

**NEW SPECIES AND RECORDS  
OF SOLPUGIDA (ARACHNIDA)  
FROM MEXICO, CENTRAL AMERICA  
AND THE WEST INDIES**

**BY MARTIN H. MUMA  
PORTAL, ARIZONA 85632**

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# NEW SPECIES AND RECORDS OF SOLPUGIDA (ARACHNIDA) FROM MEXICO, CENTRAL AMERICA AND THE WEST INDIES

MARTIN H. MUMA<sup>1</sup>, PORTAL, ARIZONA 85632

During the past two centuries, 14 arachnologists have recorded or described, new species of solpugids from Mexico, Central America, and the West Indies (see Literature Cited). The most significant of these have been the studies of Simon (1879), Banks (1898), Kraepelin (1899 and 1901), Pocock (1902), Roewer (1934), Mello-Leitao (1942), Muma (1970 and 1976), and Vazquez (1981). At the present time 2 families, 10 genera, 9 species-groups, and 50 species are known from this region.

The present paper is largely concerned with the extension of our knowledge of the order Solpugida in Mexico. For completeness, however, new species and records of these arachnids in Central America and the West Indies are included. Two unrecorded genera, 4 unrecorded species-groups, 16 new species, and 9 new records are presented here.

Methods and procedures utilized in examining, studying and describing species, species-groups, and genera were generally the same as those outlined by Muma (1951 through 1970), and as expanded and revised by Brookhart and Muma (1981). Specimens were preserved in 70% ethyl or isopropyl alcohol and examined in 70 to 95% isopropyl alcohol. Total length measurements included the chelicerae, propeltidia and abdomens and were made without magnification under 95% alcohol and adjusted to the nearest one-half millimeter. Legs and palpi were measured in the same manner, but excluded coxae. Chelicerae and propeltidia were measured at 10X to 140X magnifications. Coloration evaluations and morphological descriptions were made at the same magnifications. Setal counts, basic measurements, and cheliceral, propeltidial, and leg and palpal ratios were established using the procedures outlined by Brookhart and Muma (1981).

The ectal cheliceral cluster setae (ECCS) are illustrated for new species, in this paper, on the ectal cheliceral views but are not otherwise discussed owing to their present tentative status, Muma (1985).

Families, subfamilies, genera, and species-groups are not diagnosed here. They are diagnosed in Muma (1951 and 1962), and diagnostic characters are available in the keys and revised keys given in Muma (1951, 1962 and 1970).

Type deposition is noted under the new species descriptions. Families, genera, and species previously recorded from the study area are cited in a list located at the end of the paper.

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FAMILY EREMOBATIDAE ROEWER, 1934

SUBFAMILY EREMOBATINAE ROEWER, 1934

Genus Eremorhax, 1934

None of the new species assigned to this genus significantly extends or alters the presently established generic characters.

montezuma-group, Muma, 1970

A new species of this recently established group (Muma, 1970) is described here. Diagnostic characters of the group include a shallow, indistinct, longitudinal mesal groove of male fixed finger, Eremobates-like cheliceral dentition, Eremorhax-like leg length, distinguishable abdominal ctenidia, and angulate female opercula.

Eremorhax fuscus new species  
Figures 1 to 7

DIAGNOSIS: This species is distinguished from the typical species, E. montezuma (Roewer), by the dusky propeltidium, the well separated dentition of the male movable cheliceral finger that occupies about one-half of the length of the finger and the low ridge-like anterior tooth of the movable finger. Both species lack a palpal scopula, and both species have 4 short, lanceolate abdominal ctenidia, but montezuma has a pale propeltidium and has the dentition of the movable cheliceral finger normal and crowded into one-third of the length of the finger.

MALE HOLOTYPE: Total length 25.0 mm.

	Length	Width
Chelicerae	6.9 mm.	3.1 mm..
Propeltidium	3.9	5.2
Palpus	20.5	CL/CW = 2.22
Leg 1	18.0	PW/PL = 1.33
Leg 4	24.0	A/CP = 5.78

Color in alcohol dark yellow. Eye tubercle dark. Propeltidium reticulate with dusky-purple except for an ovate pale median area. Mesopeltidium and abdominal tergites dusky-purple. Chelicerae, palpi, legs and venter pale to dark yellow and unmarked.

Cheliceral dentition as shown in figures 1, 2, and 3. Mesal groove of fixed finger a shallow indistinct groove extending to the distal end of the setal articulation area. Flagellum complex composed of a dorsal series of striate setae and a ventral series of weakly-plumose to striate setae; the apical plumose seta is not modified. Mesal tooth of movable finger distinct but not visible behind principal tooth in lateral view.

Palpus with the usual cylindrical, spine-like, and long whip-like setae but no scopula. First post-spiracular sternite with 4 short (about 1/3 the length of the succeeding segment) distinct lanceolate ctenidia, figure 4. Palpal metatarsus 3.3

times the length of the tarsus.

FEMALES: Total length 26.0 to 30.0 mm. Allotype smaller measurements.

	Length	Width
Chelicerae	7.3-8.8 mm.	2.9-3.6 mm.
Propeltidium	2.7-3.6	5.3-6.5
Palpus	16.0-18.0	CL/CW = 2.45
Leg 1	13.0-14.0	PW/PL = 1.37
Leg 2	22.0-24.0	A/CP = 4.73

Coloration similar to that of male except that the pale median propeltidial area tends to be quadrate rather than ovate.

Dentition as shown in figure 5. Mesal tooth present but indistinct. Other structures the same as those of the male. Opercula as shown in figures 6 and 7.

TYPE LOCALITY: Male holotype from Putla, Oaxaca, Mexico collected December 13, 1948 by E.S. Ross, deposited in the California Academy of Science, San Francisco, California.

RECORDS: Female allotype from 4 mi. N. Cuernavaca, Morelos, Mexico, December 8, 1948, E.S. Ross; female paratype from 18 mi. W. Zacatecas, Zacatecas, Mexico at 8400 ft. elev., under rock in yellow pine-oak association, both deposited in the California Academy of Science, San Francisco, California.

REMARKS: The two females described here exhibit differences in size, color, and the opercula that may be of specific importance. Since only two specimens were available, it was deemed advisable to describe them as one species until additional material was collected. The larger female (paratype) is darker, with dark palpal tarsi and flatter opercula, figure 7.

#### striatus-group, Muma, 1951

The new species described below does not alter the diagnostic characters cited by Muma (1951 and 1970) for this group. Several new records extend the distribution of 2 known species.

#### Eremorhax gigasellus Muma

Eremorhax gigas, Muma, 1951, p. 48, (not Eremocosta gigas, Roewer).

Eremorhax gigasellus Muma, 1970, p. 8.

Four males of this large species were collected in the state of Coahuila, Mexico, July 1, 1968 by Walters and Turner. This is the third record of this species outside of southwestern Texas and southeastern New Mexico.

#### Eremorhax striatus (Putnam)

Datames striatus Putnam, 1883, p. 255.

Datames cinerea Putnam, 1883, p. 260.

Eremobates cinereus, Kraepelin, 1901, p. 124. Roewer, 1934, p. 575.

Eremorhax striatus, Muma, 1951, p. 45. Muma, 1970, p. 8.

The following are Mexican records of this species; one

female, Nuevo Leon, Mexico; one male, Sonora, Mexico, August 11, 1960.

Eremorhax bajaensis new species  
Figures 8 to 12.

DIAGNOSIS: This species is distinguished from the closely related E. calexicensis Muma by the more extensively dusky propeltidia of both sexes, the slightly dusky palpal tarsi, the indistinct aborted anterior tooth of the male movable cheliceral finger and the smoothly curved widely separated posterior lobes of the female opercula.

MALES: Total length 32.0 to 34.0 mm. Holotype smaller measurements.

	Length	Width
Chelicera	8.4-9.4 mm.	3.6-3.9 mm.
Propeltidium	4.4-4.4	6.0-6.8
Palpus	31.0-32.5	CL/CW=2.34
Leg 1	23.0-25.0	PW/PL=1.45
Leg 4	38.0-40.0	A/CP=7.10

Coloration in alcohol pale to dusky-yellow with the palpi, legs, chelicerae, and venter unmarked. Eye tubercle dusky-purple with a black ring around eyes; propeltidium reticulate with dusky-purple except for a pale spot behind the eye tubercle; mesopeltidium, metapeltidium, and abdominal tergites reticulate with dusky-purple and somewhat darker on tergites; pleura of abdominal segments also dusky purple.

Dentition of chelicerae as shown in figures 8 and 9. Fondal notch U-shaped, wider than deep, about half as wide as the base of the fixed finger and bearing one to three minute denticles. Mesal tooth large and distinct. Groove of fixed finger a flat, half-oval, meso-ventral concavity that occupies about the distal half of the finger. Anterior tooth of movable finger a low flat ridge. Chelicerae longer than wide by a ratio of 1 to 2.3.

Propeltidium wider than long by a ratio of 1 to 1.5. Other characters essentially as in E. calexicensis.

FEMALES: Total length 44.0 to 52.00 mm. Allotype smaller measurements.

	Length	Width
Chelicerae	6.1-7.3 mm.	2.6-3.1 mm.
Propeltidium	2.9-3.2	4.4-5.6
Palpus	30.0-34.0	CL/CW=2.31
Leg 1	24.0-27.0	PW/PL=1.61
Leg 4	39.0-44.0	A/CP=10.10

Coloration in alcohol similar to that of males except females are paler and propeltidial markings are not as distinct.

Dentition of chelicerae as shown in figure 10. Fondal notch as in males. Chelicerae longer than wide by a ratio of 1 to 2.3.

Opercula as in figures 11 and 12 of allotype and paratype.

General structure as in males but much more robust. Propeltidium wider than long by a ratio of 1 to 1.6. Mean appendage length 10.10 times the mean length of the combined chelicerae and propeltidium.

