

Two New Species of *Sabacon* Harvestmen, with Descriptions of the Females of *Sabacon astoriensis* Shear and *Sabacon sheari* Cokendolpher, from Western North America (Arachnida, Opiliones, Sabaconidae)

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Abstract: Two new species of Sabaconidae (Ischyropsalidoidea) are described: *Sabacon* # 1 from central Alberta and British Columbia and *Sabacon* # 2 from Oregon. Descriptions of the females of *Sabacon astoriensis* Shear 1975, from Oregon, and *Sabacon sheari* Cokendolpher 1984, from Oregon and Idaho, are also given.

Species Already Described: There are about 35 species described – all from temperate regions of the Northern Hemisphere (Chemeris & Logunov 2000; Martens 1972, 1983; Shear 1975; Suzuki 1974; Tsurusaki & Song 1993 and references therein).

There are eight Sabacon species described from North America, mostly from the west coast: *S. astoriensis* Shear 1975, *S. branti* (Banks 1898), *S. briggsi* Shear 1975, *S. cavicolens* (Packard 1884), *S. mitchelli* Crosby & Bishop 1924, *S. occidentalis* (Banks 1894), *S. sheari* Cokendolpher 1984, and *S. siskiyou* Shear 1975. There is a ninth possible species in North America, *S. jonesi* Goodnight & Goodnight 1942, that was described from an immature specimen (see Shear 1975).

Methods: Specimens were obtained from the Canadian Forest Service, Northern Forest Centre, Edmonton, Alberta; Canadian National Collection of Terrestrial Arthropods, Agriculture and Agrifoods Canada, Ottawa, Ontario (CNC); and the personal collections of Chris Buddle, James Cokendolpher and Robert Holmberg. Measurements were taken with a stereomicroscope fitted with an ocular micrometer. All measurements are maxima. Measurements, all made at 25 X or 50 X, are all reported to the nearest 0.1 mm. All measurements were made, and colours noted, when the specimens were in 70-75% ethanol. Nadine Dupérré did the illustrations. She first photographed the specimens and then traced the enlarged images before shading the drawings in pencil. She checked details with magnifications up to 150X.

Introduction: Harvestmen of the genus *Sabacon* are small, short-legged arachnids with relatively large, clubbed palps that are covered with stout setae. They have two small cones with spines located just behind the ocular tubercle, on the posterior of the cephalothorax (i.e., on the metapeltidium) (Shear 1986).

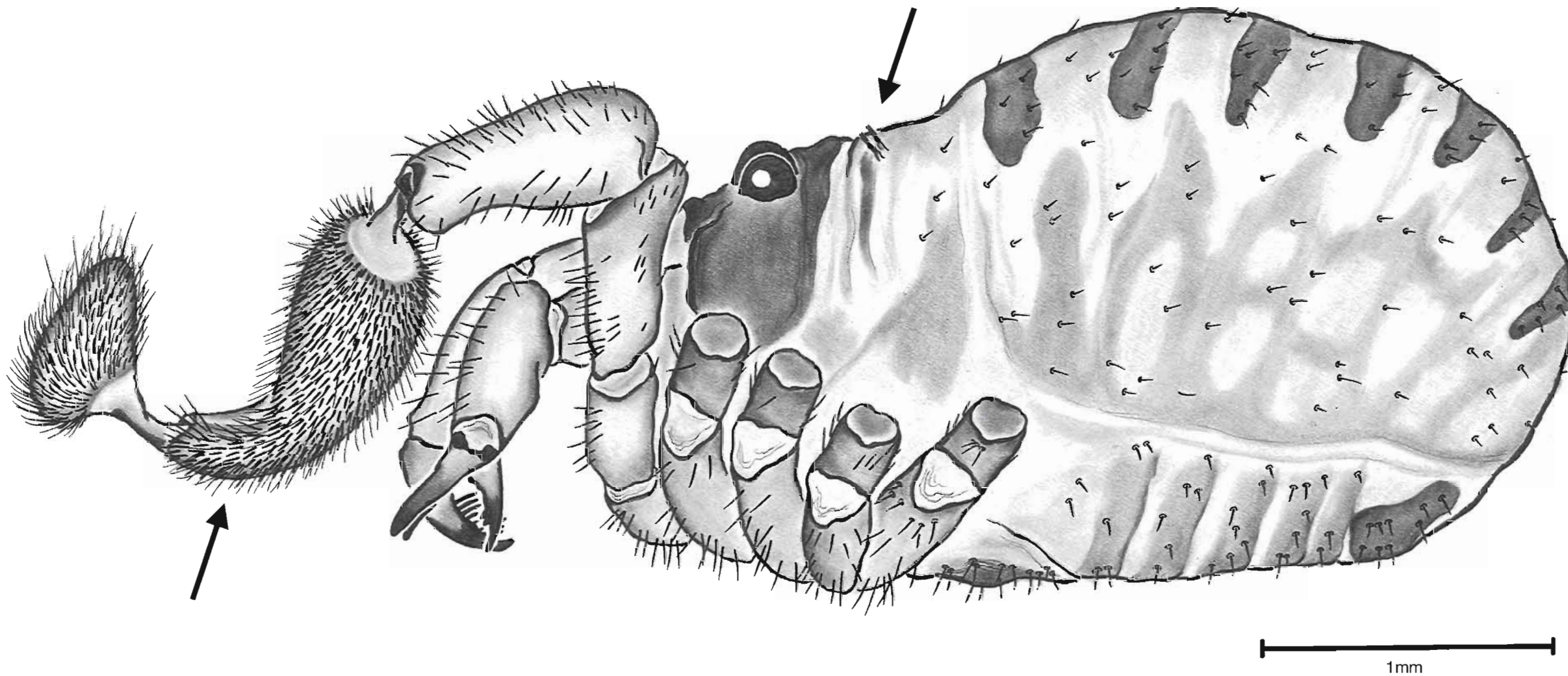


Figure 1: Lateral view of female *Sabacon* # 1.

Descriptions of New Species: *Sabacon* # 1, male.

