FIELD NOTES ON A COLOR VARIANT OF THE TWO-STRIPED WALKINGSTICK, *Anisomorpha buprestoides* (Stoll)[1]

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Large walkingsticks of a peculiar black and white coloration were first observed by the writer late in 1947 at Juniper Springs, Marion County, Florida. In October 1948 these same walkingsticks were found to be very abundant near Salt Springs, Marion County, Florida. Specimens were collected and submitted to the United States National Museum for examination. Mr. C. F. W. Muesebeck reported that the specimens had been examined by Dr. A. B. Gurney who considered the insects to be a color variation of *Anisomorpha buprestoides* (Stoll). The National Museum specialists urged that cage studies of these insects be made in order to definitely determine the correct taxonomic status.

In size and structure the black and white walkingsticks agree with descriptions of *Anisomorpha buprestoides* (Stoll). Several thousand pairs of the black and white form have been examined by the writer as well as a large number of pairs of the more typical brown form of *Anisomorpha buprestoides*. In the black and white walkingsticks the anterior margins of the joints of the antennae are consistently ringed with white. Also the tergites of the thorax and abdomen are each consistently margined with a black band posteriorly. This brings about interruptions of the "two dorsal light stripes" from which the approved common name of *Anisomorpha buprestoides* is derived. Comparable markings have not been found during examination of many pairs of typical *Anisomorpha buprestoides*.

The area where large numbers of the black and white walkingsticks have been found is a typical Florida scrub. Excessively drained sandy soil characterizes such an area. Typical plants of the scrub are the sand pine, *Pinus clausa* Vasey, Chapman oak, *Quercus chapmani* Sarg., myrtle oak, *Quercus myrtifolia* Willd., turkey oak, *Quercus laevis* Watt., tree lyonia, *Lyonia ferruginea* Nutt., rosemary, *Ceratiola ericoides* Michx., and the palmetto, *Sabal etonia* Swingle.[2]

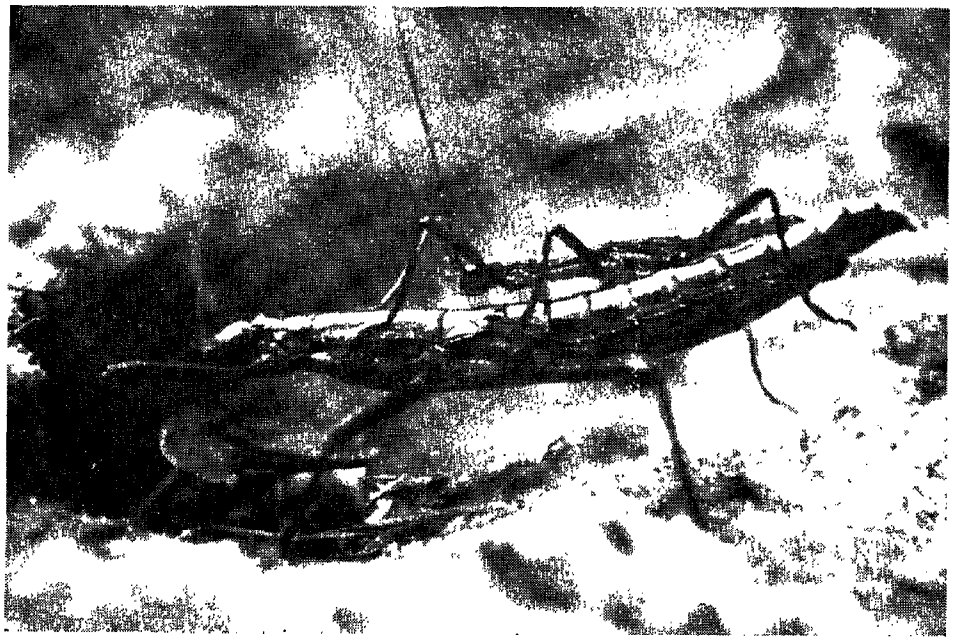
Apparently the oaks are the favored food plants of the black and white walkingsticks. Feeding has also been observed on the

[1] Order Orthoptera, Family Phasmidae.

[2] Plant identifications were made by Miss Lillian Arnold of the University of Florida Agricultural Experiment Station.

foliage of rosemary and the tree lyonia. Fronds of the palmetto are a frequent resting place for the insect but no indication of feeding on this plant could be found. Occasionally the insects have been collected from the trunks of the sand pine but it is doubtful that the foliage of this tree would be acceptable as food.

Perhaps the most interesting observations made on the black and white walkingsticks were those on the oviposition habits of the insects. It is quite generally accepted that the eggs of walkingsticks are dropped randomly and indescriminately upon the ground beneath the food plants of the adults. Blatchley states that "the eggs are dropped loosely and singly upon the ground by the mother". Comstock has written that "the eggs are scattered on the ground beneath the plants upon which the insects feed, the female, unlike most Orthoptera, making no provision for their safety". In the black and white form of *Anisomorpha buprestoides* many females were observed to be digging small pits in the sandy soil, the eggs being dropped into these pits and sand being scratched over them by the females. Although no leg modifications for digging are apparent, both the prothoracic legs and the mesothoracic legs are used for this purpose. The mesothoracic legs are used exten-