TYPE LOCALITY: Male holotype from 2 miles east of Rancho

San Salvador along road to Valle Trinidad from Ensenada, Baja California Norte, Mexico on June 21, 1973 by S.C. Williams and K. B. Blair, deposited in California Academy of Science, San Francisco. Female allotype from 7 miles north Santa Maria, Baja California Norte, on July 12, 1969 by S. C. Williams and V. F. Lee, deposited in California Academy of Science, San Francisco. Female paratype with same data as allotype.

RECORDS: Male paratype from Campo, California on July 7, 1969 by Steve Parkis.

REMARKS: The legs of females of this species are distinctly proportionately longer than those of E. calexicensis and E. titania Muma. The above cited female paratype lacks the oval, anterior opercular concavities present on the female allotype.

#### Genus Eremobates Banks, 1900

None of the new species assigned to this genus significantly extend or alter the presently established generic characters. One species, E. lapazi new species, requires the establishment of a new species-group, which is here named the lapazi-group.

#### palpisetulosus-group, Muma, 1951

This is proving to be the largest and most difficult species-group of Eremobates. Fondal tooth formulae are no longer considered valid for genus or group separation; they are subject to wear, especially by females. Females, unless collected in association with males or from within known distribution ranges, are presently nearly impossible to place to species. Two new species are described here. Several new records, extending species ranges, are also included.

#### Eremobates bajaensis new species Figure 13

DIAGNOSIS: Distinguished from other male group members that lack ctenidia and scopulae by the presence of a distinct mesal tooth, the obscure bilobed anterior tooth and the laterally viewed obscure ventral notch of the movable cheliceral finger. The fondal notch is equally as deep as wide and narrower than the basal width of the fixed cheliceral finger. E. pallidus Muma and Brookhart seems to be the most closely related species but the lack of ctenidia in this species and the nearly indistinguishable anterior tooth are distinctive. Females are unknown.

MALE: Total length 20.0 to 21.0 mm. Holotype larger measurements.

	Length	Width
Chelicera	5.5-5.5 mm.	2.3-2.3 mm.
Propeltidium	3.9-4.2	2.2-2.1
Palpus	19.0-19.5	CL/CW=2.39
Leg 1	15.0-16.0	PW/PL=1.86
Leg 4	24.0-25.0	A/CP=6.17

Structure similar to that of other species of the group and as indicated, figures 13 of the chelicerae, and above measurements and ratios. The specimens also have a mesoventral

row of 6 or 7 distinguishable spine-like setae apically on the palpal femur and basally a mesoventral row of 4 distinguishable spine-like setae on the palpal tibia.

TYPE LOCALITY: Male holotype from 0.5 miles south of La Virgen at 2,000 ft., Baja California Norte, Mexico on April 9, 1969 by S. C. Williams, deposited in the California Academy of Science in San Francisco. Male paratype from Socorro Sand Dunes at 100 ft., Baja California Norte, Mexico on April 6, 1969 by S. C. Williams, deposited in the American Museum of Natural History.

Eremobates coahuilanus new species  
Figures 14 and 15

DIAGNOSIS: Distinguished from other male members of species with 4 ctenidia and no scopula by having the ctenidia moderate in length to long and flattened, the virtual lack of an anterior tooth on the movable cheliceral finger, and the propeltidium totally lacking dusky markings. E. nodularis Muma is the most readily confused species but it has 2 short ctenidia, dark markings on the propeltidium, and pale abdominal pleura. Females of E. coahuilanus are unknown.

MALES Total length 28.0 to 31.0 mm. Holotype larger measurements.

	Length	Width
Chelicerae	7.8-7.8 mm.	3.9-3.6 mm.
Propeltidium	3.9-3.6	6.0-6.0
Palpus	22.0-22.0	CL/CW=2.05
Leg 1	18.0-18.0	PW/PL=1.57
Leg 4	29.5-29.0	A/CP=5.90

Coloration in alcohol pale with no distinctive markings.

Structure similar to that of other species of the group and as indicated in figure 14 of the chelicerae, figure 15 of the ctenidia, and above measurements and ratios. The mesoventral apical group of spine-like setae on the palpal femora and the basal group on tibiae vary from 10 to 12 and 1 to 2 respectively.

TYPE LOCALITY: Male holotype from 14 mi. SSW of Cuatro Ciénegas, Coahuila, Mexico on August 9, 1968 by S. C. Williams, M. M. Bentzien, J. Bigelow, and W. L. Minckley, deposited in the collection of the California Academy of Science, San Francisco. Male paratype from 2.9 mi. SE Rancho Orozco, Cuatro Ciénegas Basin, Coahuila, Mexico on August 11, 1968 by S. C. Williams, M. M. Bentzien, and W. L. Minckley, deposited in the collection of the California Academy of Science, San Francisco.

Eremobates guenini (Roewer)

Eremognatha guenini Roewer, 1934, p. 567.

Eremobates guenini, Muma, 1970, p. 17.

Roewer (1934) recorded males of this species from 2 localities in the state of Durango, Mexico. The author has seen both specimens. I have also seen 2 males from the state of Coahuila, Mexico collected August 6, 1972 by Norman Horner.



Eremobates nodularis Muma

Eremobates nodularis Muma, 1951, p. 69; Muma, 1962, p. 4.  
Eremobates hessei (Roewer), Muma, 1970, p. 18. (misplacement of specimens of nodularis Muma from Texas, New Mexico, and Arizona by Muma (1970)).

This species is common and widely known in the United States where it ranges from south central Texas, through southern New Mexico, Arizona, and California to the Pacific Ocean.

Although there are no present records from Mexico, it will undoubtedly be found in the adjoining Mexican states of Chihuahua, Sonora, and possibly in Baja California Norte.

Eremobates hessei (Roewer)

Eremopus hessei Roewer, 1934, p. 563.  
Eremobates hessei Muma, 1970, p. 18. (type only; misplacement of nodularis Muma from Texas, New Mexico, and Arizona by Muma 1970).

Females are distinguished by the narrower anterior lobes of the opercula, no trace ctenidia, and the presence of only 1 intermediate tooth between the medial and anterior teeth of the fixed cheliceral finger. There are no additional records of the species, but it is probable that it is a central Mexico form.

Eremobates marathoni Muma

Eremobates marathoni Muma, 1951, p. 63; Muma, 1970, p. 18.

A male and a female from Mexico extend the known range of this species, and make the females recognizable for the first time. Males are now known to vary in size from 30.0 to 33.0 mm.

DIAGNOSIS: Distinguished from other male group members with 2 ctenidia and no scopula, by the short slender ctenidia, a distinct mesal tooth, bipartite anterior tooth of the movable cheliceral finger, and dark palpal metatarsus and tarsus. It does not seem to be closely related to any members of the palpisetulosus group. Females have distinctive opercula and 2 fine hair-like trace ctenidia.

RECORD: Female allotype and male at night on desert from 6 mi. S of Nuevo Laredo, Tamaulipas, Mexico on July 10, 1966 by R. E. Woodruff, deposited in the Florida State collection of Arthropods, Gainesville.

REMARKS: This species is now known by both sexes, from Texas in the United States, and Tamaulipas in Mexico.

angustus-group

The single new species described here does not significantly alter the diagnostic group characters cited in Muma (1951). Fondal tooth formulae are no longer considered valid for genus or group separation; they are subject to wear, especially by females.

Eremobates becki new species  
Figure 16

DIAGNOSIS: This species differs from previously described forms by the shallow quadrate shape of the male fondal notch and the flattened but almost normal tooth-like anterior tooth of the male movable cheliceral finger. There is no scopula on the male palpus, and no discernible ctenidia on the first post-stigmatic abdominal sternite of the male. Females are unknown.

MALE HOLOTYPE: Total length 18.5 mm.

	Length	Width
Chelicerae	5.5 mm.	2.9 mm.
Propeltidium	2.9	3.9
Palpi	18.0	CL/CW=1.90
Leg 1	13.5	PW/PL=1.34
Leg 4	24.5	A/CP=6.66

Coloration in alcohol obscure. The specimen has dried out at one time and has been recovered. There are no distinct markings on the appendages or abdomen. The propeltidium is dark along the anterior margin and apparently distinctly dusky on the anterior half.

Structure essentially the same as that of E. angustus Muma and E. cruzi Muma except that the anterior tooth of the movable cheliceral finger is distinctly tooth-like, the fondal notch is quadrangular, slightly wider than long, and only slightly narrower or wider than the fixed finger. Figure 16 shows the cheliceral dentition. The above measurements and ratios are also distinctive except for that of length; the abdomen is shriveled.

TYPE LOCALITY: Male holotype from Colonia Garcia, Chihuahua, Mexico on July 19, 1931 by D. Eldon Beck, deposited in the collection of the Zoology Department of Brigham Young University, Provo, Utah.

REMARKS: If the type of E. toltecus (Pocock) is ever located, this species could well prove to be synonymous.

E. angustus and E. cruzi, the two previously described species of this group, have the fondal notch triangular in form, distinctly longer than wide, and much wider than the base of the fixed cheliceral finger.

The ECCS have been broken off of both chelicerae and cannot be illustrated.

lapazi-group, new group

Males of this group have a constriction but no distinct notch or ectodorsal tooth-like process at the base of the fixed cheliceral finger when viewed from above. Mesoventral groove of fixed finger dilated basally. The only known male has 3 apparently normal sword-like ctenidia on the first post-spiracular abdominal sternite. Females have roughly triangular genital opercula that are adjacent and essentially parallel along most of their mesal margins, undulate along their posterior margins, and provided with a narrow slot-like posteriomesal notch.

Eremobates lapazi new species

Figures 17 to 22.

DIAGNOSIS: The group characteristics cited above will serve to distinguish this species until other members of the group are described.

