

63502 Location #179(2) Arroyo Rio near Tecolapán, Ver.

Elevation 800' Palaeomonina

Collected larvae about 1/2 mile upstream from Rio Tecolapán, Rio Campa del El Chorrado
stream fed by large "macientes" 1 mile up ^{1/4 volume} + small springs along border. (3/4 of volume)

Rio Campa del
Tecolapán #461
El Chorrado 470
443
59293
62

Vegetation

very large ferns - many varieties

Heliconias - huge

elephant ears - "

many Begonias in bloom

"wandering jew" in bloom

air temp 95°

75-100 stones (large) turned over - no Palaeomonina
found, Heteragrion + many mayflies
No Planarians

6 larvae - 63502

Upstream where wider + shallow 20' x 1/2' substrate of small stones a little larger than gravel - a Palaeomonina collected. many stones held up or dredges used to catch the larvae.

9 II 63

63461 - Loc #24 Rio "Campa del" (?)

spinn drawn - ~~only~~ now loaned to MJW. July 3, 1964

ident to this genus by

comparison + elimination.

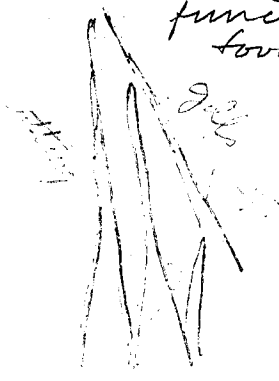
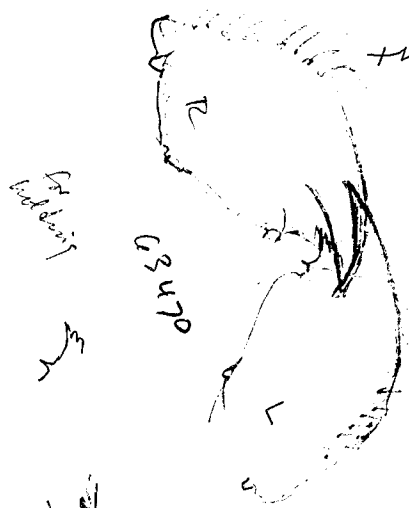
sp. probably desiderata based on previous collis in this region.

3 #5

1 2
4 3 5 6
4 6

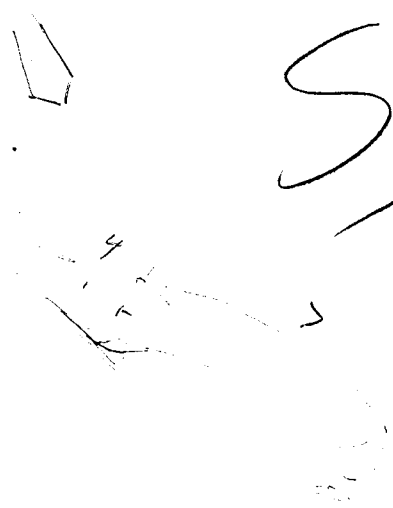
5

is in position when closed the outer band of the R Mandible articulates with the l. mandible between its outer & inner branches. The serrated inner of the M may serve as a cutting tool. However the main work is done by the R M & the small inner of R M does not contact any part of the ~~upper~~ mandibles. Perhaps their function is in holding food.

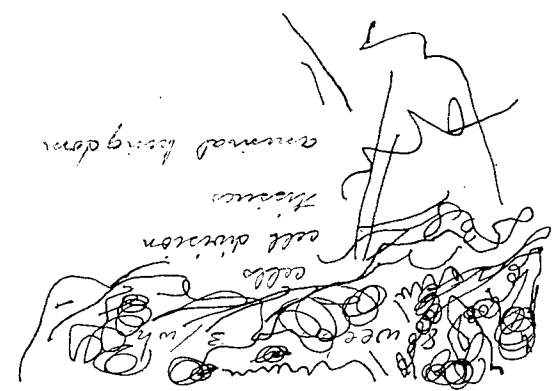


Save

figures
are
good



Vertebral anatomy + physiology
Genetics
Anatomical



around 2000'

1800' Rio "Camparde". Arroyo crossing Pan-American highway (K.1309)
34 mi. S.E. of Comitán, Chis.

Stream 5-10' wide, 1-2' deep

Deposition dams every 100' causing streams to spread out & seek new channels. Much decomposing organic material behind dams. Water highly mineralized & deep mud
Waterfalls 1-2' high over dams.

Wooded - medium sized trees
very large bamboo

several stream beds through wooded area
upstream - pasture - channel with out dams & waterfalls

El Chorroadero 1800' elev 17.7 mi. E. of Tuxtla Gutiérrez, Chis.
(Gaz.)

Rio "Camparde" 34 mi. S.E. of Comitán, Chis.
Arroyo crossing Pan-Am. h'way K.1309; collecting for 1/2 mi. below this crossing. Stream mostly 5-10' wide & averaging

Four of the five genera of the Platystictidae are widely distributed in the tropical area of the Oriental Region (India, Ceylon, Malay Archipelago and the Philippines), although there are no records for the African and Australian Regions. In the New World the family is represented by the genus *Palaeomnema* which is known from the Amazonian region of ^{Peter} Peru to northeastern ^{Mexico} Mexico. Published records are almost exclusively from the Atlantic slope (as observed in Costa Rica by Calvert 1931) from the states of San ~~Jose~~ Potosi, Puebla, Veracruz, Oaxaca, & Tabasco. According to Calvert in a letter to Kennedy (Kennedy, 1938) the majority of species have a very limited or local distribution. Observations made by the writer do not agree with this.

