercles small. Thoracic spiracles 0.7 mm long, shaped like a question mark; spiracular prominences exceed dorsal thoracic margin 0.3 mm. Biseriate fringes of spines encircle abdominal segments 2-7, the posterior series reduced to a submedian and usually 2 lateral pairs; posterior series also reduced on pleura and sternites; fringe of tergite 7 of 44 spines. Lateral preanal combs vestigial; dorsolateral and ventrolateral of 3-4 and 9-12 spines respectively. Dorsal, lateral, and ventral tubercles of aster 0.28, 0.34, and 0.25 mm long respectively.

#### MERYCOMYIA WHITNEYI (JOHNSON)

As previously noted, variation in characters is in evidence in larvae, pupae, and adults of this species. Variation in the adults was discussed by Pechuman (1964) and was primarily concerned with degree of infuscation along wing veins, the infuscation being generally more extensive and heavier in females from the southern portion of the range and such infuscation being "barely indicated" in males examined. I have since seen males in which the infuscation was nearly as heavy and extensive as in any females. Such males were from Georgia and Florida. In addition the ground color of the dorsal surfaces of thorax and abdomen ranges from reddish-brown to almost black, the darker color found in southern forms.

In the pupae, variation is less evident overall than in other stages. Exuviae tend to be a little darker in southern forms. But of more importance is the development of the preanal combs. Teskey (1969) noted that the dorsolateral and lateral combs were reduced or vestigial in specimens from Canada. All pupae collected or reared by me have well-developed dorsolateral combs and only somewhat reduced lateral combs. All specimens were taken in either southern Georgia or Florida.

In the larvae, variation involves the extent of pubescence. The larvae described by Teskey had the following features (only those exhibiting variation are noted): anterior pubescence encircled the first four segments, being absent laterally on the following four, absent laterally, middorsally and midventrally from 9 and 10, and entirely absent from anal segment; pseudopodial pubescence formed complete annuli on first four abdominal segments and was absent between lateral and ventrolateral pseudopodia on remaining three pseudopodial segments; anterior and pseudopodial pubescence

united dorso-laterally and ventrolaterally on first four abdominal segments; posterior pubescence broadly encircled anal and preanal segments being restricted to narrow dorsolateral and ventral patches on segment 9. In larvae from Georgia and Florida the following were noted: anterior pubescence encircled the first four (1 specimen), first five (2 specimens), first six (1 specimen), and first seven (2 specimens) segments, being absent on succeeding segments essentially as noted for Canadian specimens; pseudopodial pubescence encircled first two (1 specimen) first three (2 specimens), and first four (3 specimens) abdominal segments being absent between lateral and ventro-lateral pseudopodia on others; anterior and pseudopodial pubescence were narrowly united dorso-laterally only on first abdominal segment and ventro-laterally on first two (3 specimens) and first three (3 specimens); posterior pubescence encircled anal, preanal, and ninth segments and was sometimes evident ventrally and dorsolaterally on the eighth.

Of the above variations, the presence of a posterior pubescent annulus on the ninth larval segment, the lack of dorsolateral connections of anterior and pseudopodial pubescence on the second, third, and fourth abdominal segments, and the presence of well developed dorsolateral preanal combs and at least evident lateral preanal combs in the immatures from southern Georgia and Florida in contrast to the related features of the Canadian larvae and pupae, considered in line with characters used for separation of immatures of different species in other genera, indicate the possibility that *whitneyi* may represent two species. However the lack of consistent differences in adults over the north-south range and the absence of immatures from the area between southern Georgia and Canada prevents any attempt at definitive analysis for the present.

Adults examined other than reared specimens were taken from Georgetown Co., South Carolina, and Chester Co., Tennessee, the latter being the first report of this species from Tennessee.

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## TEACHER-NATURALIST: A FIRST FOR TENNESSEE SCHOOLS

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#### ABSTRACT

The Kingsport City School System has created and

filled a unique position in its educational program. Titled a Teacher-Naturalist and charged with the co-

ordination of the system's environmental education program, the creation of this unusual position is a first for school systems in Tennessee.

#### INTRODUCTION

The need for a Teacher-Naturalist and an environmental education program, as the Kingsport School System views it, is that responsibility for the present state of the environment must rest primarily with the existing adult generation. In the past, environmental education has been delegated to resource people such as Naturalists or Conservation Educators or taught as the last chapter in a textbook. This conventional approach no longer meets today's educational needs.

#### ENVIRONMENTAL EDUCATION PROGRAM

Recognizing the role and responsibility of public schools in meeting these needs, Kingsport City Schools began planning in early 1970, for a total environmental education program spanning all grade levels. As one phase of the program, Kingsport students participate in the newly established program offered by Bays Mountain Nature Preserve, a 1300 acre semi-wilderness, natural watershed area and park, owned and operated by the City of Kingsport. Though employed as a teacher with the school system, the Teacher-Naturalist serves as an interpretative naturalist while presenting environmental interpretative programs at various community resources—thus the title Teacher-Naturalist.

Immediately responsible to the Assistant Superintendent in charge of Curriculum and Instruction, the Teacher-Naturalist has been charged with planning and coordinating the total environmental education program of the school system. Basic to the total program is the utilization of community resource facilities ranging from sewage treatment plants in the inner city to natural or wilderness areas in the rural environment. Supplementing this use of community resource facilities is the assistance obtained from community resource

consultants and cooperating resource agencies such as the Soil Conservation Service and the Tennessee Valley Authority. The Teacher-Naturalist serves as the liaison agent between the school system and these resource facilities and consultants.

#### COMMUNITY RESPONSIBILITIES

Included in the total program are the many meaningful educational experiences relating to the activities preceding and following the utilization of community resources. One of the prime responsibilities of the Teacher-Naturalist is, therefore, to plan, develop and implement pre-trip and post-trip activities for visits to community resource facilities. This may take the form of developing materials, assisting teachers, or visiting classrooms and conducting activities. Additional duties include planning and developing of environmental study areas on individual school sites, preparation and submission of proposals for federal environmental education grants, development and implementation of environmental education in-service programs, assisting school librarians in increasing the supply of environmentally related literature, and serving as general science consultant to all city schools.

Though the long range goal of both is the same, the duties of the Teacher-Naturalist in the Kingsport System varies greatly from those of the traditional Conservation Educator or Naturalist. By beginning early in the educational program to include a curriculum which will provide an awareness and functional knowledge of the total environment, subsequent generations may be equipped with the skills and necessary learning to cope with the staggering environmental problems now facing man.

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## FIRST OCCURRENCE OF *RHABDOMETRA ODIOSA* IN BOBWHITE QUAIL IN TENNESSEE

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#### ABSTRACT

The occurrence of *Rhabdometra odiosa*, Leidy 1887 in bobwhite quail (*Colinus virginianus*) in Tennessee is reported. Six of 140 birds examined contained the cestode.

#### INTRODUCTION

The object of this paper is to report the occurrence of *Rhabdometra odiosa*, Leidy 1887 in bobwhite quail

(*Colinus virginianus*) in Tennessee. A recent report (Kellogg 1969) indicated that *R. odiosa* had previously been found in quail from Florida, Georgia, Mississippi, North Carolina, and Texas.

#### METHODS

A sample of 140 quail collected on the Ames Plantation, a Field Station of the University of Tennessee Agricultural Experiment Station at Grand Junction, was