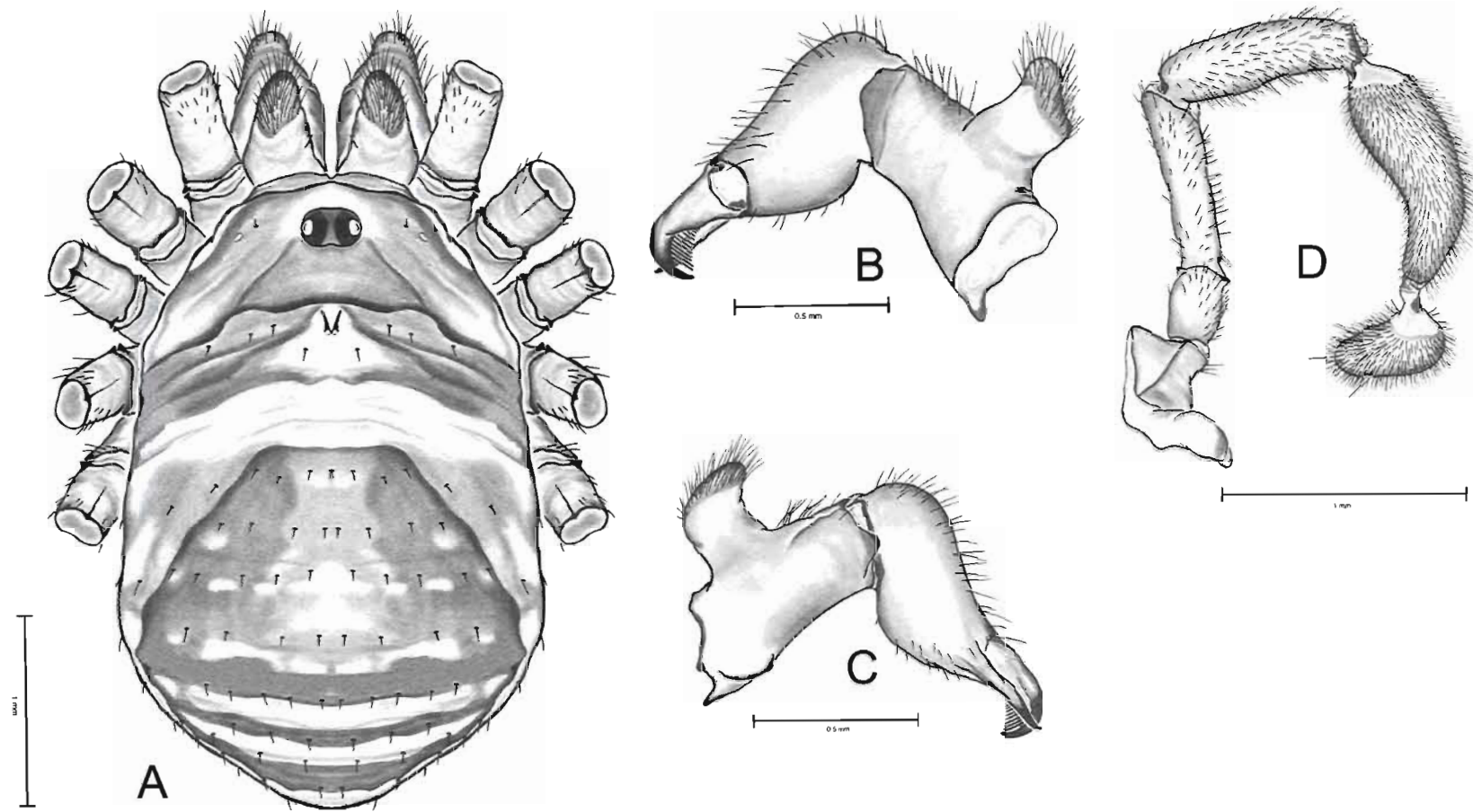


Figure 2. *Sabacon* # 1, male. A = dorsal view of body, B = ectal view of left chelicera, C = mesal view of left chelicera, D = mesal view of left palp.

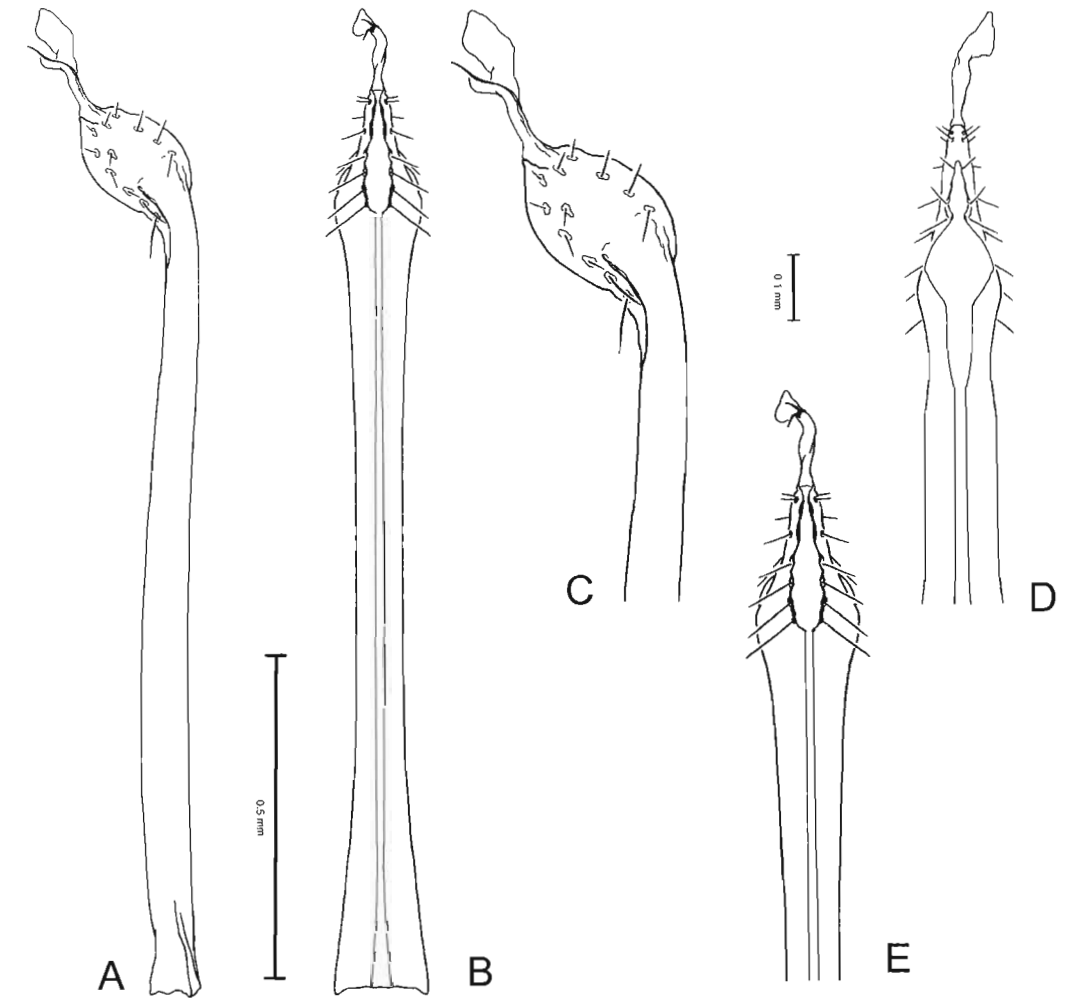


Figure 3. *Sabacon* # 1, penis. A & C = lateral views, B & D = dorsal, E = ventral.

