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## THE ATTIDAE

The Attidae are jumping spiders, many of them brightly colored and quick in their movements and living in open places among the tops of low plants. They are usually short and stout spiders, with a large cephalothorax, which is wide in front, where the eyes have a peculiar arrangement in three rows (fig. 118), somewhat as in the Lycosidae, but with the middle eyes of the front row much the largest, so that at first sight many of them appear to have only two eyes. The eyes of the second row are very small and hard to see, and those of the third row are far back on the head and usually turned a little backward. The front legs are usually thicker than the others, especially in the males. The relative length of the legs is variable, the first pair being commonly the longest, but sometimes the fourth and even in some species the third pair. The feet have two claws, with many fine teeth and a thick brush of hairs. The Attidae are usually thickly covered with hair or scales, often brightly colored or iridescent, and their appearance is often entirely changed by rubbing or wetting.

They walk backward or sidewise as well as forward, and many of them jump great distances. They make no cobwebs, but some species make silk tubes or bags on plants or under stones in which they hide to molt or lay their eggs or to pass the winter. There are often great differences in color and markings between the sexes, and the males have peculiar bunches

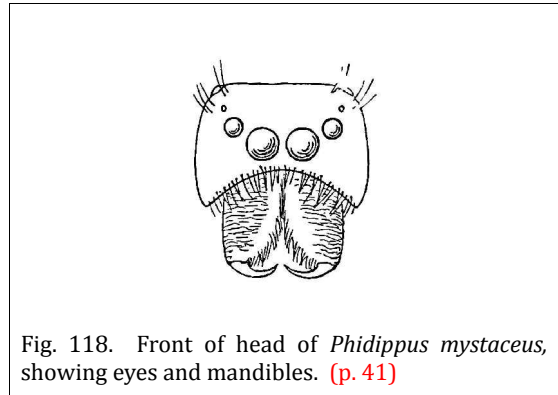


Fig. 118. Front of head of *Phidippus mystaceus*, showing eyes and mandibles. (p. 41)

of hairs and color spots on the legs and head. At the mating time some of the males have peculiar ways of approaching the female, holding their legs extended sidewise or over their heads in such ways as to display their ornaments. These mating habits have been well described by G. W. Peckham, who has made a special study of this family, in the *Occasional Papers of the Wisconsin Natural History Society*, of Milwaukee, in 1889. This family is largely represented in more southern countries, and our species belong to a great number of genera most of whose members live farther south.

***Attus palustris***. — Large females are quarter of an inch long, the males a little smaller. The cephalothorax is a quarter longer than wide, shorter in proportion to its width than in the next species, *Saitis pulex*, which it much resembles. The two sexes resemble each other in markings, but the females are lighter and browner and the males darker and grayer. The cephalothorax has a narrow white middle line, widened opposite the dorsal eyes, and a shorter white line just below the eyes on the sides (fig. 119). The edge of the cephalothorax is also white. On the abdomen the front middle spot is not so distinct as in *pulex*, but in place of it are two white spots. Behind these is a large transverse light marking, sometimes

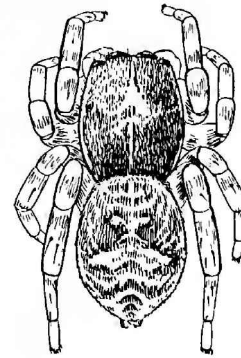
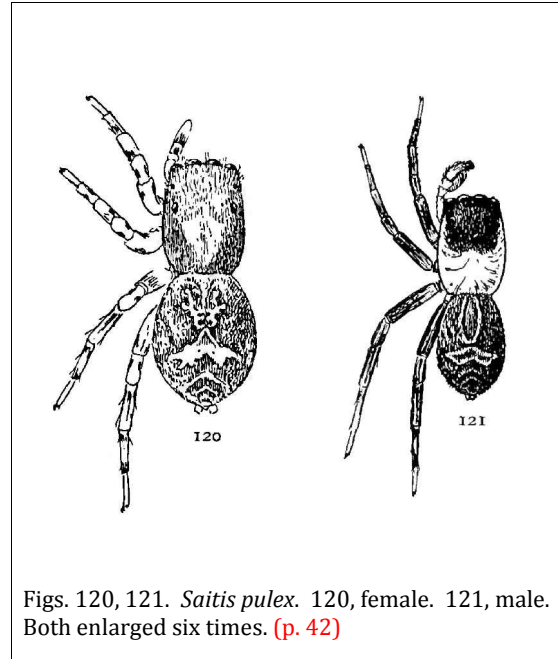


