

Description of the pupa of *Toxorhynchites (Lynchiella) rutilus septentrionalis* (Diptera: Culicidae)¹

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ABSTRACT. The pupa of *Toxorhynchites (Lynchiella) rutilus septentrionalis* is described and illustrated from a slide of a pupal skin presumably associated with the holotype male collected at Woodstock, Virginia.

The adults of *Toxorhynchites (Lynchiella) rutilus septentrionalis* were described by Dyar & Knab (1906) (as *Megarhinus septentrionalis*) from a series of 13 ♂ and 11 ♀ collected from various localities in Virginia, West Virginia, District of Columbia, Maryland, North Carolina, Louisiana, Missouri, and Mississippi. The male collected at Woodstock, Virginia, is the only specimen bearing a type label and was considered to be the holotype by Stone & Knight (1957). This specimen bears the labels: (1) Woodstock/iss. 24 Aug 04 VA; (2) F. L. Pratt/Collector; (3) Type/No. 9952/U.S.N.M.; (4) *Megarhinus/septentrionalis*/D&K.

During recent studies of type material of *Toxorhynchites* at the National Museum of Natural History, WS found a slide-mounted pupal skin bearing the label: *Megarhinus*/SEPT. ♂/pupated Aug. 20'04/issued Aug 24'04/Woodstock, Va/in TreeStump (Pratt). This corresponds to the label on the holotype and is presumed to be the pupal skin of the type.

The pupa of *Tx. (Lyn.) rutilus septentrionalis* (Dyar & Knab) has never been described or illustrated in detail. Recent studies of *Toxorhynchites (Toxorhynchites)* from the Oriental Region (Moss et al., 1979) indicated pupae do provide some valuable characters for clarifying interspecific relationships in *Toxorhynchites*. Although this particular pupal skin was poorly mounted, the historical value of a complete illustration was considered worthwhile. Additional associated pupal skins for various localities should be examined and compared to those of *Tx. (Lyn.) rutilus rutilus* (Coquillett) described by Reinert (1970). The relationship of these two taxa, currently considered subspecies, needs to be further clarified. Since both can be colonized, they would be ideal subjects for genetic studies. Although *Tx. (Lyn.) rutilus septentrionalis* is fairly common and widely distributed throughout the eastern and southeastern United States, very little material, especially associated pupal and larval skins,

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is available for study. Investigators studying the biology of this species are encouraged to deposit voucher specimens in established entomological collections.

The following tabular description (Table 1) of *Tx. rutilus septentrionalis* presents the complete pupal chaetotaxy for the type slide specimen. A single number indicates identical setal counts on both sides on this specimen. If a particular seta varies, both counts are listed, separated by a comma. Fig. 1 represents a reconstructed illustration of the pupal chaetotaxy. The cephalo-thorax and abdominal segments I-IV are distorted on the pupal slide; therefore, the illustration represents our interpretation of the shape of these segments.

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Table 1. Chaetotaxy of the pupa of *Toxorhynchites (Lynchbiella) rutilus septentrionalis* type

SETA No.	CEPHALO- THORAX	ABDOMEN												
		I	II	III	IV	V	VI	VII	VIII	IX	X			
0	-	-	1	1	1	1	1	1	1	1	-	-	-	-
1	1(b,L)	m(b,d)	m(b,d)	5,9	3,5(b)	5	2	2	3	3	-	-	-	6,8
2	2	1	1	1	1	1	1	1	1	1	-	-	-	-
3	2	1,2(b,L)	1	1(L)	5,6	6,7	4	4	4,6	4,6	-	-	-	-
4	1	4,6	1,5	2,4	5,6	6,7	4	4	1	1	-	-	-	-
5	4,5	4,5	1(L)	1(b,L)	1(b,L)	1(b,L)	1(b,L)	1(b,L)	1	1	-	-	-	-
6	3,4	2	1	1	1,3	1,2	*	*	5	5	-	-	-	-
7	2	2	1,2	1	2	2,3	5	5	1	1	-	-	-	-
8	1,2	-	1	1	1	1	m	m	m	m	-	-	-	-
9	1,2	-	1	1	1	1	1	1	1	1	-	-	-	-
10	2,4	1	1	1,2	1	2,3	1	1	1	1	-	-	-	-
11	4,5	-	1	1	1	1	1	1	1	1	-	-	-	-
12	5,6	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	1	1	1	1	-	-	-	-

B = barbed; b = weakly barbed; d = dendritic; L = long; m = multiple (more than 10 branches).

* Seta missing.

Specimens examined: 1 ♂ type from Woodstock, Virginia, USA.