MALE HOLOTYPE: Type length 34.0 mm.

	Length	Width
Chelicerae	8.8 mm.	4.5 mm.
Propeltidium	4.7	6.5
Palpus	28.0	CL/CW=1.96
Leg 1	24.0	PW/PL=1.38
Leg 4	38.0	A/CP=6.66

Coloration in alcohol pale to dark yellow with dusky purplish markings as follows: chelicerae with a pair of dorsal dusky stripes; eye tubercle dark; propeltidium reticulate dusky, darker at margins, a pair of light ovate areas beside the eye tubercle, and a narrow, clear yellow mesal stripe; mesopeltidium, metapeltidium, and abdominal tergites reticulate dusky; palpal and leg markings somewhat faded but palpus apparently pale on tarsus and dusky on metatarsus, and fourth leg apparently dusky apically on femur and basally on tibia; malleoli white.

Dentition as shown in figures 17 and 18. Anterior tooth apparently reduced to a low ridge; fondal notch sub-triangular in form, 1.6 times the basal width of the fixed finger, and with 2 to 4 minute denticules; mesal tooth distinct.

Mesal groove of fixed finger typical of genus, narrow distally and dilated basally. Flagellum complex typical of genus. Mesal setae of movable finger plumose dorsally but simple ventrally. Palpal scopula composed of about 200 small papillae, 10 on tarsus, and 190 on most of metatarsus. Ctenidia on first post-stigmatic abdominal sternite as shown in figure 19.

FEMALE ALLOTYPE: Total length 37.0 mm.

	Length	Width
Chelicerae	7.8 mm.	4.7 mm.
Propeltidium	4.4	9.9
Palpi	23.0	CL/CW=1.66
Leg 1	21.0	PW/PL=2.25
Leg 4	32.0	A/CP=6.22

Coloration in alcohol almost identical with that of the male except that the pleura of the abdomen are also dusky.

Dentition as shown in figures 20 and 21. Mesal tooth distinct. Mesal setae of movable cheliceral finger plumose dorsally and simple ventrally.

Structure typical of the genus and similar to that of the male except that there is no palpal scopula and there are no ctenidia on the first post-stigmatic abdominal sternite. Genital opercula as shown in figure 22.

TYPE LOCALITY: Male holotype and female allotype from 10 mi. NW of La Paz, Baja California, Mexico on October 6, 1941 by Rose and Bohart, deposited in the collection of the California Academy of Science, San Francisco, California.

REMARKS: This species is placed in a new species-group of the genus because of its large size, the absence or reduction of

the anterior tooth on the male movable cheliceral finger and the distinctive female genital opercula.

Genus Eremothera Muma, 1951

The new records and new species of this genus that are included here do not significantly alter the diagnostic characters cited by Muma (1951). It should be noted, however, that one of the two large spatulate setae of the flagellum complex may be the apical plumose bristle and not a dorsal bristle as previously stated.

Eremothera sculpturata Muma

Eremothera sculpturata Muma, 1951, p. 92; Muma, 1970, p. 29.

Muma (1951) failed to note that this species has the tarsus and metatarsus of the palpus darkened or dusky.

A single atypical male collected by C. Eberhard, September 20, 1965 at Puerto Penasco, Sonora, Mexico is the first record of this species outside of the state of Arizona. The specimen has six flattened, sword-like ctenidia and a large tooth-like anterior tooth on the movable cheliceral finger.

Eremothera drachmani new species  
Figures 23 to 25

DIAGNOSIS: Aside from qualitative differences in the sculpturata in the possession of a palpal scopula, only 4 flattened abdominal ctenidia, the palpus dusky or darkened on the tarsus, metatarsus, and tibia, and both the third and fourth legs dark laterally on the tibia and on most of the femur. Females are unknown.

MALE HOLOTYPE: Total length 23.0 mm.

	Length	Width
Chelicerae	5.3 mm.	3.1 mm.
Propeltidium	3.2	5.2
Palpus	22.0	CL/CW=1.71
Leg 1	17.0	PW/PL=1.63
Leg 4	28.0	A/CP=7.88

Coloration in alcohol similar to that of E. sculpturata except that the palpi are dusky on the tarsi, metatarsi, and tibiae, and both leg 3 and leg 4 are dark laterally on the tibiae and most of the femora.

Structure essentially as in sculpturata. Dentition as shown in figures 23 and 24. Palpus provided with a scopula of 80 plus or minus papillae on the metatarsus. First post-stigmatic abdominal sternite with 4 flattened sword-like ctenidia, figure 25. Other structures the same as for sculpturata and probably of generic importance only.

TYPE LOCALITY: Male holotype on patio at Neuva Guaymas, Sonora, Mexico, October 1969, by Grace Drachman deposited in the American Museum of Natural History.

REMARKS: This species becomes the second known species of

the genus. Eremothera barberi Muma (1951) has been moved by Brookhart and Muma (1981) to the pallipes species-group of Eremobates.

SUBFAMILY THEROBATINAE MUMA, 1951

Genus Eremochelis Roewer, 1934

The key to species-groups of this genus in Muma (1951), and as revised by Muma (1962 and 1970) characterizes the presently recognized sub-generic groupings within Eremochelis. The descriptions of the following 3 new species from Mexico do not significantly alter these concepts. Two new species apparently belong in the bilobatus species-group of the genus. Eremochelis sonorae new species is a member of the andreasana species-group.

bilobatus-group

Eremochelis bilobatus (Muma)

Therobates bilobatus Muma, 1951, p. 92.

Eremochelis bilobatus (Muma), 1970, p. 33.

A male from Durango, Mexico appears to be this species. It is much smaller and more slender than typical specimens, and has 5 elongate ctenidia.

Eremochelis truncus new species

Figures 26 and 27.

DIAGNOSIS: The specific name refers to the opercula which do not extend to the posterior margin of the first abdominal segment. Otherwise the species seems to belong in this group of the genus. It is distinct from all other known species and may later have to be moved to another species-group.

FEMALE HOLOTYPE: Total length 22.0 mm.

	Length	Width
Chelicerae	5.6 mm.	2.1 mm.
Propeltidium	2.3	4.2
Palpus	16.0	CL/CW=2.67
Leg 1	13.0	PW/PL=1.83
Leg 4	20.0	A/CP=6.20

Coloration in alcohol pale yellow with a dusky purple eye tubercle, and a faintly dusky tarsus and metatarsus of the palpus. All other structures are pale with an unusual pale lavender tinge on the margins.

Structure seemingly similar to that of other females of the group as indicated by the above measurements and ratios, and the cheliceral profile shown in figure 26. However, the opercula are distinctive as shown in figure 27; there is a low rounded mesal tooth on the movable cheliceral finger, and there are no claws on the tarsi of leg 1. There are no distinguishable trace ctenidia on the first post-stigmatic abdominal sternite.

TYPE LOCALITY: Female holotype from Isla Coyote just north of Isla San Francisco, Baja California Sur, Mexico on April 19,

1962 by Chris Parrish, deposited in the collection of the California Academy of Science, San Francisco, California.

Eremochelis rossi new species  
Figures 28 and 29.

DIAGNOSIS: This species is distinguished by its small size, pale coloration, slightly different cheliceral profile and 4 short linear abdominal ctenidia. Females are unknown.

MALE HOLOTYPE: Total length 13.0 mm.

	Length	Width
Chelicerae	2.0 mm.	0.9 mm.
Propeltidium	1.6	1.9
Palpus	12.0	CL/CW=3.22
Leg 1	8.0	PW/PL=1.19
Leg 4	13.00	A/CP=7.33

Coloration in alcohol very similar to that of E. cochisae Muma except this species has the purplish markings much less dense and paler; eye tubercle dark; propeltidium with an incomplete submarginal dark band; the purplish markings on the abdominal tergites tend to form 3 stripes, and the malleoli are not distinctly margined dark.

Structure similar to other species of the group. The spine-like palpal setae are slender and not countable. Chelicerae as in figure 28; ctenidia as in figure 29. Palpal metatarsus longer than tarsus by a ratio of 3 to 1; there is no palpal scopula.

TYPE LOCALITY: Male holotype from 11,000 ft. elevation on north slope of Mt. Popocatepetl, Mexico on November 22, 1946 by E. S. Ross, deposited in the collection of the California Academy of Science, San Francisco, California.

Eremochelis flexacus Muma

Therobates flexacus Muma, 1963, p. 3.

Eremochelis flexacus (Muma); Muma, 1970, p. 34.

This species has recently been collected in Baja California, Mexico; one male from Sierra Juarez, 2 mi. SW La Rumorosa at 4300 ft. elevation on April 1, 1969 by S. C. Williams. It is now known from Nevada, USA and Baja California Norte, Mexico.

andreasana-group

Eremochelis andreasana (Muma)

Therobates andreasana Muma, 1962, p. 16.

Eremochelis andreasana (Muma), 1970, p. 35.

A male of this species from Baja California, Mexico, collected on May 2, 1968 is in the San Diego State Museum, San Diego, California.

Eremochelis sonora new species  
Figures 30 to 34.

DIAGNOSIS: Males of this species are distinguished from the typical species of the group by their larger size, pale coloration, more extensive setal articulation area on the fixed cheliceral finger, and an obscure apical flange on the movable cheliceral finger. Females are distinguished by their size, coloration, cheliceral pattern and more obvious lateral pits at the margins of the opercula.

MALE HOLOTYPE: Total length 22.0 mm.

	Length	Width
Chelicerae	5.2 mm.	2.3 mm.
Propeltidium	2.3	4.2
Palpus	19.0	CL/CW=2.26
Leg 1	14.0	PW/PL=1.83
Leg 4	24.0	A/CP=7.60

Coloration in alcohol pale to rusty yellow with indistinct purplish brown markings as follows: eye tubercle dark; propeltidium lightly dusky except for a large, median, ovate, pale area; mesopeltidium, metapeltidium and abdominal tergites reticulate dusky; abdominal pleura pale; chelicerae, palpi and legs pale except for extreme distal end of palpal metatarsus and tarsus which are lightly dusky; venter and malleoli pale.