Descriptions of New Species: *Sabacon* # 1, female and known distribution.

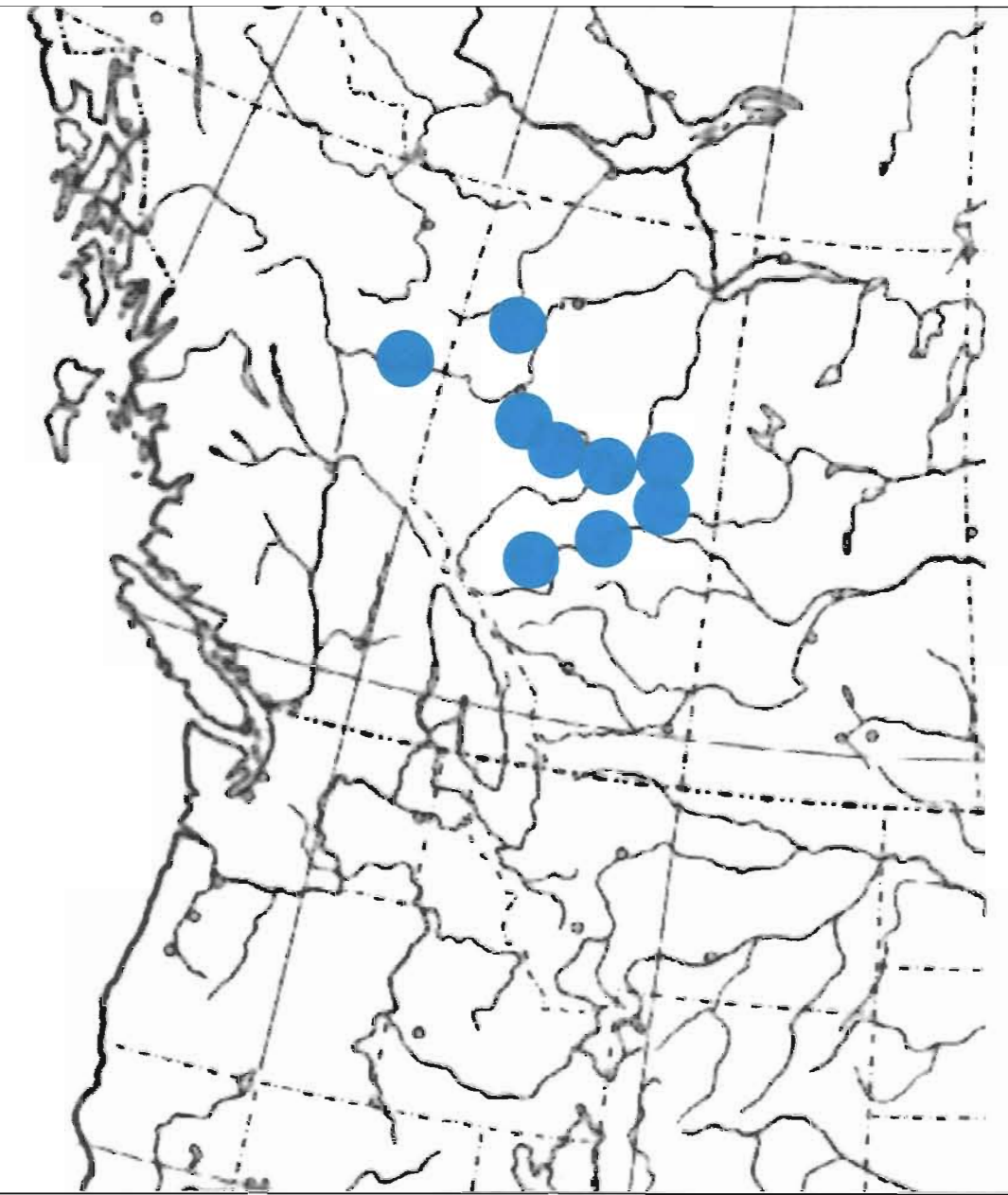
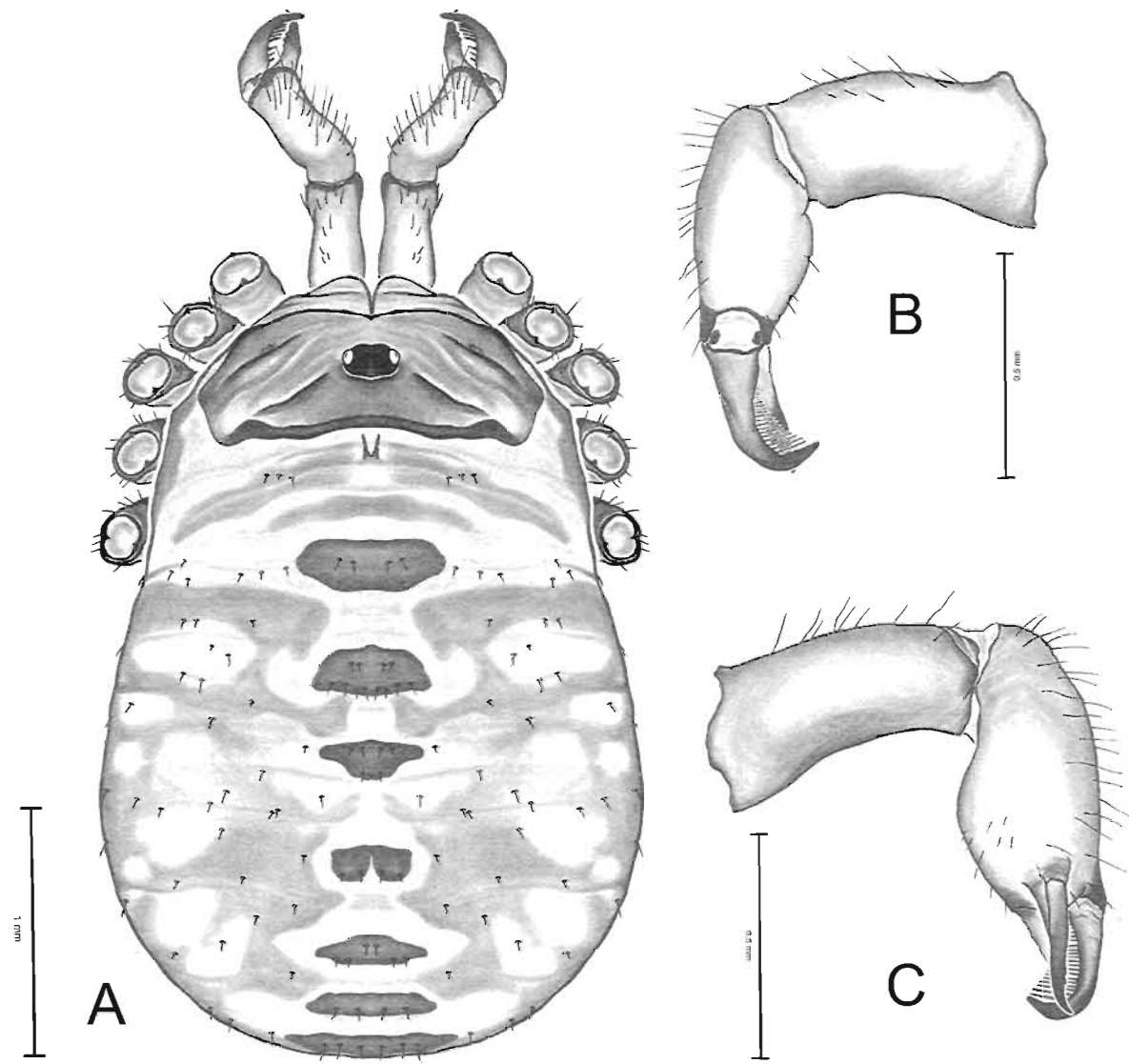


