

Los "palitos vivos de Lima" III: un Hydrometridae de las lomas costeras

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RESUMEN

AGUILAR P G, UYUYAMA F, AGUILAR Z P. Los "palitos vivos de Lima" III: un Hydrometridae de las lomas costeras. Rev. per. Ent. 1985. 28.— Se hace referencia a la descripción original, a la morfología externa y a algunos aspectos ecológicos de *Bacillometra woytkowskii* Hungerford, 1935, un "chinche palito" que vive en las lomas de la costa central del Perú.

Palabras clave: Hydrometridae del Perú, *Bacillometra woytkowskii*, Lomas de la costa central del Perú, palitos vivos.

SUMMARY

AGUILAR P G, UYUYAMA F, AGUILAR Z P. "Walking sticks of Lima" III: one Hydrometridae from coastal lomas. Rev. per. Ent. 1985. 28.— Reference to the original description, to external morphology and to some ecological aspects, is made for *Bacillometra woytkowskii* Hungerford, 1935, a tiny "walking stick bug", found in the coastal lomas of central Perú.

Key words: Peruvian Hydrometridae, *Bacillometra woytkowskii*, Peruvian coastal lomas, walking sticks.

INTRODUCCION

Es conocida la muy alta humedad relativa que caracteriza a las lomas de la costa del Perú, durante el período invernal que, sin haber lluvia abundante, permite una tupida vegetación higrofila característica, aunque efímera. También se conoce que esto facilita el desarrollo de una fauna insectil cuya mayor frecuencia se concentra en ese período y cuenta con especies representativas de familias propias de bordes de cuerpos de agua o que viven sobre plantas acuáticas, como el caso de los chinches Hydrometridae. En el ecosistema de las lomas costeras se forman también sobre oquedades de las rocas, pequeños cuerpos de agua donde se desarrollan algunas especies de entomostráceos que necesitan ser estudiados. Es de destacar que durante los meses de verano todos estos habitats quedan expuestos directamente a la luz solar.

Entre los insectos se reconocen formas ápteras como adaptadas a este ecosistema de lomas, casi de tipo insular. Entre ellos, los más notables son los "palitos vivos" que tienen representantes de 4 familias y de dos órdenes diferentes (fig. 6). Fuera de las lomas existe en Lima una especie de Mantidae que constituye otro "palito vivo" todavía indeterminado.