Fig. 119. *Attus palustris*, enlarged six times. (p. 42)

broken into two spots. The legs are dark or light gray, without any distinct markings. The male palpi are smaller than in *pulex*, though the males are larger. *Palustris* lives on plants and makes nests among the leaves.

***Saitis pulex***. — This is one of the smallest of the family. It is about a sixth of an inch long, sometimes even smaller. The colors are various shades of gray like the ground, and when still it is hard to find, but it is an active spider and exposes itself by jumping in open places. The cephalothorax is half longer than wide, longer and narrower than in *Habrocestum* and *Attus*. The abdomen is usually shorter than the cephalothorax and wider (figs. 120, 121). The cephalothorax has a large light-colored triangle in the middle, covering the head between the eyes in front and ending in a point behind. In alcohol this spot disappears, especially in the males, and the head appears black between the eyes and light behind and at the sides. The front half of the abdomen has a light middle stripe, lightest at the edges and darker gray in the middle. Behind this is a transverse white spot nearly the



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whole width of the abdomen and behind it several smaller light markings. In the male these markings are brighter and the surrounding dark color blacker than in the females. The legs are marked with indefinite spots of dark gray on a lighter ground, the contrast stronger in the males. The hairs all over the body are short and fine and the spines on the legs distinct, especially in the males.

***Habrocestum auratum***.—In life this spider is covered with bluish white hairs that give it a light gray color and obscure the markings. The markings of the male are so much stronger that those of both sexes can be best understood by describing the male first (fig. 122). The cephalothorax has a white middle stripe for a short distance back from the front eyes and two distinct white stripes from the lateral front eyes back the whole length. In the middle of the head are two small white spots and just behind them between the posterior eyes two curved white lines. The latter marks show indistinctly in the females. Down at the sides of the cephalothorax are white stripes meeting in front under the eyes. The abdomen has a white line extending entirely around it and a middle stripe of varying width.

The female (fig. 123) has only faint indications of the markings of the cephalothorax, usually a little lighter color in the middle and at the sides below the eyes. The white stripe around the abdomen is broken into three pairs of oblique white markings and the middle stripe into several spots or pairs of

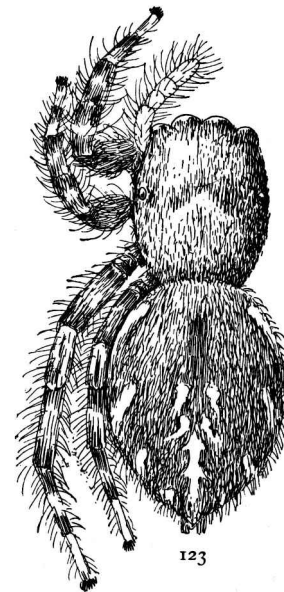
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spots. There is nothing distinctive in the markings of the under side or of the legs except the ornaments of the male.

The front legs of the male (fig. 125) in this species are much ornamented. The femur has long black hairs on the under side. The patella has long black hairs beneath, a spot of short black hairs on the inner side, and a crest of long white hairs mixed with shorter black on the upper side. The tibia is covered with long black hairs except at the tip, where they are white. There is nothing peculiar about the third leg (fig. 124). The form and general appearance can best be understood from the figures.