Figure 4. *Sabacon* # 1, female. A = dorsal view of body, B = ectal view of left chelicera, C = mesal view.

Figure 5. Distribution of *Sabacon* # 1.

Descriptions of New Species: *Sabacon* # 2, from one male and one female collected in Clackamas County, Oregon.

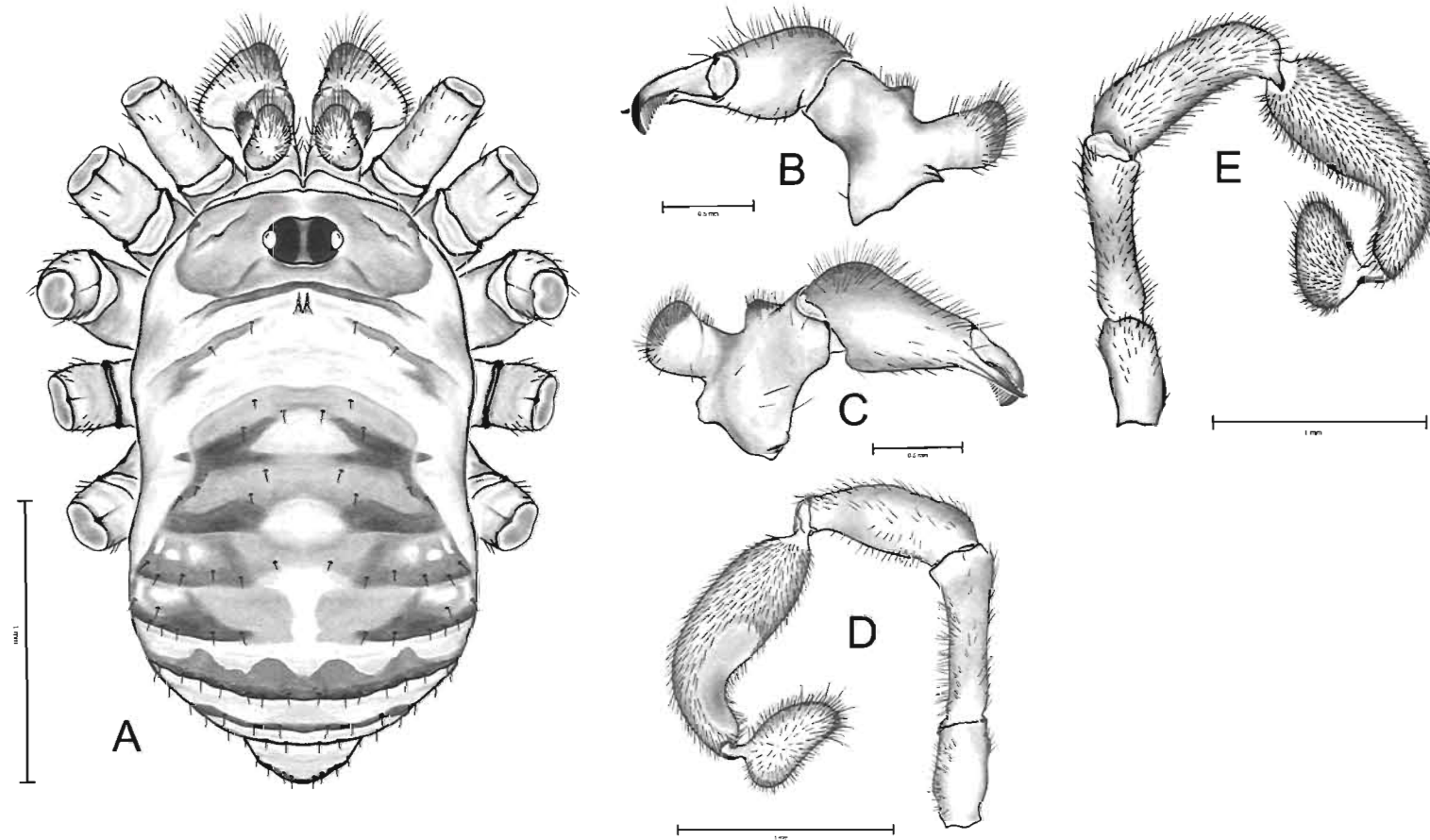


Figure 5. *Sabacon* # 2, male. A = dorsal view of body, B = ectal view of left chelicera, C = mesal view, D = ectal view of left palp, E = mesal.