Structure similar to that of E. andreasana but specifically different as indicated in measurements and ratios given above, figures 30 and 31 of the chelicera, and figure 32 of the abdominal ctenidia. There is no mesal tooth on the movable finger of the chelicerae, the setal articulation area of the fixed cheliceral finger occupies two-thirds of the length of the finger. There is no palpal scopula, the ventral spine-like setae of the palpus are too slender to count, and the palpal metatarsus is 3.3 times the length of the tarsus.

FEMALE ALLOTYPE : Total length 21.0 mm.

	Length	Width
Chelicerae	5.5 mm.	2.1 mm.
Propeltidium	2.2	3.9
Palpus	15.0	CL/CW=2.62
Leg 1	11.5	PW/PL=1.77
Leg 4	19.5	A/CP=6.00

Coloration in alcohol similar to that of male but much more distinct.

Structure similar to that of E. andreasana with specific differences as indicated in the measurements and ratios given above, figure 33 of the chelicerae, and figure 34 of the opercula. There is no mesal tooth on the movable cheliceral finger and there are 2 trace ctenidia on the first post-stigmatic abdominal sternite.

TYPE LOCALITY: Male holotype, female allotype and an immature from San Carlos Bay, Sonora, Mexico on August 10, 1960 by P. H. Arnaud, E. S. Ross, and D. C. Rentz, deposited in the California Academy of Science, San Francisco.

Genus Hemerotrecha Banks, 1903

Hemerotrecha Banks, 1903, p. 78; Muma, 1951, p. 98; Muma, 1970, p. 37.

The generic description given by Banks (1903) was expanded by Muma (1951) to include species-groups other than the typical group, originally described. Muma (1970) revised and expanded the key to species-groups given in 1951. The genus is now believed to encompass 5 unique species-groups.

The following new species from Mexico is a member of the branchi species-group, and expands the group to 7 species.

Hemerotrecha cazieri new species

Figures 35 to 37.

DIAGNOSIS: This is the only species of the group that totally lacks dark markings on the palpi and legs. Males have three widely distributed tiny aborted teeth on the ventral margin of the fixed cheliceral finger, the striate bristles of the flagellum complex are flattened apically, there are 2 hooked, striate, and 1 hooked, plumose flagellar setae, the abdominal ctenidia are much longer than the succeeding sternites, and the palpal scopula is composed of only 10 to 16 weak papillae. Females are unknown.

MALE HOLOTYPE: Total length 7.1 mm.

	Length	Width
Chelicerae	2.6 mm.	1.0 mm.
Propeltidium	1.6	1.8
Palpus	9.5	CL/CW=2.60
Leg 1	6.5	PW/PL=1.13
Leg 4	12.0	A/CP=6.66

Coloration in alcohol entirely pale yellow and without markings except for black rings around the eyes.

Structure similar to that of other males of the group but specifically different as indicated in the diagnosis, measurements, and ratios above, and figure 35 of the chelicera, figure 36 of the palpal scopula, and figure 37 of the abdominal ctenidia. The palpal metatarsus is 4 times the length of the tarsus which is more than twice as long as it is wide. There is no mesal tooth on the movable finger of the chelicerae.

TYPE LOCALITY: Male holotype from sand dunes 26 mi. E of San Luis, Sonora, Mexico on July 4, 1968 by M. A. Cazier, J. Bigelow, N. Leppla, and J. Davidson, deposited in the collection of the California Academy of Science, San Francisco, California.

FAMILY AMMOTRECHIDAE ROEWER, 1934

SUBFAMILY AMMOTRECHINAE, ROEWER, 1934

Genus Ammotrecha Banks, 1900

Roewer's (1934) leg tarsal spine-like setal formulae for this genus are 1, 2, 2, 1 for legs 2 and 3 and 2, 2-2-2, 1 for leg 4. These species have a mesal tooth on the movable cheliceral finger, and an intermediate and two primary teeth



distad of the principal tooth of the fixed cheliceral finger. Except for a distinct to indistinct dorsal indentation, the male fixed cheliceral finger is unmodified. Two new species are included here.

Ammotrecha stolli Pocock

Cleobis stolli Pocock, 1895, p. 97.

Ammotrecha stolli (Pocock), Kraepelin, 1901, p. 115; Roewer, 1934, p. 597; Muma, 1951, p. 123; Muma, 1970, p. 50.

Ammotrecha picta Pocock, 1902, p. 65.

Muma (1970) overlooked a Texas record in Muma (1951). Additional females are here recorded from Chiapas, Mexico and El Salvador.

One female from San Cristobal de las Casas, Chiapas, Mexico on October 29, 1971 by Dennis E. Breedlove; one female from Quezaltepeque, El Salvador on July 5, 1963 by M. Irwin and D. Q. Cavagnaro.

Ammotrecha chiapasi new species

Figures 38 to 40.

DIAGNOSIS: This species is readily distinguished from other species of the genus by the white ring at the proximal end of the palpal metatarsus, and the lack of paired, stout spine-like setae on the palpal metatarsus. Males have a slight indentation on the upper margin of the fixed cheliceral finger at the posterior end of the sclerotized area. Females have the opercula 2.5 times wider than long with the posterior notch extending  $\frac{3}{5}$  the length of the opercula.

MALES: Total length 16.5 to 17.0 mm. Chelicerae 1.3 to 1.4 mm. wide and 4.2 to 4.7 mm. long. Propeltidium 2.9 to 3.1 mm. wide and 2.3 to 2.7 mm. long. Holotype larger measurements.

Coloration in alcohol pale to bright yellow marked with purplish brown essentially as in A. stolli. Venter, malleoli, sternites and appendage coxae pale yellow. Chelicerae and propeltidium bright yellow with propeltidium slightly darker. Abdominal tergites dark along margins and lighter to almost white mesally; abdominal pleura dusky dorsally and pale laterally. Legs and palpi dusky on tarsi, metatarsi, tibiae and apical ends of femora; palpi with a pale to white ring at the proximal end of the metatarsi that is broadest ventrally and interrupted dorsally. One of the paratypes has the abdominal pleura paler than usual with the result that the tergite markings form two distinct dorsal stripes.

Dentition essentially typical of other males of the genus except for the dorsal indentation of the fixed cheliceral finger as shown in figure 38. Palpi clothed with the usual cylinder bristles, and long and short hairs, but lacking a series of stout spine-like setae on the tibiae and metatarsi as shown in figure 39.

Chelicerae 3.2 times longer than wide. Propeltidium 1.2 times wider than long. The eyes are separated by less than one diameter and the flagellum is attached to the fixed finger with

an elongate, elliptical disk just behind the principal tooth. Flagellum not visible from ectal view.

FEMALES: Total length 20.0 to 20.5 mm. Chelicerae 1.7 to 2.1 mm. wide and 5.3 to 5.6 mm. long. Propeltidium 3.5 to 4.7 mm. wide and 2.7 to 3.1 mm. long. Allotype larger measurements.

Female coloration essentially the same as that of the males except somewhat paler.

Structure also similar to that of the males except for sexual differences. Chelicerae as shown in figure 40, with peak of cheliceral carina over first fondal tooth. Palpi clothed as in the males.

Chelicerae 2.9 times longer than wide. Propeltidium 1.4 times wider than long. Eyes separated by less than one diameter. Opercula 2.5 times wider than long; caudal notch  $\frac{3}{5}$  times the length of the opercula.

TYPE LOCALITY: Male holotype, female allotype, 2 male paratypes, and one female paratype taken in house, San Cristobal de las Casas, Chiapas, Mexico on October 29, 1971 by Dennis E. Breedlove, deposited in the collection of the California Academy of Science, San Francisco, California.

Ammotrecha itzaana new species  
Figures 41 and 42.

DIAGNOSIS: This species appears to be closely related to A. stolli. It is distinguished by its pale palpi which are dark only on the tarsi and apical ends of the metatarsi and the obscure indentation on the dorsal margin of the fixed cheliceral finger. Females are unknown. The two known males also have markings much paler and less extensive than those of A. stolli, A. nigrescens, and A. chiapasi. It differs from A. limbata in the possession of 5 rather than 4 pairs of spine-like setae on the palpal metatarsus.

MALES: Total length 12.5 to 16.5 mm. Chelicerae 0.9 to 1.3 mm. wide and 3.2 to 4.2 mm. long. Propeltidium 2.2 to 3.0 mm. wide and 2.1 to 2.6 mm. long. Holotype larger measurements.

Coloration in alcohol pale to dusty yellow with purplish brown markings as follows: venter, sternites, malleoli, and appendage coxae pale yellow; chelicerae and propeltidium dusty yellow; palpi dark on tarsi and apical half of metatarsi with other segments dusty yellow; leg 1 dusky on tarsus, metatarsus, and tibia with other segments pale yellow; leg 2 indistinctly dusky on femur, tibia, and metatarsus with other segments pale yellow; leg 4 dusky on femur, tibia, and metatarsus with other segments pale yellow.

Structure similar to that of other males of the genus. Dentition as shown in figure 41. Palpi with 5 pairs of spine-like setae, as shown in figure 42. Chelicerae 3.4 times longer than wide. Propeltidium 1.1 times wider than long. Eyes separated by slightly less than one diameter. Flagellum attached to fixed finger behind principal tooth.

TYPE LOCALITY: Male holotype and male paratype at lights,

Chichen Itza, Yucatan, Mexico on June 24, 1951 by L. J. Stannard, deposited in the American Museum of Natural History, New York, N.Y.