Bacillometra woytkowskii Hungerford, 1935

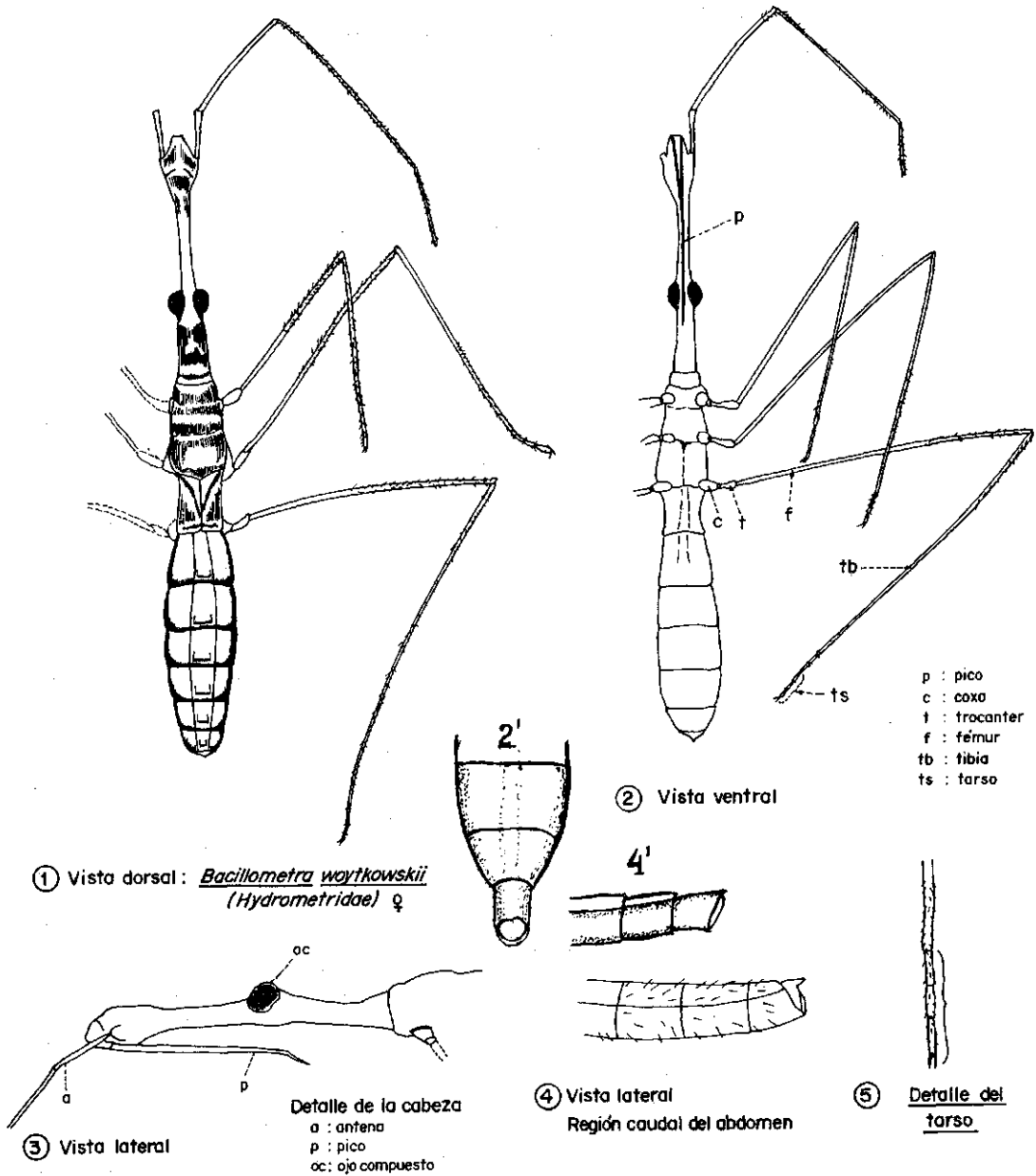
Este "chinche palito", Hydrometridae, se halla en los espacios que dejan entre sí las piedras de los pedregales naturales, de la zona media y alta, de las lomas de la costa central peruana, o las que el hombre allí amontona para formar cercos o "pircas" para el ganado. Colectado por el Dr. W.K. Weyrauch en las Lomas de Atocongo (Lima 1948) fue identificado por H.B. Hungerford de Lawrence, Kansas. Estudios posteriores sobre insectos de las Lomas Costeras, siempre han hallado esta especie en los habitats mencionados, pocas veces entre plantas. Al ser molestados se dejan caer, siendo difícil hallarlos. Sin duda faltan estudios sobre su biología y ciclo biológico, más detalles sobre su morfología y ecología; y también en áreas fuera de las lomas.

Las figuras 1 a 5 son originales que tuvieron como material siete individuos colectados en primavera de 1985. No se ha revisado material de colecciones entomológicas, prefiriéndose siempre observaciones de campo para obtener datos referidos a estudios posteriores, incluso buscando en vegetación de monte ribereño, fuera de las lomas.

La caracterización de los ejemplares colectados (todos ápteros: 5 hembras y 2 machos) puede resumirse de la siguiente manera: (figuras 1-5 y cuadro 1).

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Cuerpo (figs. 1 y 2): 8.0 a 10.1 mm longitud, ancho promedio 1.1 mm en el tórax y 1.3 mm en el abdomen. Antenas y patas muy largas y delgadas. La apariencia es la de un "pequeño palito viviente", como todos los Hydrometridae. Los machos son los de menor tamaño (cuadro 1). Color, a primera vista, pardo oscuro a negro, antenas y patas claras, abdomen moteado; en detalle, todo el dorso del cuerpo es oscuro, los pleuritos del abdomen tienen la mitad anterior amarillenta y la posterior oscura, la parte ventral del cuerpo es oscura, excepto la región anterior de la cabeza; patas y antenas pardas o pardo amarillentas.

Cabeza (fig. 3): 2.8 - 3.4 mm longitud, 0.2 mm ancho en la parte central, delante de los ojos y 0.6 mm en la par-

te posterior y también en la anterior, donde además existe una protuberancia de la que salen el pico y las antenas. El pico es tri-segmentado y corto llegando a sobrepasar en algo la posición de los ojos. Las antenas longitud promedio 7.6 mm, de 4 artejos, siendo de mayor a menor el tercero, segundo, cuarto y primero. Sin ocelos. Ojos compuestos protuberantes, grandes, a los lados de la cabeza y en el tercio medio.