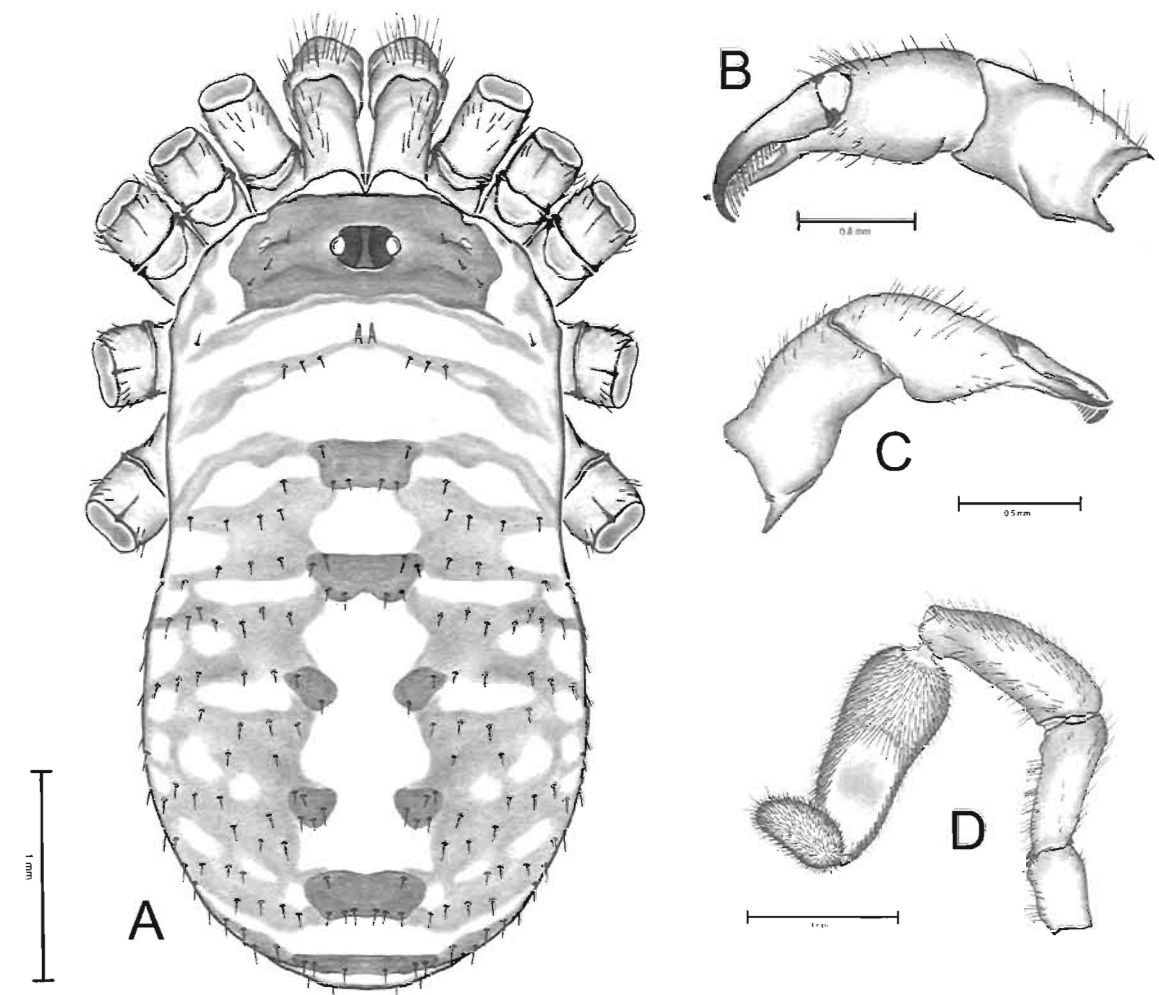


Figure 6. *Sabacon* # 2, female. A = dorsal view of body, B = ectal view of left chelicera, C = mesal view.

Descriptions of New Species: Sabacon # 2 and collection sites for three species.