Genus Ammotrechella Roewer, 1934

Roewer's (1934) leg, tarsal, spine-like, setal formulae for this genus are 1,2,2,1 for legs 2 and 3 and 2,2,-2-2 for leg 4. These species have a mesal tooth on the movable cheliceral finger and 2 primary teeth distad of the principal tooth of the fixed cheliceral finger. Males of this genus often carry remnants of the female dorsal carina on the fixed cheliceral finger with very little additional modification. Two new species are described here.

Ammotrechella maguirei new species  
Figures 43 and 44.

DIAGNOSIS: This species seems to be most closely related to A. apejii Muma. It is easily distinguished by its pale body, chelicerae, and legs; A. apejii has these structures rust to purplish brown in color. The cheliceral pattern is also distinctive. Both species are known only from males.

MALE HOLOTYPE: Total length 9.4 mm. Chelicerae 0.8 mm. wide and 2.4 mm. long. Propeltidium 1.9 mm. wide and 1.8 mm. long.

Coloration in alcohol pale yellow to white except for a narrow brown line along the anterior margin of the propeltidium, a dark eye tubercle, and a dark purplish brown palpal tarsus and apical two-thirds of the metatarsus. Other palpal segments and femora and tibiae of leg 4 appear to be rusty yellow in color, but this is caused by a dense clothing of tiny, stout, cylindrical setae.

Structure typical of other males of the genus. Cheliceral dentition as shown in figure 43. Palpal clothing as shown in figure 44. Chelicerae 3 times as long as wide. Propeltidium 1.1 times wider than long. Eyes less than a diameter apart.

TYPE LOCALITY: Male holotype from under rock on north end of Water Cay, Caicos Island, British West Indies, September, 1973, by John B. Iverson, deposited in the American Museum of Natural History, New York, N. Y.

REMARKS: The collector of this species, J. B. Iverson, requested that it be named for the Honorable C. W. Maguire, a very cooperative land owner on the island. I am pleased to do so.

Ammotrechella bahamica new species  
Figures 45 and 46.

DIAGNOSIS: Since males and females of this and other ammotrechid species have similar palpal ornamentation, Roewer (1934) obviously did not have the male of Koch's species, Ammotrechella geniculata (Koch); see Muma (1970). Both the type series and a lectotype of Koch's species designated by Roewer (1932) have been misplaced, lost or destroyed but specimens from

South America and the greater Antilles are dark and well striped with 3 pairs of palpal metatarsal spine-like setae. Those from the northern West Indies are very pale or totally unstriped specimens with 3 to 6 pairs of palpal metatarsal spine-like setae and those with 3 pairs are probably the present species.

This species also may be closely related to A. diaspora Roewer but this cannot be ascertained until males of that species have been collected. Females of the present species are unknown.

MALE HOLOTYPE: Total length 13.0 mm. Chelicerae 0.9 mm. wide and 3.0 mm. long. Propeltidium 2.1 mm. wide and 2.3 mm. long.

Coloration in alcohol white to pale to dusky yellow with dusky brownish to purplish markings as follows: eye tubercle dark with a narrow pale line between the eyes; chelicerae, all dorsal tergites, pleura, venter, sternites, and malleoli pale; palpi dusky on tarsus, metatarsus, tibia, and apical ends of the femur; legs 1 and 2 pale, legs 3 and 4 dusky on metatarsi, tibiae, and most of the femora.

Structure similar to that of other members of the genus. Cheliceral dentition as in figure 45. Palpal armature as in figure 46. Chelicera 3.3 times longer than wide. Propeltidium 1.1 times longer than wide. There is a distinct mesal tooth on the movable cheliceral finger and 4 dorsal teeth on both the ectal and mesal rows. The spine-like palpal setae seem to be elongate, strong, dark, cylinder setae.

TYPE LOCALITY: Male holotype from Weyer House, Winding Bay, Eleuthera Island, Bahama Islands in June 1965 by A. Spielman, deposited in the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts.

#### SUBFAMILY SARONOMINAE ROEWER, 1934

According to Roewer (1934) this subfamily is distinguished by having the tarsi of all legs with 1 segment.

#### Branchia Muma, 1951

This genus is the only one in North America with single segmented tarsi on all legs. According to Roewer's (1934) system, it is in the subfamily Saronominae and has leg tarsal spine-like setal formulae of 1,2,2,4 for legs 2 and 3 and 2,2,2,2,2 for leg 4. Males have the cheliceral flagellum highly arched and somewhat quadrate in form. The following records extend the known range of two species into Mexico.

#### Branchia angustus Muma

Branchia angustus Muma, 1951, p. 135; Muma, 1970, p. 56.

A female collected 7 mi. N of Hermosillo, Sonora, Mexico, August 14, 1964 at ultra-violet light by J. Shetterly is the first Mexican record for this species. It is now known from California and Arizona in the United States and Sonora in Mexico.

Branchia potens Muma

Branchia potens Muma, 1951, p. 138; Muma, 1970, p. 56.

A large male was collected at the South end of Isla San Jose, Baja California Sur on June 27, 1961 by Chris Parrish. Except for its large size, 16 mm., and pale tarsi, the specimen agrees well with typical specimens from Nevada. This species is now known from Utah, Nevada, and California in the United States and Baja California Sur in Mexico.

LIST OF FAMILIES, GENERA, AND SPECIES PREVIOUSLY RECORDED FROM MEXICO, CENTRAL AMERICA, AND THE WEST INDIES

Eremobatidae (Roewer, 1934)

Eremorhax Roewer, 1934

magnus-group (Muma, 1951)

E. magnus (Hancock), 1888; Roewer (1934) recorded this species from Mexico as Eremopus mexicanus Roewer. It should be noted that Roewer (1934) erred in indicating an anterior tooth on females of magnus and mexicanus. Vazquez (1981) extended the range of this species into the states of Sonora and San Luis Potosi.

montezuma-group (Muma, 1970)

E. montezuma (Roewer), 1934; Roewer recorded this species as Eremopus montezuma new species from Orizaba, Veracruz, Mexico, but inadvertently omitted it from his key to species, and erroneously cited it with 2 needle-like ctenidia.

striatus-group (Muma, 1951)

E. formidabilis (Simon), 1879; Roewer (1934) recorded this species from Guanajuato, Mexico as Eremoperna formidabilis (Simon).

E. gigas (Roewer), 1934; Roewer recorded this species as Eremocosta gigas new species from Tampico, Tamaulipas, and Veracruz, Mexico.

E. gigasellus Muma, 1970; Vazquez (1981) recorded specimens from Coahuila and southern Veracruz.

E. calexicensis Muma, 1951; Muma (1970) recorded this species from Baja California, Mexico.

E. titania Muma, 1951; Vazquez (1981) recorded this species from Baja California, Mexico.

E. spinipalpis (Kraepelin), 1899; Kraepelin described this species from Santa Rosalia, Baja California Sur, Mexico.

E. striatus (Putnam), 1883; Muma (1970) recorded this species from Neuvo Leon, Mexico.

Eremobates Banks, 1900

scaber-group Muma, 1951

E. zinni Muma, 1951; Vazquez recorded this species

- from 2 localities in Baja California.  
E. ctenidiellus Muma, 1951; Muma (1970) recorded this species from Mexico.  
E. geniculatus (Simon), 1879; Simon described this species from Mexico.
- palpisetulosus-group (Muma, 1951)  
E. affinis (Kraepelin) 1899; Muma (1970) recorded this species from Mexico.  
E. kraepelini Muma, 1970; Vazquez (1981) recorded this species from Sonora, Hidalgo, Distrito Federal, and Oaxaca, Mexico.  
E. guenini (Roewer), 1934; Roewer described this species from Dinamita, Durango, Mexico.  
E. hessei (Roewer), 1934; Roewer described this species from Mexico.  
E. purpusi (Roewer), 1934; Roewer described this species from Tlaquilotepe, Mexico, but did not cite the state. It could not be found on maps of Mexico.
- pallipes-group (Muma, 1951)  
E. dinamita (Roewer), 1934; Roewer described this species from Dinamita, Durango, Mexico.  
E. durangonus Roewer, 1934; Roewer described this species from Dinamita, Durango, Mexico.  
E. formicarius (C. L. Koch), 1842; male lectotype of this species from Puebla, Mexico, designated by Roewer, 1934.  
E. putnami (Banks), 1898; Banks described this species from San Jose del Cabo, Baja Mexico, Mexico.
- aztecus-group (Muma, 1970)  
E. aztecus Pocock, 1902; Pocock described this species from Distrito Federal, Mexico; Roewer (1934) also recorded it from Atoyac, Mexico, and (1941) from Patzcuaro, Mexico.
- Unplaced-species (Muma, 1970)  
E. hystrix (Mello-Leitao), 1942); Mello-Leitao described this species from Distrito Federal, Mexico. Vazquez (1981) cited additional records from Distrito Federal, Morelos, and Estado de Mexico, Mexico.  
E. ingens (Mello-Leitao), 1942; Mello-Leitao described this species from Villa Obregon, Distrito Federal, Mexico.  
E. toltecus (Pocock), 1895; Pocock described this species from Mexico.
- Eremochelis Roewer, 1934  
andreasana-group (Muma, 1962)  
E. andreasana (Muma), 1962; Muma (1970) recorded this species from Baja California, Mexico.  
imperialis-group (Muma, 1962)  
E. imperialis (Muma), 1951; Muma (1970) recorded this species from Sonora, Mexico.
- Ammotrechidae (Roewer, 1934)  
Innesa Roewer, 1934