Tórax: 2.1 a 2.7 mm longitud, 0.8 - 1.1 mm ancho. Con fina pilosidad. Sin alas. Patas muy delgadas, 8.1 mm primer par, 9.5 mm el 2do., 14.7 mm el 3ro. El fémur y la tibia son los segmentos más largos, tarso con tres segmentos que terminan en una uña (fig. 5).

Abdomen: 3.1 a 4.2 mm longitud, 1.0 - 1.4 en su ancho mayor. Siete segmentos siendo el sétimo el más pequeño y en forma más o menos triangular, con una pequeña prominencia en la hembra (fig. 4); en el macho es cilindroide (figs. 2' y 4'). En la región dorsal presenta dos líneas paralelas, longitudinales que corren hasta la región caudal; en la región ventral son menos visibles y llegan sólo hasta el 2do. o 3er. segmento.

CUADRO 1.— Medidas en milímetros de siete individuos ápteros de *Bacillometra woytkowskii*, 5 hembras y 2 machos, colectados en las Lomas de Pachacamac, Lima, octubre 1985.

individuos	cabeza	tórax	abdomen	total
Hembras				
1	2.9	2.6	3.5	9.0
2	3.3	2.1	4.0	9.4
3	3.3	2.2	3.9	9.4
4	3.4	2.2	3.9	9.5
5	3.2	2.7	4.2	10.1
Machos				
6	2.8	2.1	3.1	8.0
7	3.0	2.1	3.6	8.7

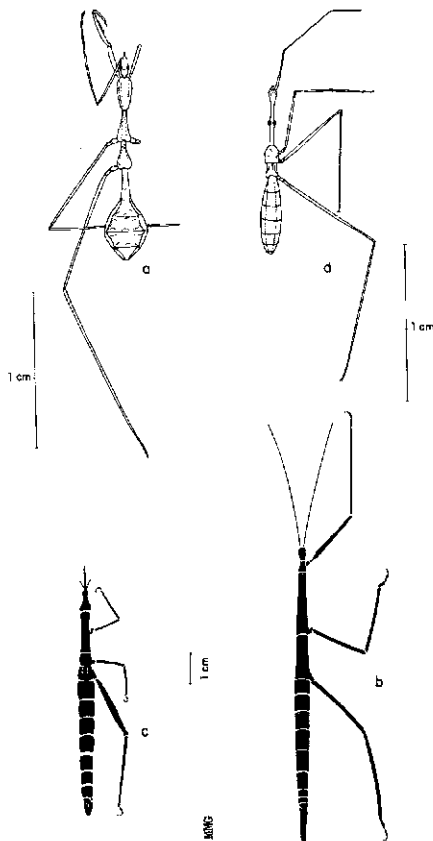


FIGURA 6.— "Palitos vivientes de las lomas costeras".— Orthoptera: b *Bostra scabrinota* Redtenbacher (Phasmatidae), c *Archotatus peruvianus* Brunner von Wattenwyl (Proscopidae).— Hemiptera: a *Gibitanella mariea* Wygodzinsky (Reduviidae), d *Bacillometra woytkowskii* Hungerford (Hydrometridae).

Descripción original

Se reproducen las páginas correspondientes de la publicación de Hungerford (1935) para tenerlas al alcance de los interesados y para las comparaciones posibles que se necesiten en estudios posteriores.

Bacillometra woytkowskii, new species

Size: Plump bodied Hydrometrids with long slender legs. The winged forms measure from 9.2 mm. (males) to 10.3 mm. (females) in length; the humeri arc 0.8 mm. to 0.9 mm. wide; the greatest thoracic width 0.9 mm. to 1 mm. The wingless forms vary in length from 8.6 mm. to 10.35 mm; width of pronotum 0.72 mm. to 0.9 mm; greatest abdominal width 0.8 mm. to 1.25 mm.