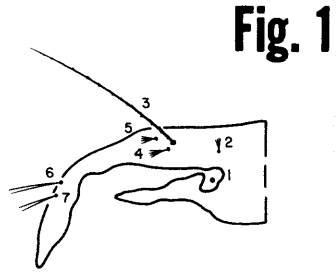
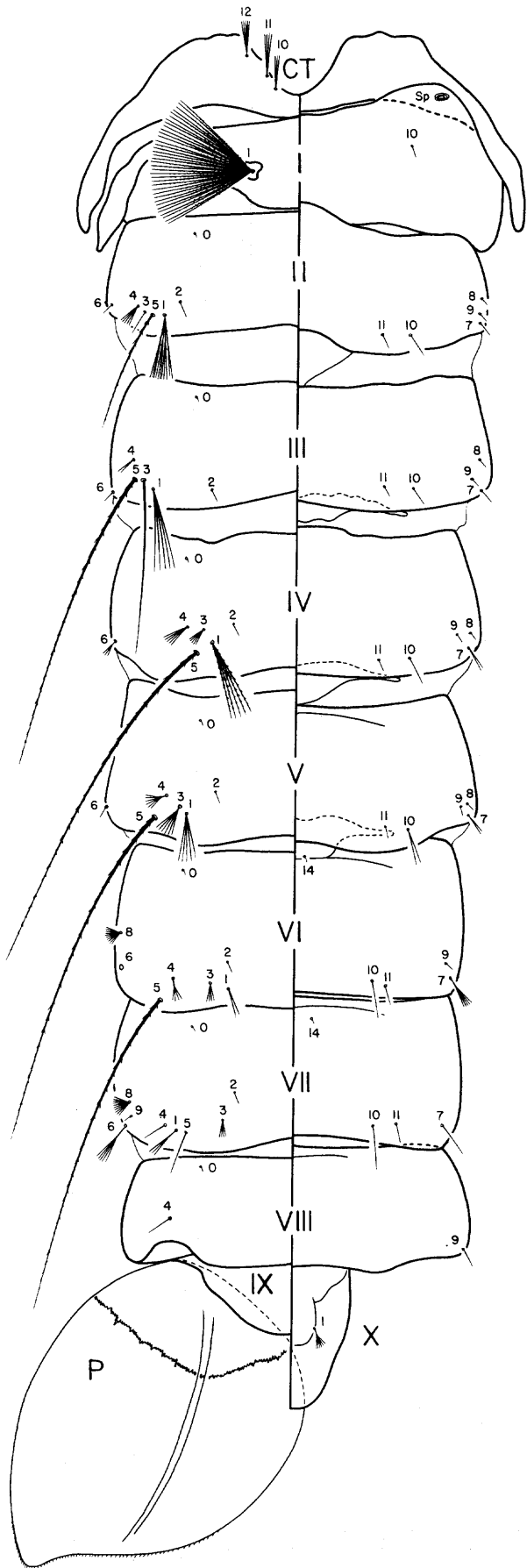
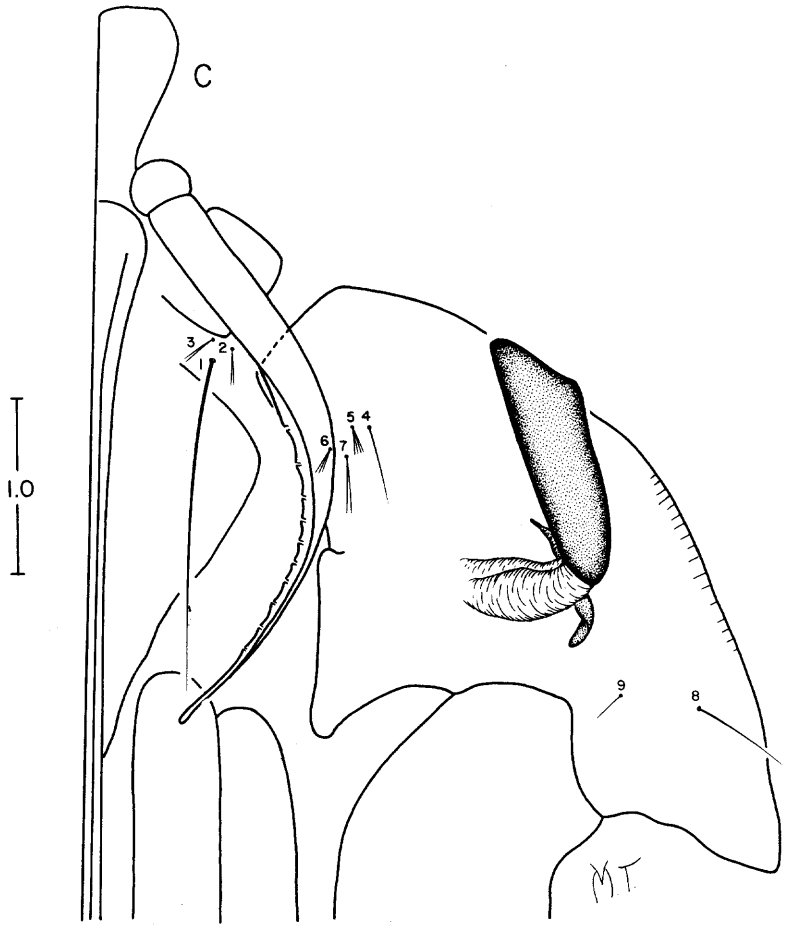


Fig. 1



rutilus septentrionalis