

# Morphological Features of Pseudoscorpion (*Strobilochelifer spinipalpis*) from Qassim Palm Farm

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**Abstract:** This study presents scanning electron microscope images of *Strobilochelifer spinipalpis*, a species of pseudoscorpion, for the first time. The images clarify the morphology of the body of the pseudoscorpion and its setae. These are the first recorded images of the morphological features of this species. The sample were collected from Palm farm in Qassim. The images collected clarify the differences between structures previously only observed by optical microscope.

**Keywords:** Pseudoscorpion ,SEM ,Saudi Arabia , morphology, *Strobilochelifer spinipalpis*

## 1. Introduction

Pseudoscorpions belongs to the class Arachnida and are usually 2-8 mm long. The body is protected by tergite on the back and sternite underneath. The pseudoscorpion body is yellow to dark-brown. Pseudoscorpions have eight legs with five to seven segments, and pedipalps. Pseudoscorpions belonging to the family Cheliferidae can be found on palm farms (Mahnert, 2009). Pseudoscorpions belonging to the genus *Strobilochelifer* have been recorded at several localities of in the Arabian Peninsula, including Saudi Arabia (Mahnert, 1980; El- Hennawy, 2014) , Oman (Mahnert, 1991), and in north of Arabian Peninsula in Iraq (Harvey, 2011). The purpose of this paper is to describe a previously undescribed species of pseudoscorpion found at Qassim palm farm in Saudi Arabia.

## 2. Material and Methods

The specimens were preserved in glutaraldehyde then prepared for scanning electron microscopy according to Klausen and Totland (1977).

## 3. Result and Discussion

*Strobilochelifer spinipalpis* (Redikorzev, 1918) is a species with considerable sexual dimorphism in the family Cheliferidae. It was collected from palm trees. The femur and patella of the pedipalps bear spine-like prolongations on the medial face, the significance of which is unknown, but might be functional during prey capture or mating behavior (Mahnert, 2009) and there are recorded this Genus a farm in ( al-hasa ) Saudi Arabia. El- Hennawy 2014. In our research is for the first time found in Qassim area.

### 3.1 Classification *Strobilochelifer spinipalpis*

Kingdom: Animalia  
Phylum: Arthropoda  
Sub-phylum :Chelicerata  
Class: Arachnida  
Order: Pseudoscorpionida  
Suborder: Iocheirata  
Super-Family :Cheliferoidea

Family :Cheliferidae

Sub-Family:Cheliferinae

Genus : *Strobilochelifer*

Species :*spinipalpis*

## 3.2 Description

### 1) Carapace

Longer than board coarsely granulate; the color brown with dark lateral marginal; darker than the abdomen. Pedipalp and anterior half carapace reddish-brown, posterior half yellowish, all tergites yellowish-brown, carapace longer than the board, coarsely granulate, parallel-sided, with two transverse furrows the subbasal one slightly nearer to posterior margin of carapace than to the median groove, two spheric eyes.

### 2) Abdomen

- Tergites:** Sclerotized and granulate lighter in color than carapace brown with dark brown and full stripes with setae. Tergites slightly sclerotized scale-like.
- Sternites:** Lighter in color than tergites lightly sclerotized; slightly granulate with many lyrifissure.
- Chelicera:** Brown; movable finger slightly darker in color; galeal seta present; hand with five simple setae; external seta shorter than a fixed finger.
- Pedipalps:** Long and narrow; brown darker than carapace; lateral margins darker and more granulate; the setae short; trochanter, femur, patella and chelal hand completely granulate; most setae short, chelal fingers with simple and long setae; trochanter with two dorsal ridges; femur with distinct pedicel. The setae of pedipalps short dentate those of carapace and targets short, palpal coxa with three marginal and one discal seta; palpal coxa with 20 setae, coxa I-II 8, III 15, IV approximately 50.

## Figures

Figure 1. General shape of the pseudoscorpion *Strobilochelifer spinipalpis*. A General view of the opsithosoma. B, C Front end of the dorsal appendage

(Pedipalp) and first pair of legs. D Enlarged view of the surface of the opisthosoma.