Color: General facies mottled, especially striking in the wingless forms because of the checkered appearance of the abdomen. Of the living insect Mr. Woytkowski writes: «a distinct pattern of various tones of brown and gray.» The dead insects are dark brown to nearly black above with distinct markings of yellowish gray on the pronotum and abdomen in both winged and wingless forms; the hemelytra are streaked with gray and brown and the veins are dark brown; the caudal end of the head is usually pale; the anterior collar of the pronotum, a median longitudinal stripe and lateral stripes that curve over the anterior acetabula and continue on margin of pronotum are pale; the rear margin of each abdominal segment, and the anterior half of each connexival segment, pale. The venter is brown to black, usually black; the anteocular portion of the head may be pale; the underside of the coxae, and a band along the lateral margin of the abdominal venter pale¹. The legs are light brown above and paler below.

Structural Characteristics. — Head: Length 108 units; the ratio of the anteocular part of the head to the postocular part is given in the formula AO:PO::67:30; the dorsal interocular space only one half the width of the eye; the longitudinal groove short and inconspicuous; ventral interocular groove long, deep and broad and extending from before the anterior margin of the eye to near the caudal end of the postocular portion; Clypeus truncate with sides parallel; the rostrum surpasses the eyes by a little less than half the postocular distance. The antennal formula is as follows: 1st: 2nd:3rd:4th::22:57:138:51 (in male); the third segment is relatively shorter in female.

Pronotum: Length 54 units, width 32 units in winged female; 40 units by 24 units in wingless male; an encircling row of about 11 pits parallel to anterior margin; pronotum transversely depressed about the middle, a row of pits in this depression.

Metanotum: Including the exposed scutellum less than half as long as the pronotum in the wingless form.

Hemelytra: Absent, vestigial or long reaching nearly to abdominal tip. Veins distinct, two cross veins.

Legs: The distance between the first and second coxal is to that between the second and third as 25:32 (wingless male) and as 33:39 (winged female); acetabula not pitted. The legs are unusually long, the front ones nearly as long as entire insect and the middle and hind legs distinctly longer. The femora slightly incrassate at base. The front femora surpass by one seventh their length the front of the head. The hind femora surpass by one third their length the end of the abdomen (female) and by nearly one half in case of the males. The ratio of the femur, tibia and tarsus of hind leg is as follows: 220:276:16. The second tarsal segment slightly shortest.

Abdomen: Relatively broad, broadest beyond the middle; dorsal and connexival segments broad; the so-called sixth dorsal abdominal nearly square in the female and the width

¹ In males this light band is usually interrupted by infuscations on caudal half of each segment and in female often is so interrupted.

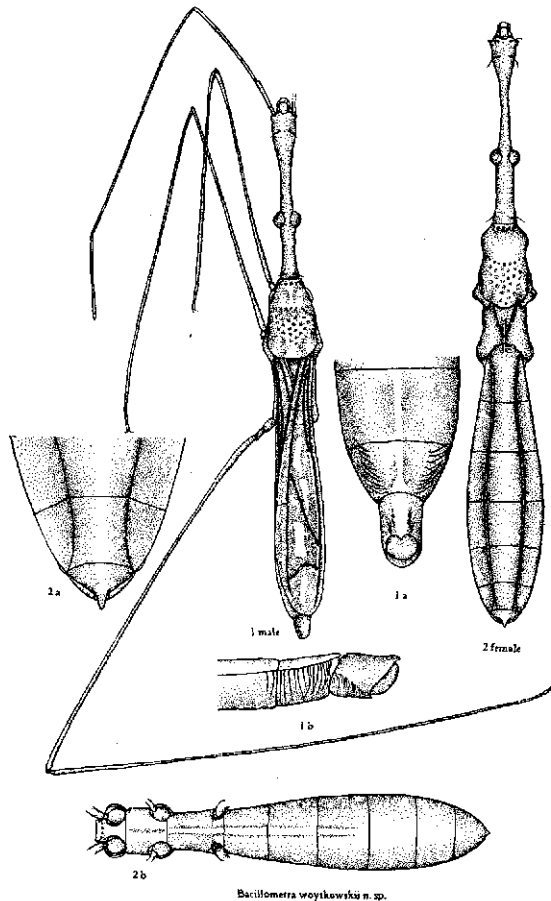


Fig. 1. *Bacillometra woytkowskii* Hungerford, dorsal view of winged male: a, ventral view of caudal abdominal segments of male; b, side view of caudal abdominal segments of male. Fig. 2. *Idea*, dorsal view of wingless female: a, dorsal view of caudal abdominal segments of female; b, ventral view of thorax and abdomen of female to show the mesosternal groove and the two grooves on metasternum and abdomen.

three fourths the length in the male; the seventh dorsal segment of female, broad, short, triangular ending in a pointed process; the seventh segment of the male prominent, about as long as preceding segment, parallel sided and without caudal process. Abdominal venter medianly longitudinally carinate in the male, faintly so in the female. Female with a few long fine hairs scattered on the venter; these are more numerous on the male and the sixth abdominal is margined laterally by rows of long curved hairs. The first genital of the male is free from pilosity on its median longitudinal line.