- I. vittata (Pocock), 1902; Pocock described the species from Guatemala, Central America.
- Ammotrechella Roewer, 1934
- A. stimpsoni (Putnam), 1883; Vazquez (1981) recorded this species from Chiapas, Mexico.
  - A. apejii Muma, 1971; described from Portland Cottage, Jamaica, West Indies.
  - A. bolivari Mello-Leitao, 1942; described from Chiapas, Mexico.
  - A. bonariensis (Werner), 1925; described from Bonaire Island, Dutch West Indies.
  - A. diaspora Roewer, 1934, described from Cape Verde Islands.
  - A. geniculata (C. L. Koch), 1842; Muma (1970) recorded the species from the West Indies.
  - A. pallida Muma and Nezario, 1971; described from Bosque Guanica, Puerto Rico.
  - A. pseustes (Chamberlin), 1925; described from Remo Island, Largo, Canal Zone; Muma and Nezario, 1971, recorded it from Puerto Rico.
  - A. tabogana (Chamberlin), 1919; described from Taboga, Panama.
- Ammotrechona Roewer, 1934
- A. cubae (Lucas), 1935; described from Cuba, West Indies.
- Ammotrecha Banks, 1900
- A. cobinensis Muma, 1951; Muma (1970) recorded the species from Mexico.
  - A. limbata (Lucas), 1835; Roewer (1934) recorded the species from Mexico and Guatemala, Central America.
  - A. nigrescens Roewer, 1934; Roewer (1934) referred this species to Pocock and recorded it from Guatemala, and San Jose, Costa Rica; also from the West Indies.
  - A. stollii (Pocock), 1895; Roewer (1934) recorded this species from Guatemala, Nicaragua, Costa Rica in Central America, and Mexico in North America. Vazquez (1981) recorded the species from Michoacan, Guerrero, and Chiapas, Mexico.
- Ammotrechinus Roewer, 1934
- A. gryllipes (Gervais), 1842; Roewer recorded this species from Haiti and Jamaica in the West Indies.
- Ammotrechesta Roewer, 1934
- A. brunnea Roewer, 1934; described from Tristan, Costa Rica, Central America.
  - A. schlueteri Roewer, 1934; described from Honduras, Central America.
- Ammotrechula Roewer, 1934
- A. boneti Mello-Leitao, 1942; described from Mazatlan, Sinaloa, Mexico.
  - A. mulaiki Muma, 1951; Muma (1976) recorded from Tamaulipas, Mexico. Vazquez (1981) recorded it from Michoacan, Morelos, and Guerrero, Mexico.

A. peninsulana (Banks), 1898; Muma (1951) recorded this species from Baja California, Mexico; Muma (1976) recorded it from Sonora, Sinaloa, and Chihuahua; Vazquez (1981) cited additional records from Baja California, Puebla, and Guerrero.

A. saltatrix (Simon), 1879; described from Mexico. Muma (1976) recorded it from Baja California.

A. venusta Muma, 1951; Muma (1970) recorded this species from Mexico.

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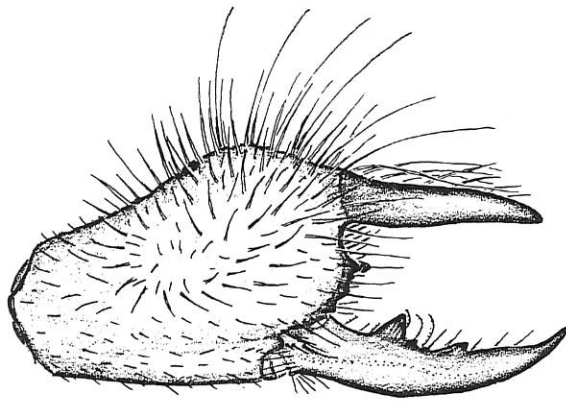


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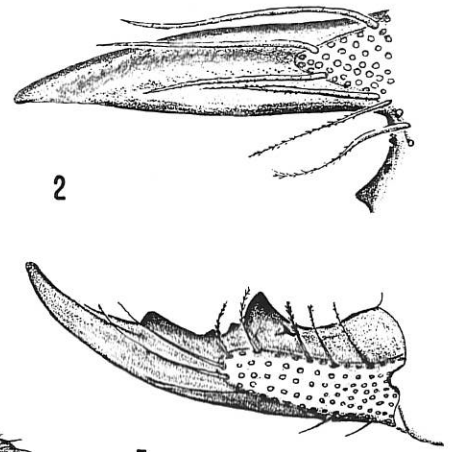
Simon, Eugene. 1879. Essai d'une classification des Galeodes. Ann. Soc. Ent. France, ser. 5, 9:93-154.

Vazquez, I. M. 1981. Solifugos de Mexico (Arachnida:Solifugae) Thesis, Universidad Nacional Autonoma de Mexico, Mexico, D. F. 78 pp., 24 figs. and 2 maps.

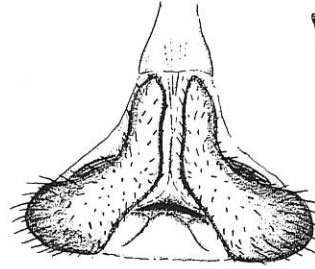
Figures 1 to 13: Eremorhax fuscus n. sp.; 1. Right male chelicera, ectal view; 2. Fixed finger, mesal view; 3. Movable finger, mesal view; 4. Male abdominal ctenidia, ventral view; 5. Right female chelicera, ectal view; 6. Female opercula, allotype, ventral view; 7. Female opercula, paratype, ventral view. Eremorhax bajaensis n. sp.; 8. Right male chelicera, ectal view; 9. Right male chelicera, mesal view; 10. Right female chelicera, allotype, ectal view; 11. Female opercula, allotype, ventral view; 12. Female opercula, paratype, ventral view. Eremobates bajaensis n. sp. 13. Right male chelicera, ectal view.



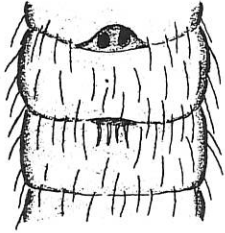
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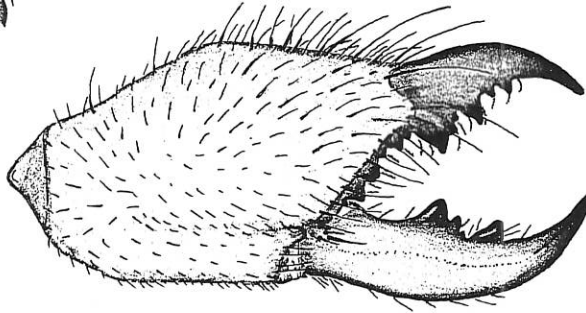
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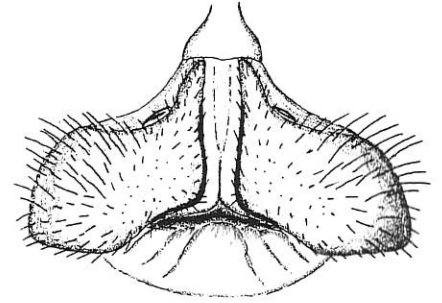
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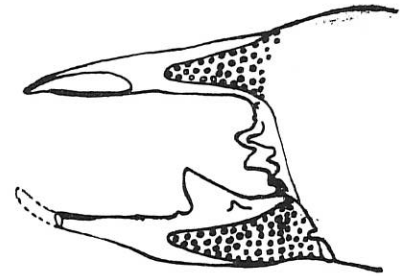
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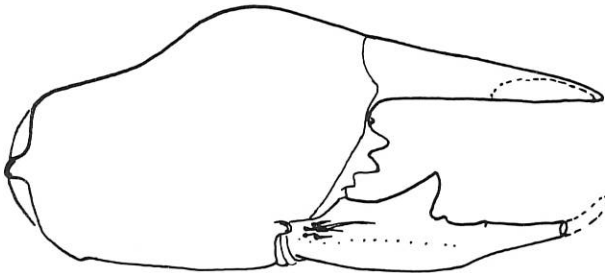
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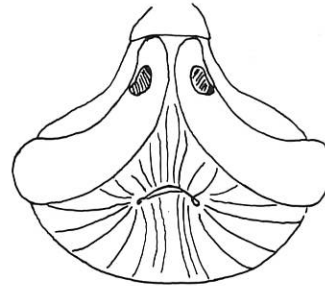
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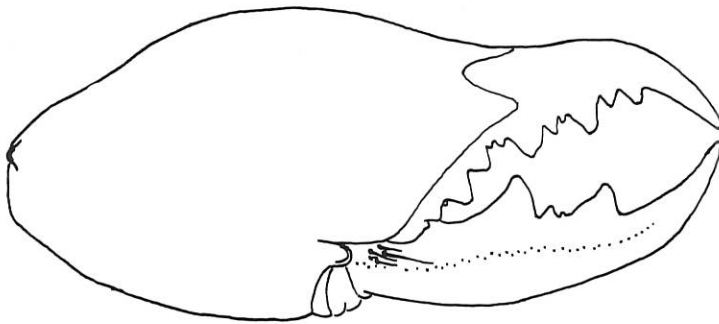
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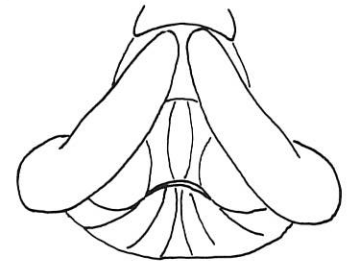


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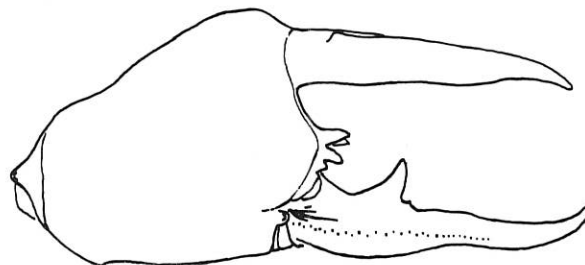