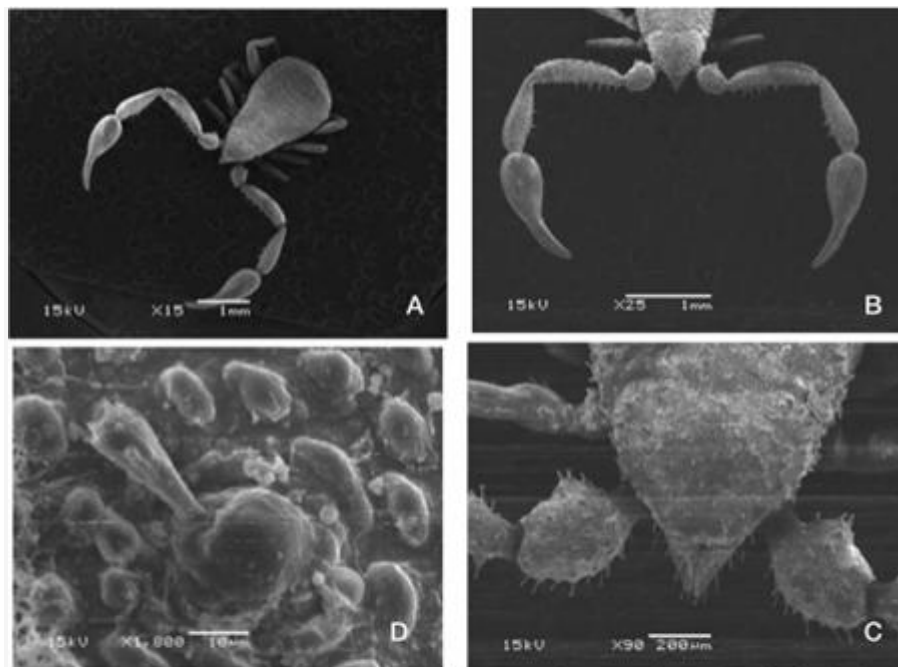
Figure 2. Dorsal view of the opisthosoma of the pseudoscorpion *Strobilochelifer spinipalpis*. A General view of the dorsal opisthosoma segments. B, C Enlarged dorsal view of opisthosoma with row of seta at the dental end.

Figure 3. Mouthparts and chaetotaxy of pseudoscorpion *Strobilochelifer spinipalpis*.

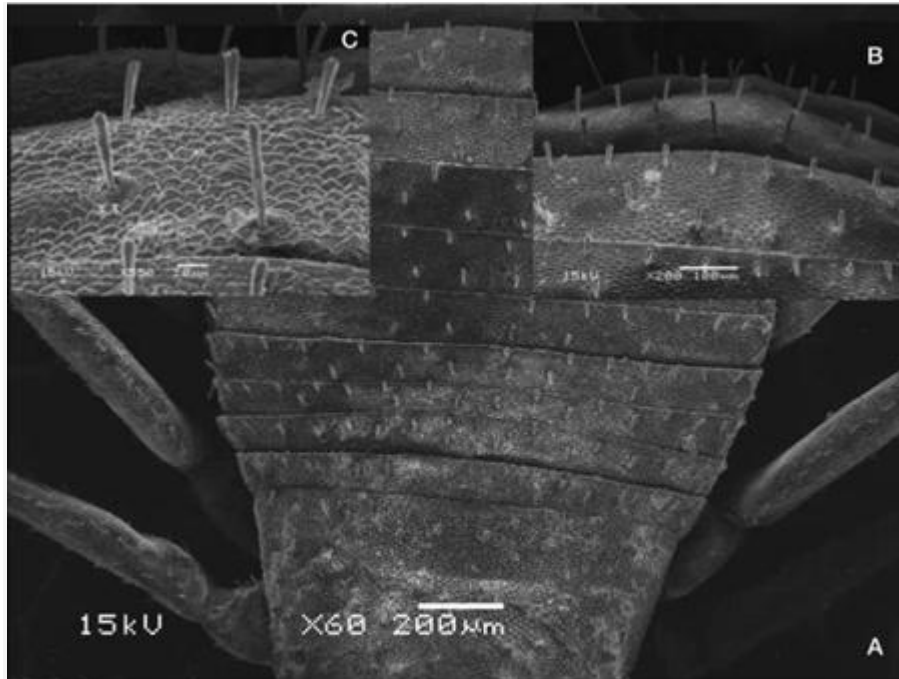
Figure 4. Pedipalp of the pseudoscorpion *Strobilochelifer spinipalpis* and chaetotaxy of the claw of chela and papilla in the tibia.