Location of Types: Described from a series of 90 specimens taken on the Rio Rimac, near the village of Ricardo Palma, Peru by F. Woytkowski. In the lot there are 82 winged ones from which the holotype and allotype have been chosen and 8 wingless forms from which the homomorphotype and allomorphotype have been designated. Types are in the Francis Huntington Snow Entomological Museum, University of Kansas. Paratypes will be sent to the United States National Museum, the British Museum and such South American museums as maintain type collections and request examples.

Comparative Notes: This is a longer species than *Bacillometra ventralis* Esaki, the wingless males being at least 8.6 mm. in length and the winged ones 9.2 mm. compared to 6.6 mm. the length of the winged male described by Esaki. The breadth of humeri, however, is slightly less. The venter is typically black with lateral margins of abdomen light while the reverse is true in *B. ventralis* Esaki. The fe-

mora are less incrassate at base than Esaki's illustration. The male genital segments large instead of small and the hemelytra with two instead of one cross vein. Compared with *Bacillometra mulfordi* (Hungerford) it is a shorter species, the head less elongate, the pronotal pattern more distinct, the terminal dorsal abdominal segment of female with a distinct process which is lacking in *B. mulfordi* (Hungerford) and the caudal margin of the last ventral abdominal lacks the lateral prolongations figured by me for *B. mulfordi* (Hungerford) on Plate XI, page 102 of *Annales Musei Nationalis Hungarici*, Vol. XXVIII.

Genus *Bacillometra* Esaki

Since Professor Esaki described this genus from a single male specimen, it was very difficult to sort out those characters which would prove to be truly generic. Now with three closely related species, one of them represented by abundant material of both sexes, it is necessary to restrict the generic diagnosis. We cannot now accept the following: «Body very elongate, about seven times as long as broad.» The two species I have described are considerably longer than seven times as long as broad. «Head shorter than twice the length of prothorax.» In *B. woytkowskii* Hungerford it is twice as long as prothorax and in *B. mulfordi* slightly more than twice as long. «Ante-ocular region longer than twice the length of the posterior.» This is true of practically all species of *Hydrometra* Lamarck, «... femora incrassate near the base.» In *B. woytkowskii* Hungerford the femora are slightly incrassate but in *B. mulfordi* (Hungerford) no more so than in some *Hydrometra* species. «... tarsi three jointed, second joint shortest: true for *B. woytkowskii* Hungerford but not true for *B. mulfordi* (Hungerford).

However, Professor Esaki pointed out the following characters that all three species possess and which distinguish them from *Hydrometra* Lamarck: Plump bodied Hydrometrids with unusually long legs; eyes large; pronotum relatively short; scutellum visible; mesosternum distinctly sulcated longitudinally at the middle, metasternum with two longitudinal sutures near the middle which extend onto ventral surface of the abdomen as far as second segment¹, and with a distinct, short, transverse suture on each side near the anterior margin of the posterior coxa.

To the above there may be added: The second tarsal segment shortest or at least not distinctly longer than the others; a pair of setiferous elevations near the caudal margin of the head; lateral margins of abdomen diverging to the anterior margin of the fourth abdominal segment.

The three species of *Bacillometra* now known may be separated as follows:

1. Second tarsal joint shortest..... 2
- Second tarsal joint longer than the first (Bolivia) *mulfordi* Hungerf.
2. Body only about 7 times as long as broad; hemelytra with one cross vein; male genital segments small; size of male 6.6 mm. long. (French Guiana)..... *ventralis* Esaki
- Body considerably longer than above; hemelytra with two cross veins; male genital segments large; size of males more than 8.5mm. long (Peru)..... *woytkowskii* Hungerf.

¹) In *B. woytkowskii* Hungerford they go beyond the middle of the third.

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