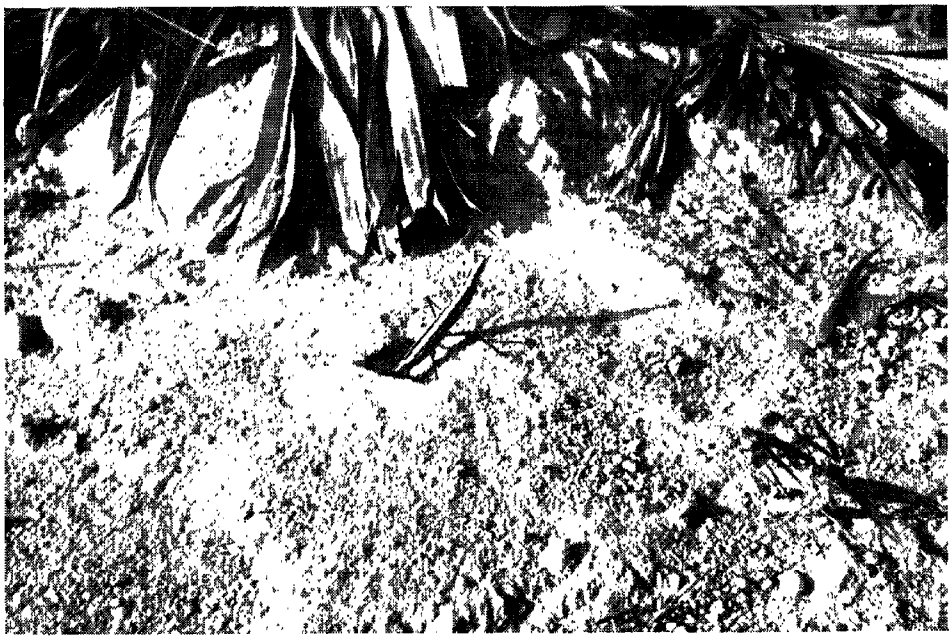


Pair of walkingsticks over excavation in sandy soil, in which the eggs are deposited. Photo by W. D. Sudia.

sively for covering up eggs that have been dropped into the depressions. Apparently not more than eight or ten eggs are laid into a hole; the female moves away and selects another location.

The male insect frequently remains attached to the female during the process of oviposition. At first sight this appears to be copulation but the male genitalia are attached to the ventral portion of the segment anterior to the genital segment of the female. Relative to *Anisomorpha buprestoides,* Littig has stated that "in the act of copulation this organ (aedeagus of the male) is typically inserted into the vulva, (8th sternite of female) as many specimens were collected in this position. Nevertheless, several males and females were collected with the male organ inserted into a midventral opening posterior to the 7th female sternite which is possibly a primative gonopore". Perhaps this is merely a means of aiding the diminutive male in clinging to the body of the female.

Apparently *Anisomorpha buprestoides* is one member of the Family Phasmidae that makes some provision to insure the hatching of eggs by digging them into the sandy soil. Perhaps the covering of sand assures optimum humidity conditions for the hatching of the eggs. The soil cover over the eggs may



Female of *Anisomorpha buprestoides* excavating pit in sandy soil for purposes of oviposition. Photo by W. D. Sudia.

serve to protect them from foraging birds or other predators. It seems doubtful that eggs beneath the shallow soil cover would survive winter fires that frequently burn over scrub areas but this is worth some consideration.

LITERATURE CITED

Blatchley, W. S. 1920. Orthoptera of Northeastern North America. Nature Publishing Company.

Comstock, J. H. 1920. An Introduction to Entomology. Comstock Publishing Company.

Littig, K. S. 1942. External Anatomy of the Florida Walkingstick, *Anisomorpha buprestoides* (Stoll). Fla. Ent. 25 (3): 34-41.

INSECTS FROM BURROWS OF *PEROMYSCUS POLIONOTUS*

The following records of commensal or parasitic insects found in the burrows of the white-footed mice, *Peromyscus polionotus polionotus* (Wagner) and *P. polionotus rhoadsi* (Bangs) in Florida may be of interest in connection with the ecology of those forms:

In burrows of *P. polionotus polionotus:*

Siphonaptera—

Ctenophthalmus pseudagyrtes Baker (Det. J. Bequaert).
Jackson Co., Marianna, April 3, 1938, 1 specimen, C. C. Goff. Recorded only as a parasite of the Pocket Gopher, *Geomys bursarius* (Shaw), by Fox (U. S. D. A., Misc. Publ. 500, 1943).

In burrows of *P. polionotus rhoadsi:*

Orthoptera—

Arenivaga floridensis Caudell (Det. T. H. Hubbell).
Marion Co., Ocala National Forest, "Big Scrub" 11 mi. east of Ocala, March 11, 1939, F. N. Young [1 juv. ♀].

Ceuthophilus latibuli Scudder (All det. T. H. Hubbell).
Lake Co., Cassia, March 28, 1938, C. C. Goff [1 adult]; Emeralda, March 25, 1938, C. C. Goff [5 adults and juvs.]; Tavares, March 5, 1938, C. C. Goff [6 adults and juv.].
Marion Co., Ocala National Forest, "Big Scrub" 11 mi. east of Ocala, March 11, 1939, F. N. Young [7 juvs.].
Orange Co., Zellwood, March 23, 1938, C. C. Goff [1 adult].

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