## References

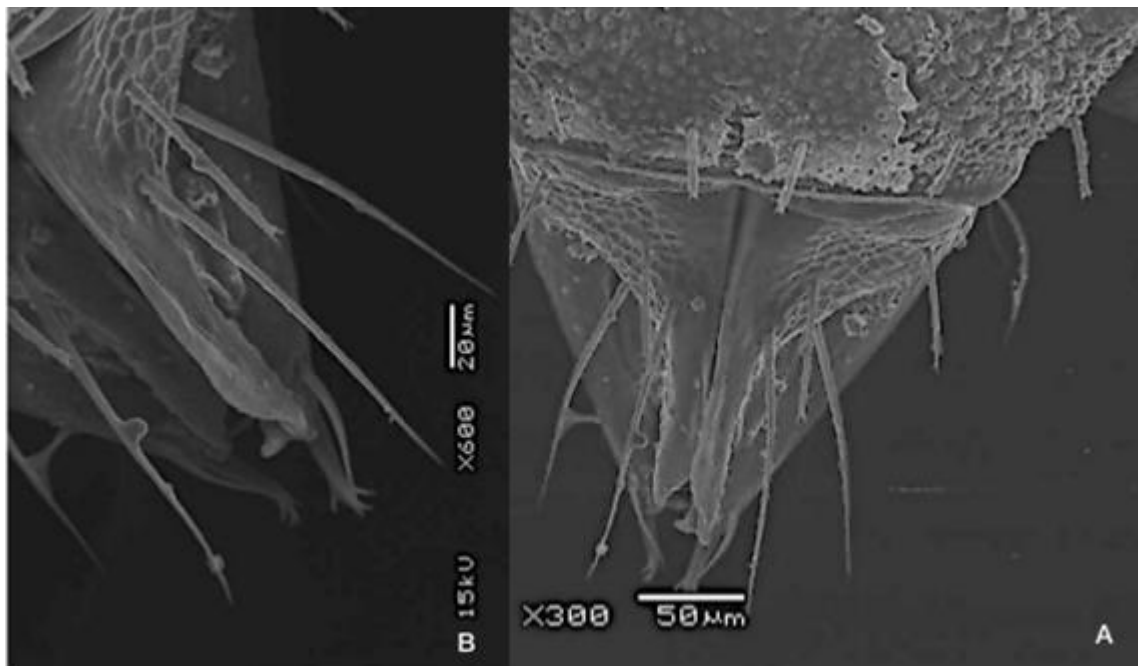
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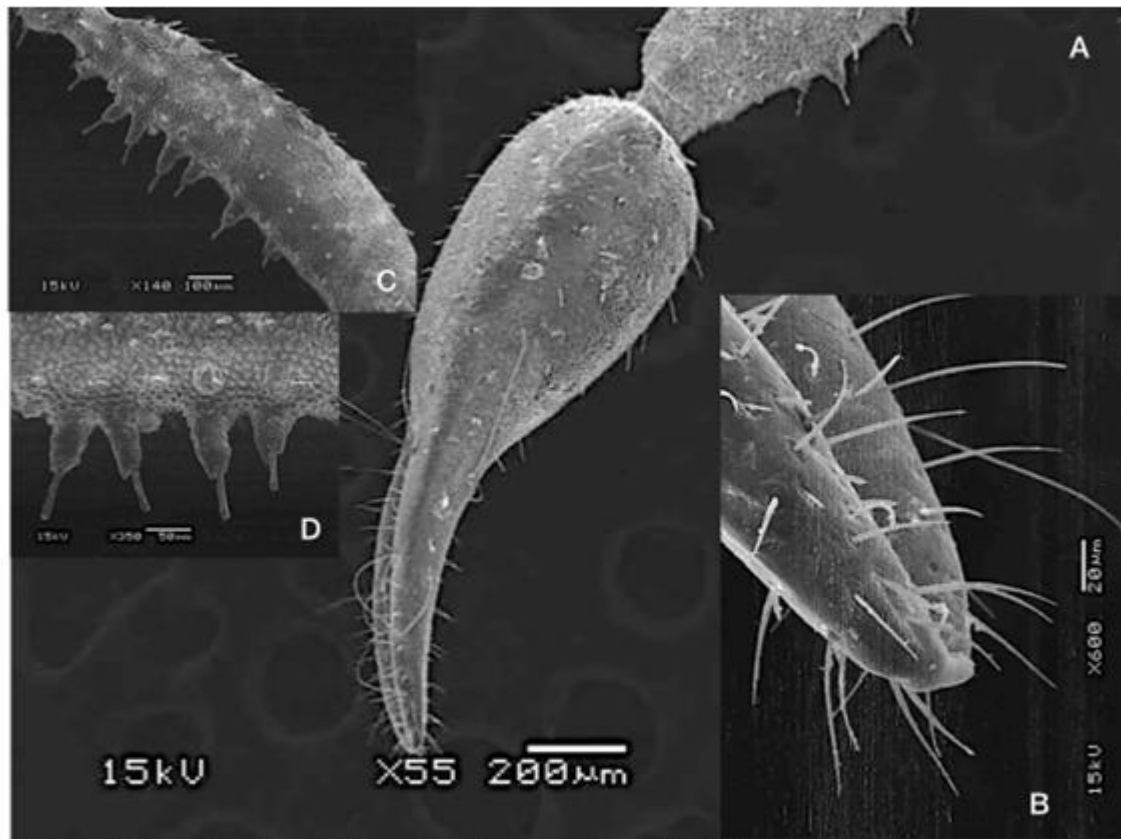
**Figure 1.** General shape of the pseudoscorpion *Strobilochelifer spinipalpis*. A General view of the opisthosoma. B, C Front end of the dorsal appendage (Pedipalp) and first pair of legs. D Enlarged view of the surface of the opisthosoma.



**Figure 2.** Dorsal view of the opsithosoma of the pseudoscorpion *Strobilochelifer spinipalpis*. A General view of the dorsal opsithosoma segments. B, C Enlarged dorsal view of opsithosoma with row of seta at the dental end.



**Figure 3.** Mouthparts and chaetotaxy of pseudoscorpion *Strobilochelifer spinipalpis*.



**Figure 4.** Pedipalp of the pseudoscorpion *Strobilochelifer spinipalpis* and chaetotaxy of the claw of chela and papilla in the tibia.