

= Zygoballus sexpunctatus =

Zygoballus sexpunctatus is a species of jumping spider which occurs in the southeastern United States where it can be found in a variety of grassy habitats . Adult spiders measure between 3 and 4 @. @ 5 mm in length . The cephalothorax and abdomen are bronze to black in color , with reddish brown or yellowish legs . The male has distinctive enlarged chelicerae (the mouthparts used for grasping prey) and front femora (the third , and typically largest , leg segments) . Like many jumping spiders , *Z. sexpunctatus* males exhibit ritualized courtship and agonistic behavior .

= Etymology =

The specific name is derived from the Latin *sex* meaning " six " and *punctum* meaning " spot " . This is a reference to the six spots typically occurring on the abdomen of the male .

= History and taxonomy =

The species was first described by entomologist Nicholas Marcellus Hentz in 1845 in the *Boston Journal of Natural History* . Hentz named the species *Attus sexpunctatus* and described it as follows :

" Black ; cephalothorax with the two posterior eyes near the base , which is wide and suddenly inclined at nearly a right angle with the upper surface , cheliceres with a strong inner tooth , and a long , curved fang ; abdomen with six dots , and a line in front , white ; feet , 1 . 4 . 2 . 3 . , first pair with enlarged thighs and quite long . "

Hentz classified *A. sexpunctatus* in the subgeneric group *Pugnatoriae* , which consisted of jumping spiders whose first pair of legs were the longest , followed by the fourth pair . Later entomologists abandoned this classification , which Hentz himself admitted was " somewhat artificial " . In 1888 , with the recognition of *Zygoballus* as an independent genus , American arachnologists George and Elizabeth Peckham renamed the spider *Zygoballus sexpunctatus* . Specimens of *Z. sexpunctatus* are housed at the Museum of Comparative Zoology , the British Museum , the Milwaukee Public Museum , the American Museum of Natural History , and the Muséum National d 'Histoire Naturelle . No type specimens are known .

The genus *Zygoballus* contains approximately twenty species distributed from the United States to Argentina . *Zygoballus* is classified in the subfamily *Dendryphantinae* of the family *Salticidae* (jumping spiders) .

= Description =

According to arachnologist B. J. Kaston , adult females are 3 @. @ 5 to 4 @. @ 5 mm in body length , while males are 3 to 3 @. @ 5 mm . The Peckhams ' earlier description , however , gives a length of 3 mm for females and 3 to 4 @. @ 5 mm for males .

The cephalothorax of *Z. sexpunctatus* is bronze to black in color . Like all *Zygoballus* spiders , the cephalothorax is box @-@ like in shape , being widest at the posterior lateral eyes . Numerous white or pale blue scales cover the clypeus (" face ") and chelicerae . This covering extends around the sides of the carapace , ending beyond the posterior median eyes . In males , the labium is two @-@ fifths as long as the maxillae , and as wide as it is long . The chelicerae of males are greatly enlarged and obliquely oriented , with each chelicera having a prominent inner tooth and a long , curved fang .

The legs are reddish brown , or sometimes yellowish , with the femora of the anterior (first) pair being darker and enlarged , especially in the male . The anterior legs have three pairs of long spines on the ventral surface of the tibia and two pairs of spines on the metatarsus . The Peckhams give the following measurements for the lengths of the legs of a male specimen , starting with the anterior pair : 3 @. @ 7 mm , 2 @. @ 2 mm , 2 mm , 3 mm . In females , the fourth pair of legs are the longest . The pedipalp in the male has a single tibial apophysis which tapers gradually .

The abdomen is bronze to black with a white basal band and two white transverse bands . The transverse bands are often broken to form six spots . Some or all of these spots may be lacking , however .

Zygoballus sexpunctatus is similar in appearance to *Zygoballus rufipes* , with whom its range overlaps . The male can be distinguished from *Z. rufipes* by the large spot of white scales at the beginning of the thoracic slope (which is lacking in *Z. rufipes*) , and by the longitudinal division present on the bulb of the pedipalp (*Z. rufipes* has a transverse division) . The female can best be distinguished by the form of the epigyne (the external genital structure) .

= = Habitat and distribution = =

The range of the species extends from New Jersey to Florida and west to Texas , although it is most commonly found in the southern states . Hentz collected his original specimen in North Carolina . In 1909 , the Peckhams reported that the species had been collected from North Carolina , Florida , Texas , Louisiana , and Mississippi . A seven @-@ year survey of spider species in western Mississippi reported the abundance of *Z. sexpunctatus* as " uncommon " . A one @-@ year survey in Alachua County , Florida , reported the species as " rare " .

Specimens have been collected from several ecosystems , including old fields , river terrace forests , flatwoods , Florida Sand Pine scrub , Slash Pine forests , Appalachian grass balds , and rice fields . Robert and Betty Barnes reported the species as occurring in broomsedge fields throughout the southeastern Piedmont . The species is typically found in the herb stratum (among grasses and other short plants) and may be collected with a sweep net .

= = Behavior = =

Male *Zygoballus sexpunctatus* spiders are known to exhibit elaborate courtship displays . As a male approaches a female , it will typically raise and spread its first pair of legs and vibrate its abdomen . If the female is receptive , it will often vibrate its abdomen as well . The specific patterns of courtship behavior , however , vary between individuals .

Z. sexpunctatus males exhibit ritualized agonistic behavior when encountering other males of the same species . This behavior may include many of the same elements as courtship , such as raising and spreading the first pair of legs and vibrating the abdomen . During agonistic display , males will also extend their pedipalps and fangs . Lethal attacks between males appear to be rare , however .

= = Diet and ecology = =

Like most spiders , *Zygoballus sexpunctatus* is an opportunistic feeder , feeding on a wide range of invertebrate prey . The spider 's diet typically includes small insects such as aphids and young caterpillars . They have also been known to eat mosquitoes and numerous kinds of small spiders .

Mud dauber wasps , which capture and paralyze spiders as a source of food for their larvae , have been shown to prey on both male and female *Z. sexpunctatus* spiders .

= = Life cycle = =

In a study of spider populations in western Tennessee , *Zygoballus sexpunctatus* spiderlings were reported to hatch from egg sacs in mid summer . The spiders hibernated through the winter in an immature form and reached sexual maturity around late April .