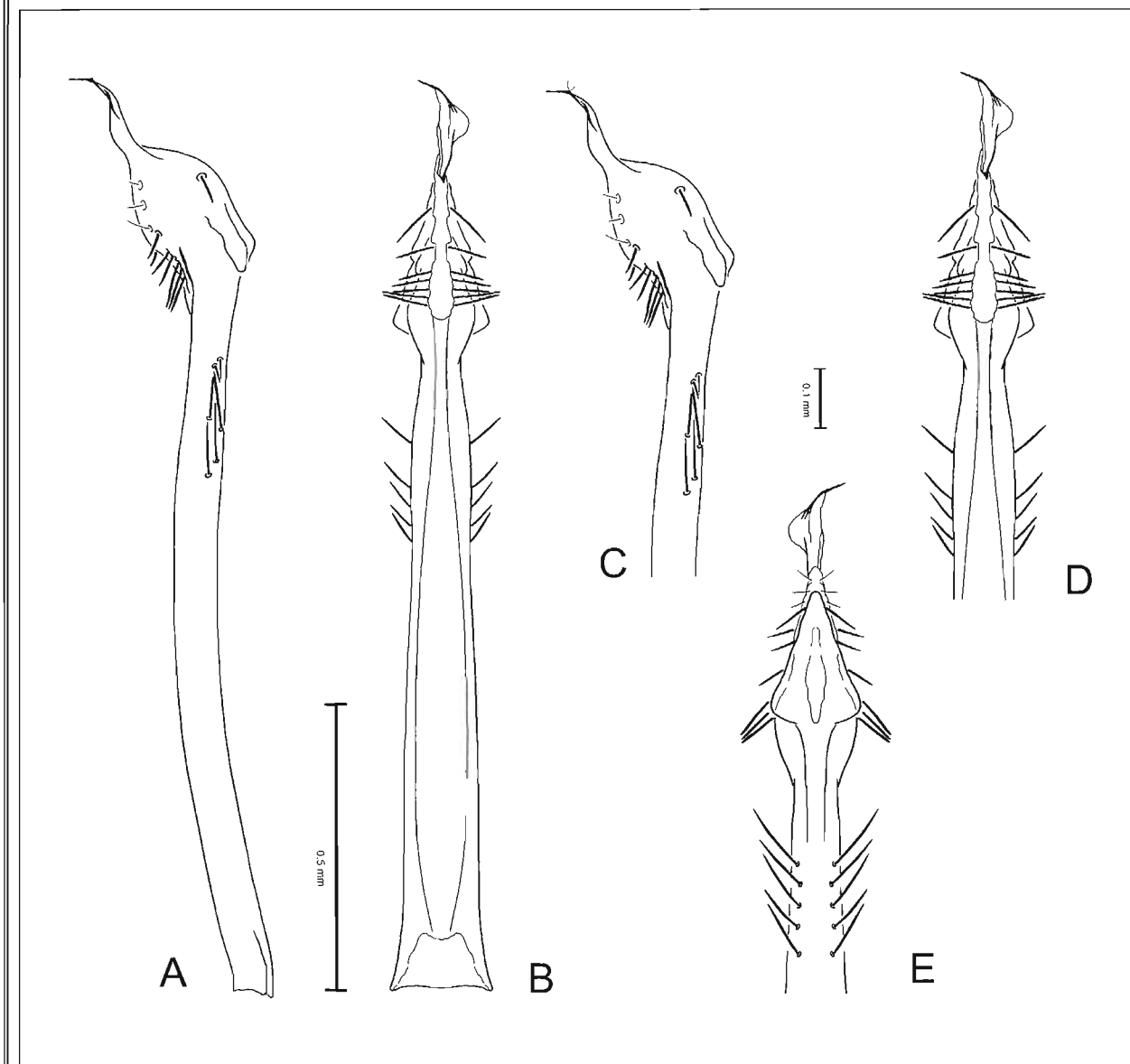


Figure 7. Sabacon # 2, penis. A & C = lateral views, B & D = dorsal, E = ventral.

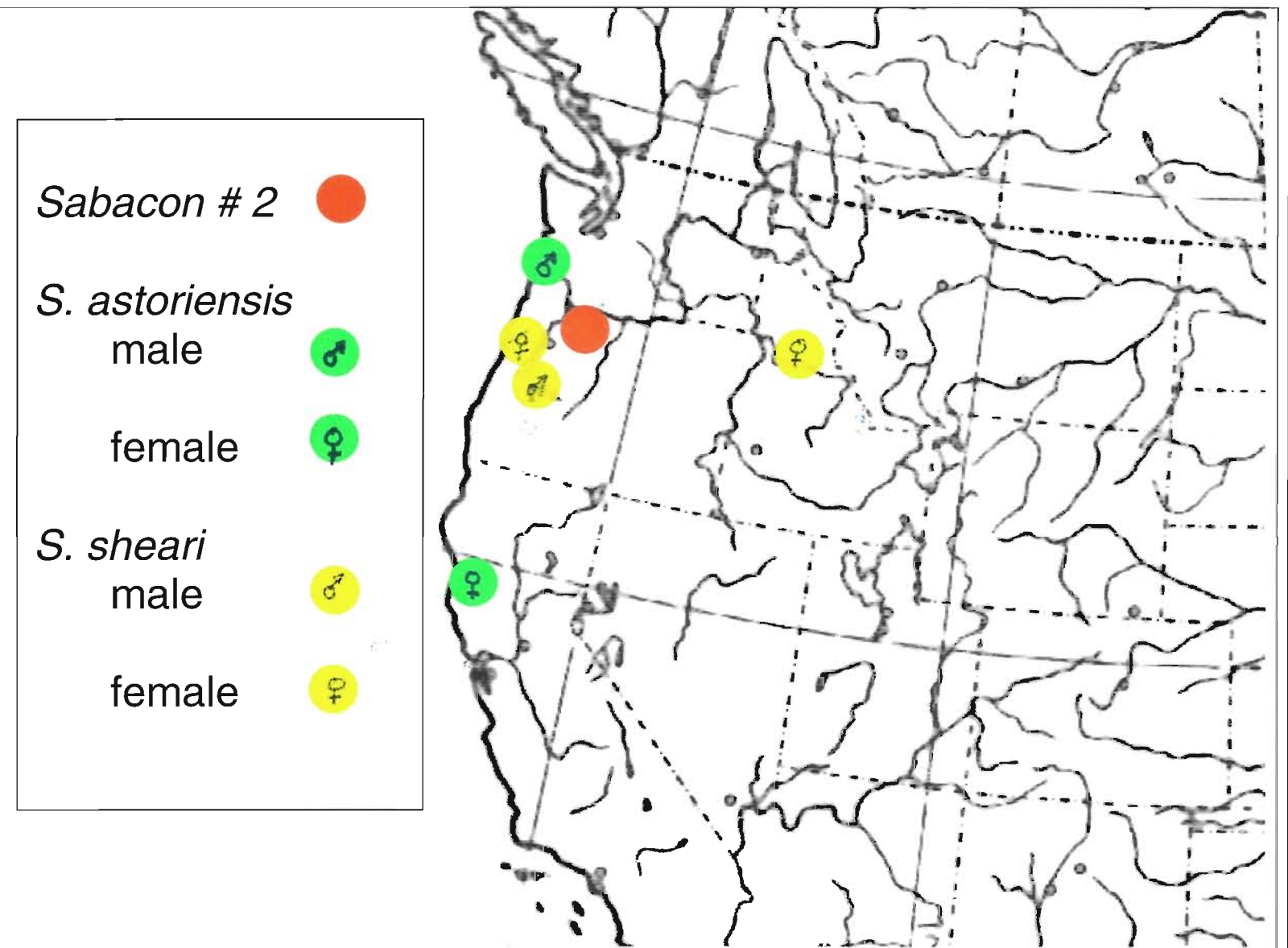
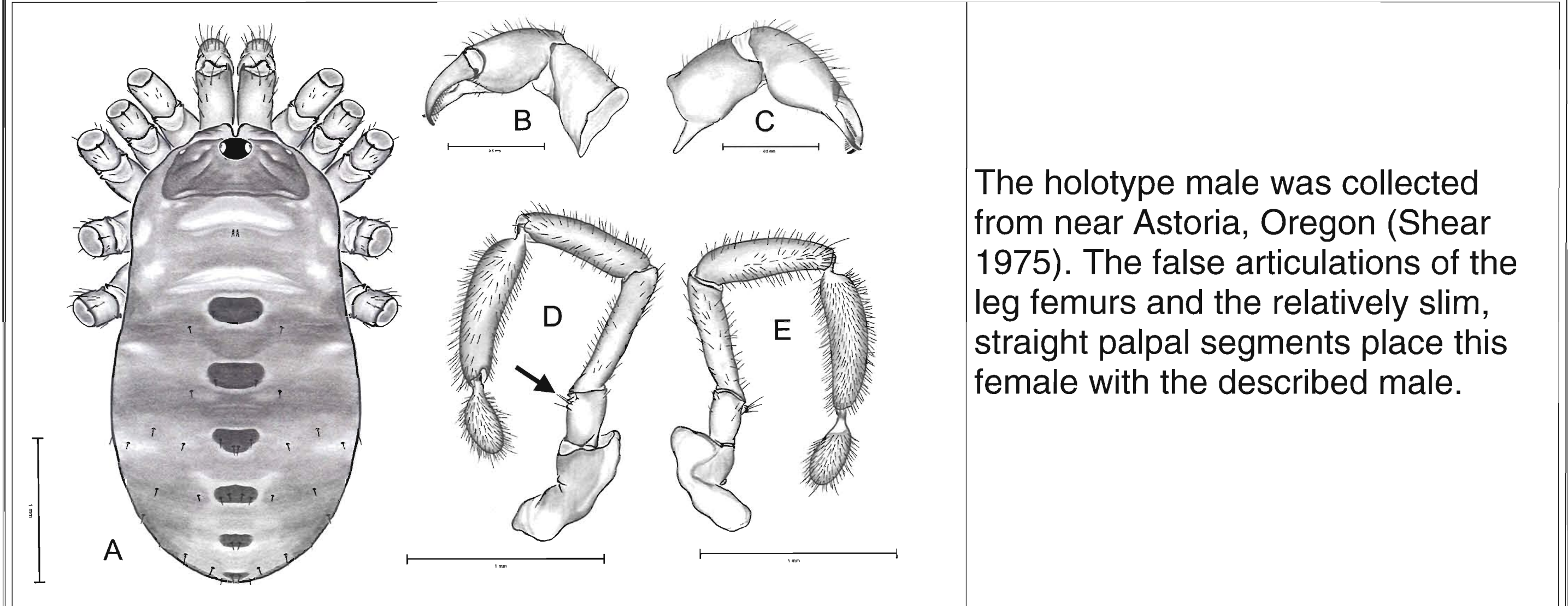


