TRICHADENOTECNUM CIRCULAROIDES
(PSOCOPTERA: PSOCIDAE) IN SOUTHEASTERN
UNITED STATES, WITH NOTES ON
ITS REPRODUCTION AND IMMATURE STAGES1

EDWARD L. MOCKFORD2

Department of Biological Sciences,
Illinois State University, Normal, Illinois 61761

ABSTRACT

Trichadenotecnium circularoides Badonnel, described from Angola, is
recorded for the first time from the United States. Records are presented from
Florida, Georgia, South Carolina, and North Carolina. Thelytokous
parthenogenesis is demonstrated for the species. The egg and nymph are
described.

Trichadenotecnium circularoides Badonnel was first described from the
Dundo region of Angola (Badonnel 1955:229). In October 1952, I found it
breeding on the outer wall of a building at the University of Florida, Gaines-
ville. Subsequently, I have found it at several other Florida localities and at
localities near the coast in Georgia, North Carolina, and South Carolina, and
I have received specimens from Athens, Georgia.

Records—Florida: Alachua Co.: Cross Creek Hammock, 15 Nov. 1952,
beating red maples (Acer rubrum) along creek, 1 female; Gainesville, 8 Oct.
1952, on outer north wall of building, 21 females, 4 ny.; 24 Oct. and 22 Nov.
1953, on outer north wall of building, 14 females; Hendry Co.: Clewiston, 16-17
April 1954, on Ficus trunks in palm-Ficus hammock, 15 females, 4 ny.; Leon
(Quercus laevis) and live oak (Q. virginiana) in sand scrub, 1 female. Georgia:
Camden Co.: Crooked River State Park, 16 Oct. 1973, beating scrub live oak
(Quercus gerrinata) and long-leaf pine (Pinus australis) 2 females, 2 ny.;
Duxton (Cape Hatteras), 23 Sept. 1973, beating trees and shrubs in forest, 1
female; New Hanover Co.: Masonboro State Park, 28 Sept. 1973, beating
mostly turkey oak and scrub live oak; 1 female; Pender Co.: 15 mi. W. Wil-
lington on Highway 17, 27 Sept. 1973, beating oaks and bay shrubs with much
Spanish moss, 2 females. South Carolina: Berkeley Co.: Bonneau, 3 Oct. 1973,
beating pine and hardwoods branches, 1 female; Charleston Co.: Sewee
Campgrounds near Awendaw, 1 Oct. 1973, beating branches in hardwoods-
pine forest, 1 female. Except where indicated otherwise, I collected the
specimens listed above.

Parthenogenesis—Of 79 adults that have been collected in the field (76
in above records, three from Angola), all are females. These data suggested the
possibility of parthenogenesis. In October 1973, I took a single female alive for

1Contribution No. 307, Bureau of Entomology, Division of Plant Industry, Florida Department
of Agriculture and Consumer Services, Gainesville, Florida 32602.
2Research Associate, Florida State Collection of Arthropods, Plt. Dep. Agr. and Cons. Serv.,
Gainesville, Florida.
culturing at Crooked River State Park, Georgia. Sixteen offspring of this female reached adulthood, and all were females. These females oviposited primarily in late November and December 1973 (the culture was then at Illinois State University, Normal). These eggs began to hatch in early January 1974. No data were kept on percent hatch, but it appeared to be high, and the resulting nymphs were vigorous. Some of them reached adulthood by early February. Thus, thelytoky was demonstrated for the species.

**Immature Stages**—Eggs in culture are laid singly on exposed bark surfaces. Each egg is covered with a coat of fine debris particles of the same color as surrounding crustose lichens. The chorion under the debris coat is dark brown. The debris coat reaches beyond the egg itself, covering a small region of surrounding bark. Length measurements for 10 eggs (in mm with an error of +0.0046 mm) showed a range of 0.33-0.44, a mean of 0.38, and a standard deviation of 0.033.

Nymphs show the distinctive head markings of the adult: (1) a brown band through the postclypeus from side to side, continuing laterally through each compound eye and nearly to the posterior head margin and continuing anteriorly in the middle of the postclypeus to its anterior margin and on through the anteclypeus, (2) a brown line across the gena below the antennal attachment. Most of the remainder of the head is creamy white. The dorsal surfaces of head, thorax, and abdomen of the nymph, including compound eyes and wing pads, are densely beset with gland hairs. The metatergum near its posterior border bears a small rounded tubercle to each side of the midline. The nymph of *T. unum* Sommerman has a similar pair of tubercles, but they are pointed and adjoin each other on the midline (personal observation). The antennae are relatively short for nymphs of this genus. Even on nymphs with long wing pads, indicating a late instar, the antennae are not longer than three-fourths of the body length. Nymphs in culture generally have a sparse covering of fecal material on their upper surfaces.

**Literature Cited**