TITLE

Desc. of hitherto unknown larva of *Palaeomnema*, the only Platystictidae N.W. region of family

Acct for why it is a *Palaeomnema*

conclusions drawn from knowledge of larva -

Introduction
 Distribution
 Notes on collecting larvae
 Descriptions of habitats generally
 Larval description
 Habitat characteristics
 specimens attached
 Oviposition data
 Compare my larvae with *Palaeomnema*

Calvert in a letter # majority of sp. have a very limited local distribution
 Kennedy 1938 p 249 - local distribution of species limited

According to Calvert in a letter to K

Ovi took place on a plant 5' high overhanging the edge of a stream where the water was moving slowly & contained much debris. The process was observed for 10 minutes. The ♀ slowly inserted an egg, moved a few millimeters inserted another, moved again, making a zig-zag pattern of the ^{locations of} eggs in the twig. In the period observed 2" were covered. The tip of the abdomen was held as close as possible to the thorax ~~as~~ as the eggs were being deposited. The

The male

of the 5
Four genera of the

a family Platystictidae are widely distributed in
tropical the Oriental Region (India, Ceylon, the Malay
Archipelago + the Philippines), although there are no
records for the African + Australian Regions.

In the New World the family is represented
by the genus Palaeomma which is known from
the Amazonian region of Peru to northeastern Mexico.

In Mexico published records are from the states of
S. L. P., Puebla, Ver., Oax. + Tabasco. ~~and almost exclusively from the Atlantic slope (as observed)~~

in C. R. by C. 1931 (p. 14)

Very little has been published on seasonal distribution of Palaeomma.
Palveant (1931) ~~observed~~ ^{observing his spec. coll. in Costa Rica} that on the Atlantic slope of Costa

Rica where there is no sharp distinction between wet
+ dry seasons the genus Palaeomma was collected
from April through Aug with 1 specim. coll. at sea level
only in Nov. 9.

Q10

22

Very little is known concerning seasonal distribution of the genus *Palaeemnema*. Calvert (1931) during his year of ~~collecting~~^{study} in Costa Rica collected imagoes from 13 April through 10 Aug (plus one spmn. 9 Nov.) on the Atlantic slope where there is no sharp distinction between wet + dry seasons. On the Pacific slope 13 Aug through 9 Nov. ~~was~~^{was} the ~~limit~~^{limit} seasonal range which was during the ^{distinct} wet season.

In 1963 during Jan., Feb., + early March we revisited 12 locations ~~between~~^{on previous trips} from S. L. P. to central Chiapas where at we had ^{on previous trips} collected one or more species of *Pal.* in May June July Aug or Sept. and found no evidence of *Pal.* imagoes at any of these locations except on 12 March, 1 teneral ♂ + 1 ten ♀ of *P. paulitoyaca* were found at a stream 5 1/2 miles N. of Tamay., S. L. P. where the species was in great abundance between May + Sept. In ^{the preceding} Jan of ~~the year~~^{the year} ~~1963~~ this trip "*Palaeemnema* were searched for thoroughly in its usual places + not a ~~trace~~ of one was seen."

3
Larvae of *Palaemnema* were collected from these locations in Mexico as the result of much hard and frequently frustrating work of overturning stones and dredging in streams. The first discovery was made by writer's assistant, Harold White, who had been lifting and examining stones in Arroyo Frio for 30 minutes or more. He finally found two tiny, pale, weak-looking larvae that had little resemblance to Odonata, but he saw that they had the labia of Odonata and brought them for closer inspection. They looked somewhat like termites - pale, weak, with thin integument, ~~but~~ with large head and some darker color on the labial palps. Although much dredging and stone examination by several members of the party preceded and followed discovery at this location and other *Palaemnema* habitats on this expedition, no other larvae were collected.

In 1963, at the place where the above were taken, one hundred large stones were turned over + carefully examined without discovering any larvae. Ephemeroidea + ~~Planaria~~ were not as numerous as in 1962 + no *Planaria* were seen although they were common in 1962. Upstream a 1000 ft. where the water was less swift, the stones of uniform size almost as small as gravel & larvae were caught in the dredge when ~~the~~ stones were kicked up.

complete

	published records	Beatty collector
<i>P. paucicobra</i>	Ver. (C.1931)	— Ver. S.L.P.
<i>P. paulitoyaca</i>	Ver (C.1931), SLP (C1934)	— Ver., S.L.P., Oax
<i>P. desiderata</i>	Ver (C1931)	— Ver, Oax, Chis.
<i>P. paucicaya</i>	Puebla (C1931)	— Chis, Oax
<i>P. paulitaba</i>	Tab. (C1931)	— Ver,
<i>P. dominia</i>	Oax (C.1903)	—————
<i>P. mathalia</i>	—————	Oax Chis (U. Calif)
<i>P. n. sp.</i>	—————	Oax