Figure 8. Collection sites for three species of *Sabacon*.

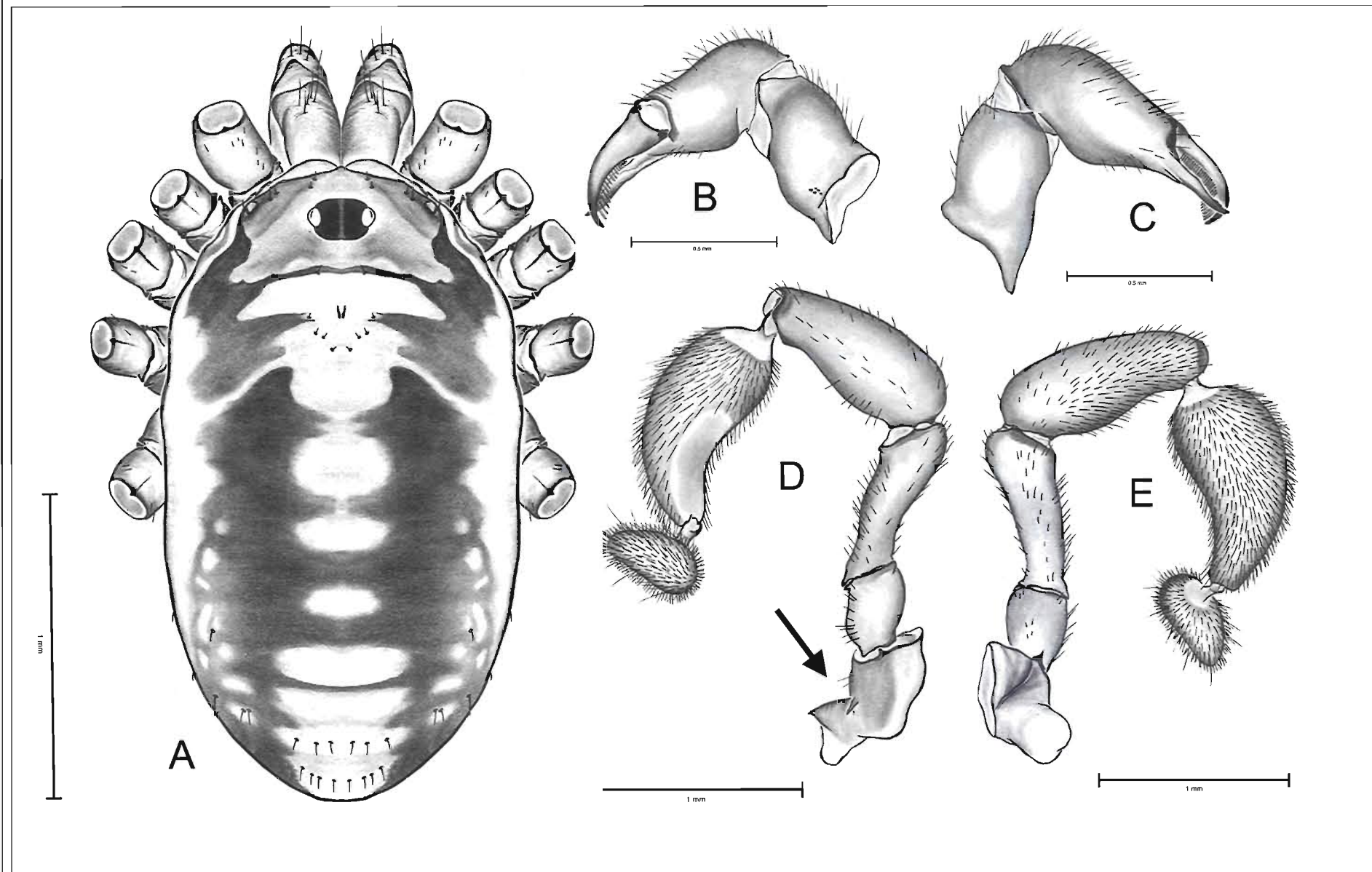
Description of Undescribed female: *Sabacon astoriensis* from one female collected from Del Norte County, California.



The holotype male was collected from near Astoria, Oregon (Shear 1975). The false articulations of the leg femurs and the relatively slim, straight palpal segments place this female with the described male.

Figure 9. *S. astoriensis*, female. A = dorsum, C & D = ectal and ectal mesal views of left chelicera, D & E = ectal views of left palp.

Description of Undescribed female: *Sabacon sheari* from one female collected from Tillamook County, Oregon and one female from Idaho County, Idaho.