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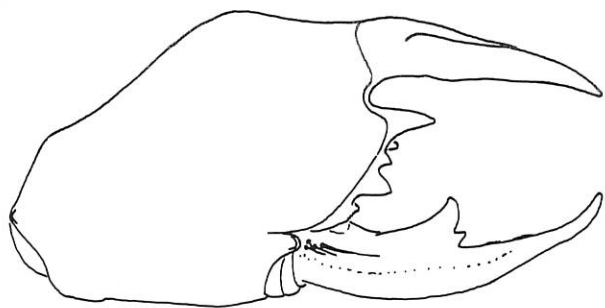


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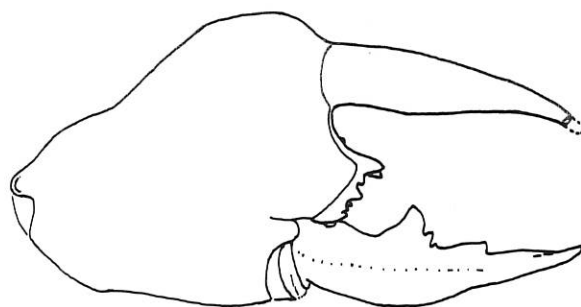


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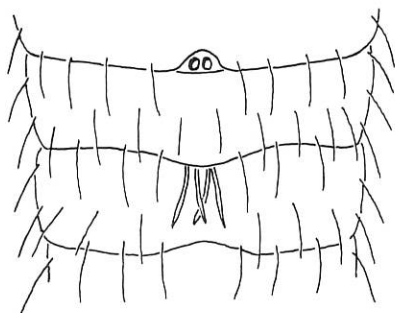
Figures 14 to 22: Eremobates coahuilanus n. sp.; 14. Right male chelicera, ectal view; 15. Male abdominal ctenidia, ventral view. Eremobates beckii n. sp.; 16. Right male chelicera, ectal view. Eremobates lapazi n. sp.; 17. Right male chelicera, ectal view; 18. Right male chelicera, mesal view.; 19. Male abdominal ctenidia, ventral view; 20. Right female chelicera, ectal view; 21. Right female chelicera, mesal view; 22. Female opercula, ventral view.



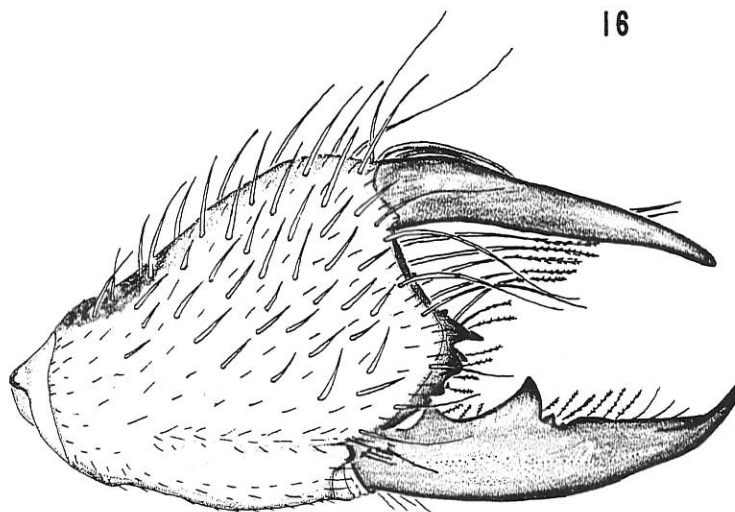
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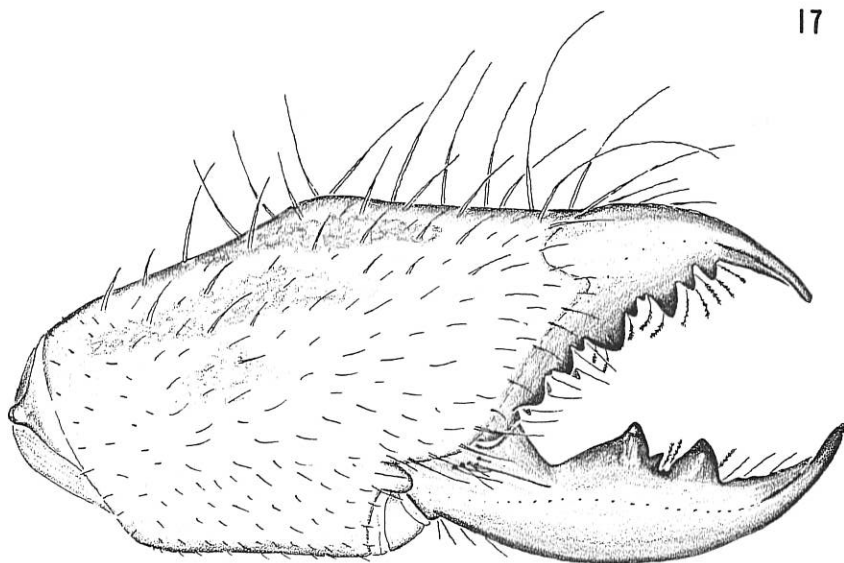
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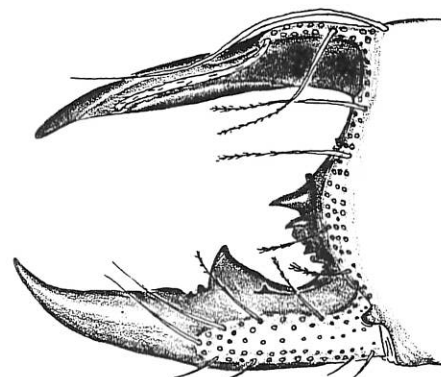
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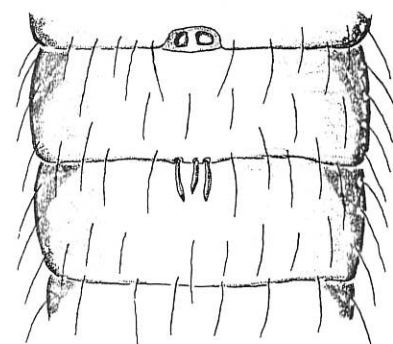
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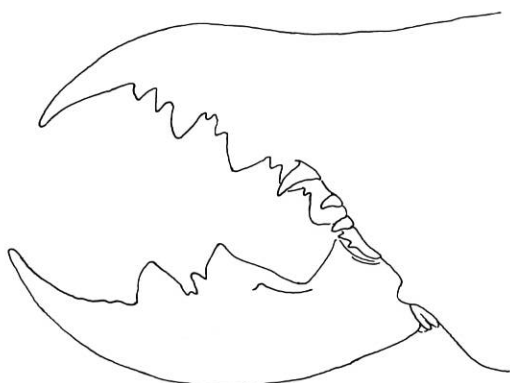
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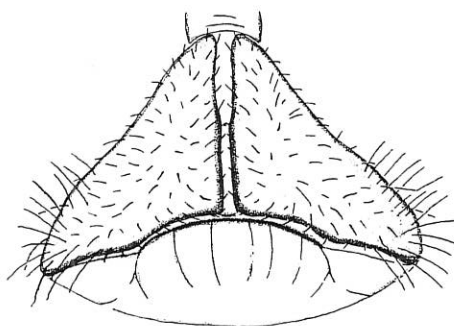
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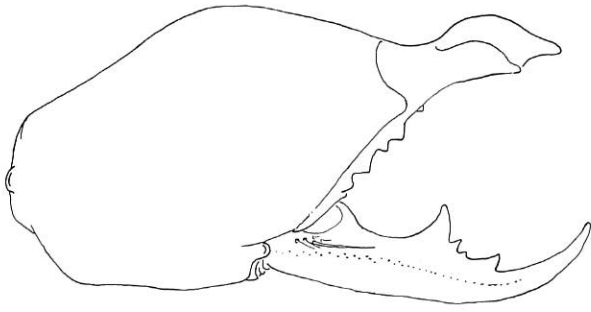


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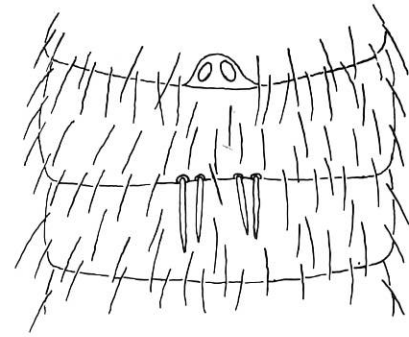


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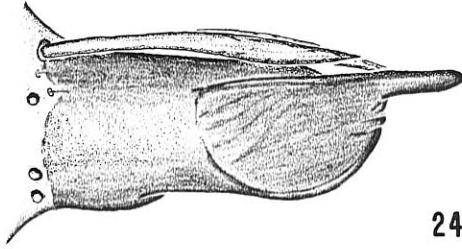
Figures 23 to 34: Eremothera drachmani n. sp.; 23. Right male chelicera, ectal view; 24. Fixed cheliceral finger, dorsal view; 25. Male abdominal ctenidia, ventral view. Eremochelis truncus n. sp.; 26. Right female chelicera, ectal view; 27. female opercula, ventral view. Eremochelis rossi n. sp.; 28. Right male chelicera, ectal view; 29. Male abdominal ctenidia, ventral view. Eremochelis sonora n. sp.; 30. Right male chelicera, ectal view; 31. Right male chelicera, mesal view; 32. Male abdominal ctenidia, ventral view; 33. Right female chelicera, ectal view; 34. Female opercula, ventral view.