The holotype male was collected from Benton County, Oregon (Cokendolpher 1984). The conspicuous slit sensillae on the mesal surface of the basal segment of the chelicerae help place these females with the described female.

Figure 10. *S. sheari*, female. A = dorsum, C & D = ectal and ectal mesal views of left chelicera, D & E = ectal views of left palp.

Ovipositors.

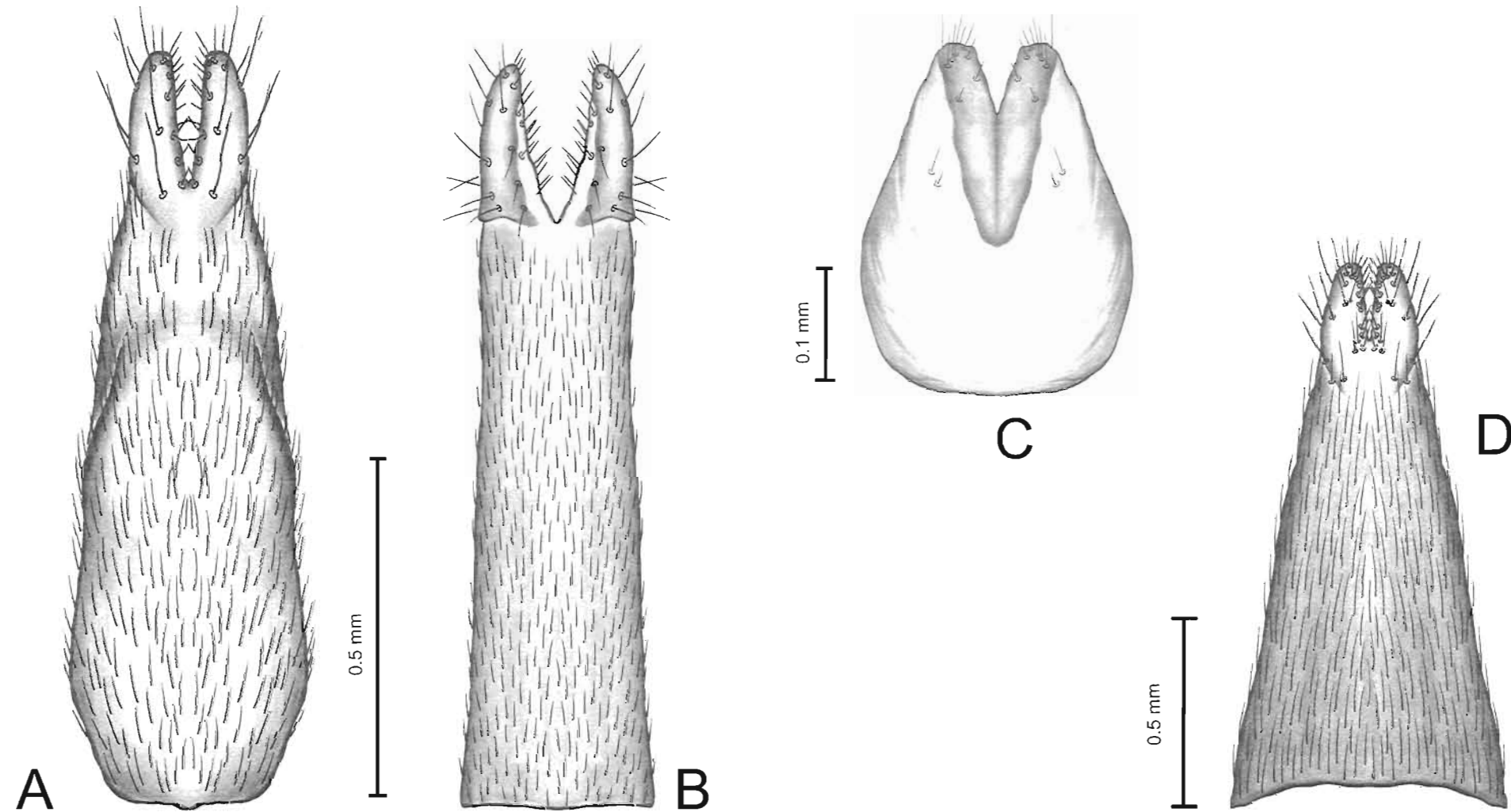


Figure 11. Ovipositors. A= *Sabacon* # 1 , B = *S. astoriensis*, C = tip of *S. sheari*, and D = tip of *Sabacon* #2.

Note that ovipositors are very fragile and often break off during removal. Thus lengths are not a good characteristic for differentiating species.

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Literature Cited:

- Chemeris, A.N. & D.V. Logunov. 2000. Notes on two species of *Sabacon* Simon, 1879 from the mountains of south Siberia (Arachnida: Opiliones: Sabaconidae). *Arthropoda Selecta*, 9(3):207–213.
- Cokendolpher, J.C. 1984. A new species of *Sabacon* Simon from Oregon (Arachnida: Opiliones: Sabaconidae). *Canadian Journal of Zoology*, 62:989-991.
- Edgar, A.L. 1990. Opiliones (Phalangida). pp. 529-581. In: Dindal, D.L. *Soil Biology Guide*. New York: John Wiley & Sons.
- Martens, J. 1972. Opiliones aus dem Nepal–Himalaya. I. Das Genus *Sabacon* Simon (Arachnida: Ischyropsalidae). *Senckenbergiana biologica*, 53(3/4):308–323.
- Martens, J. 1983. Europäische Arten der Gattung *Sabacon* Simon 1879 (Arachnida: Opiliones: Sabaconidae). *Senckenbergiana biologica*, 63(3/4):265–296.
- Shear, W.A. 1975. The opilionid genera *Sabacon* and *Tomicomerus* in America (Opiliones, Troguloidea, Ischyropsalidae). *Journal of Arachnology*, 3:5-29.
- Shear, W.A. 1986. A cladistic analysis of the Opilionid superfamily Ischyropsalidoidea, with descriptions of the new family Ceratolasmatidae, the new genus *Acuclavella*, and four new species. *American Museum Novitates*, 2844:1-29.
- Suzuki, S. 1974. The Japanese species of the genus *Sabacon* (Arachnida, Opiliones, Ischyropsalidae). *Journal of Science of the Hiroshima University, Series B, Division 1 (Zoology)*, 25:83–108.
- Tsurusaki, N. & D. Song. 1993. Two new species of *Sabacon* from Sichuan Province, China (Arachnida: Opiliones: Sabaconidae). *Zoological Science*, 10(1):155–159.