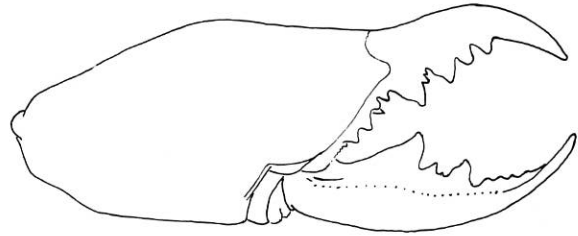
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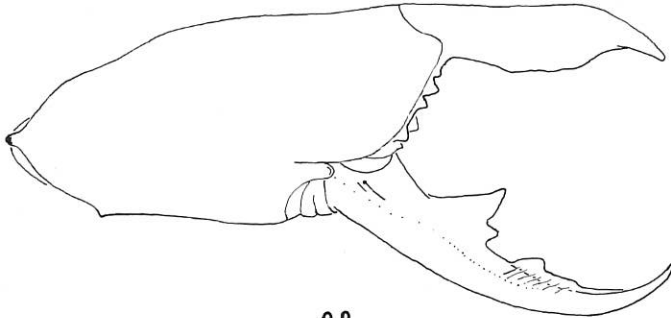
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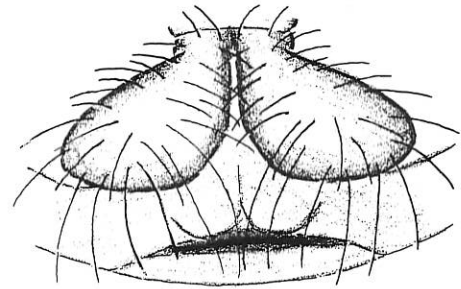
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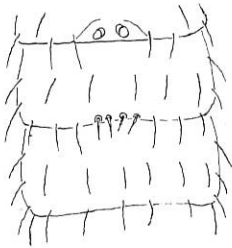
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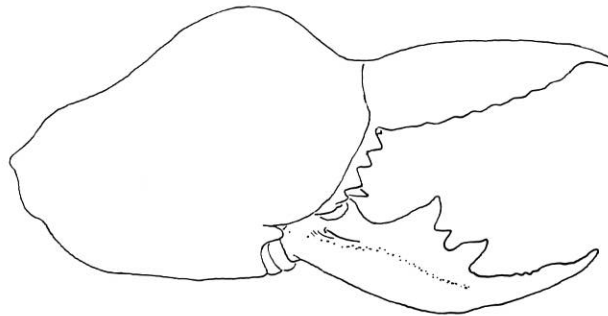
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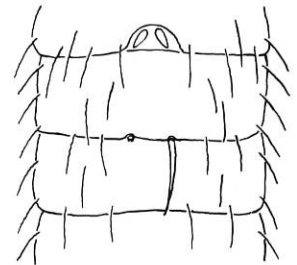
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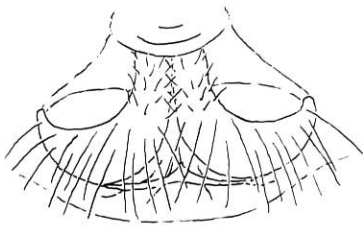
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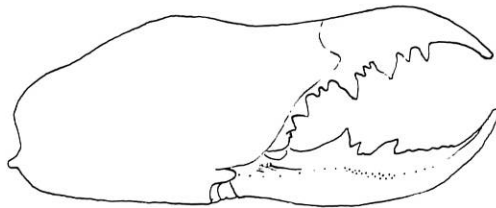
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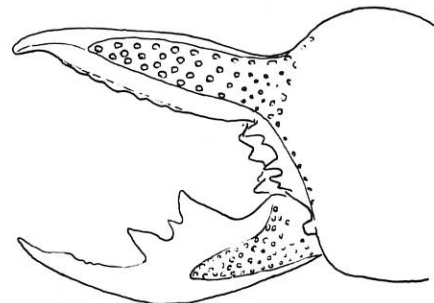
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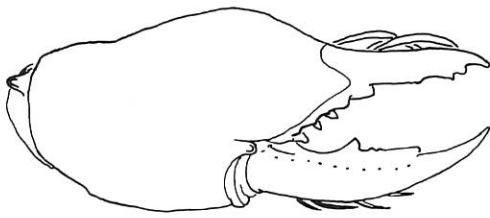
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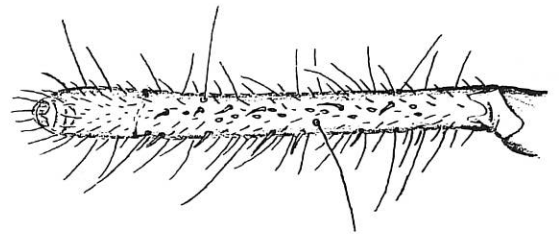
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Figures 35 to 46: Hemerotrecha cazieri n. sp.; 35. Right male chelicera, ectal view; 36. Right male palpal metatarsus and tarsus, mesoventral view; 37. Male abdominal ctenidia, ventral view. Ammotrecha chiapasi n. sp.; 38. Right male chelicera, ectal view; 39. Right male palpus, mesoventral view; 40. Right female chelicera, ectal view. Ammotrecha itzaana n. sp.; 41. Right male chelicera, ectal view; 42. Right male palpus, tibia, metatarsus, and tarsus, mesoventral view. Ammotrechella maguirei n. sp.; 43. Right male chelicera, ectal view. Ammotrechella bahamica n. sp.; 45. Right male chelicera, ectal view; 46. Right male palpal tibia, metatarsus, and tarsus, mesoventral view.

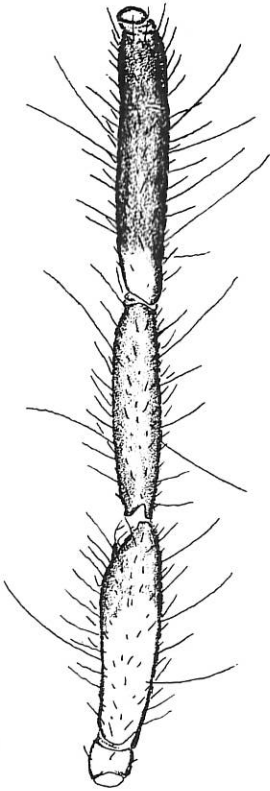




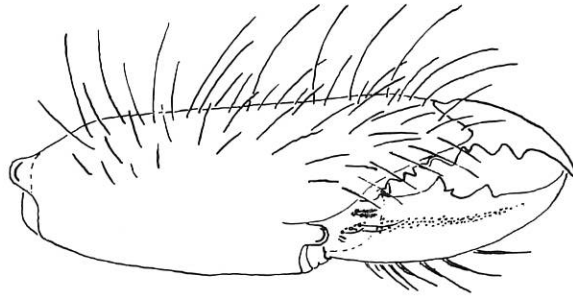
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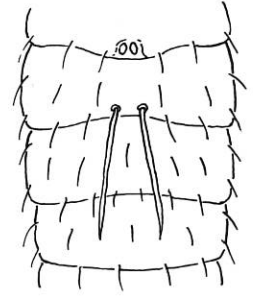
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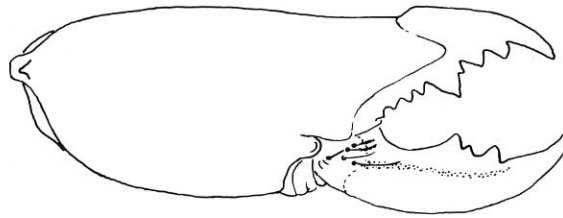
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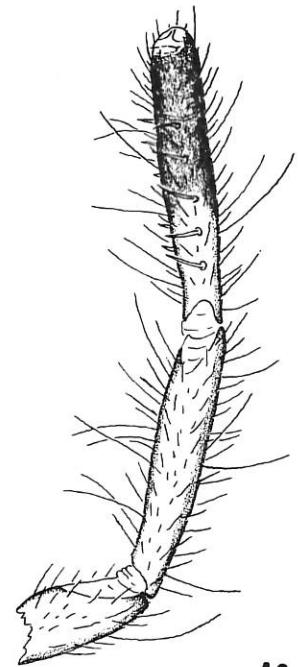
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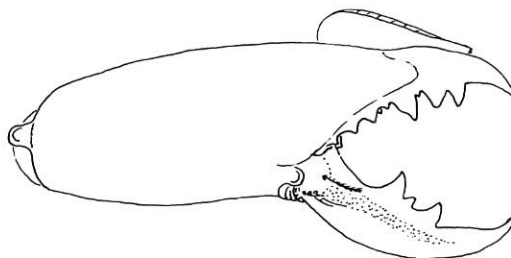
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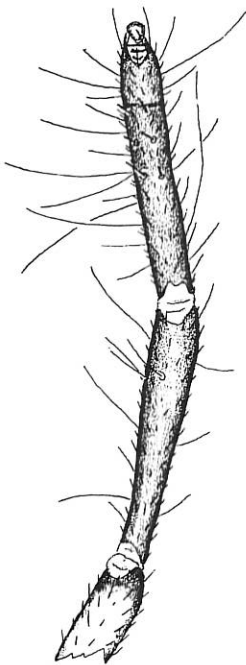
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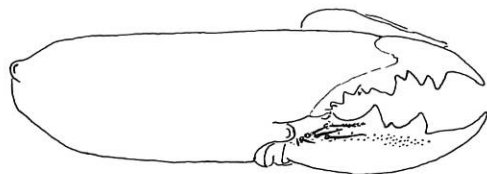
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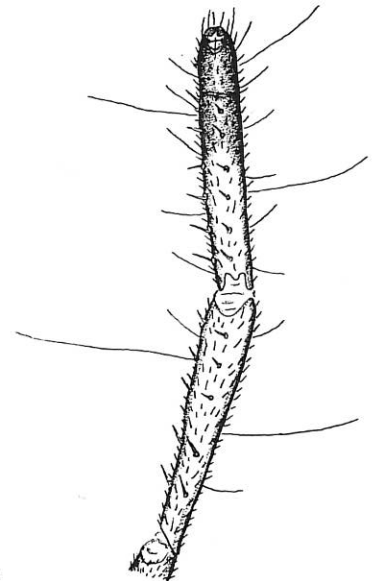
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