At the mating time the males, as they approach the females, hold the front legs extended



Figs. 122, 123. *Habrocestum auratum*. 122, male. 123, female. Both enlarged eight times. (p. 43)

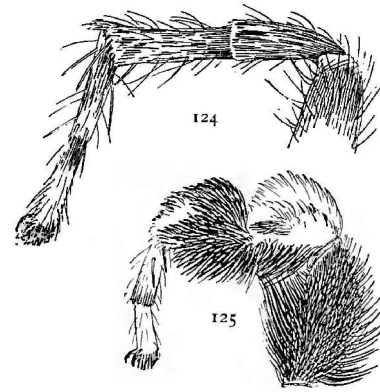
sidewise and lifted a little from the ground, with the tibia nearly horizontal and the tarsus turned downward. In this position they advance slowly, at the same time running rapidly sidewise from one side to the other and at short intervals jerking the abdomen and the front legs slightly upward. They go almost close enough to touch the female and then quickly retreat.

*Habrocestum peregrinum*. — This is about the same size as *auratum* and looks very much like it. The female, at any rate in alcohol, has a more distinct light mark in the middle of the cephalothorax, curving

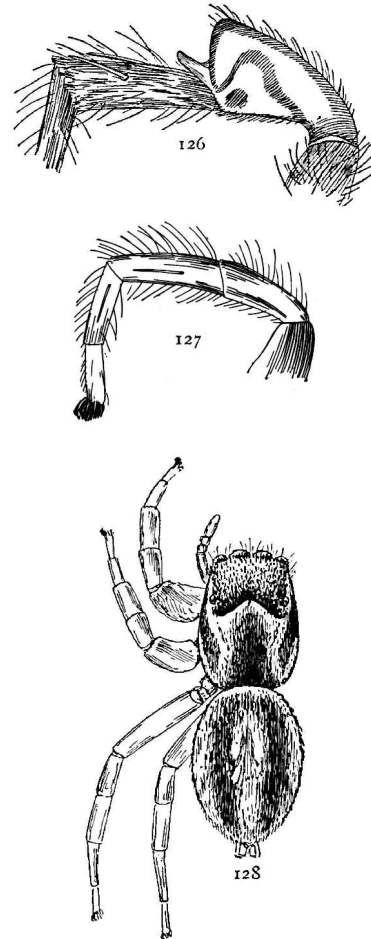
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under the eyes and pointing forward in the middle (fig. 128). The abdomen has light markings in the middle similar to those of *auratum*, but those at the sides are less distinct.

The male has the white stripes in the middle and around the abdomen like *auratum*. The cephalothorax has the same white lines at the sides under the eyes and at the posterior end. It does not have a middle white stripe on the head between the eyes or two white spots just behind it, as *auratum* has, but the marking behind the eyes is more distinct, as it is in the female. The front legs of the male (fig. 127) are not ornamented with long hairs like *auratum*, but the third legs have a very peculiar shape, the patella being wide and flat, with a dark spot in the middle of the front side (fig. 126). The shape of this joint is best shown by the figure. When approaching the female he holds up the front legs and draws in the third pair so that the ornamented patellae show from in front.



Figs. 124, 125. Third and first legs of male *Habrocestum auratum* to show differences between this species and the next. 124, third leg. 125, first leg. (p. 44)



Figs. 126, 127, 128. *Habrocestum peregrinum*. 128, female enlarged six times. 126, third leg. 127, first leg. (p. 45)

***Habrocestum splendens*.** — A little larger than the other species, with the female distinctly marked with black and white and the male with brilliant red and iridescent scales. The females are about a quarter of an inch long, sometimes longer, and the males are a little smaller. The cephalothorax of the female is covered with brown scales mixed with black hairs. Across the middle, just behind the dorsal eyes, is a light band that curves behind the eyes and extends forward in the middle. The abdomen has a white band in front, one on each side, and one in the middle, the rest being deep black. The shape of these markings varies and the black parts are often broken into two rows of spots. The cephalothorax of the male is covered with dark iridescent scales, with blue, green, and purple

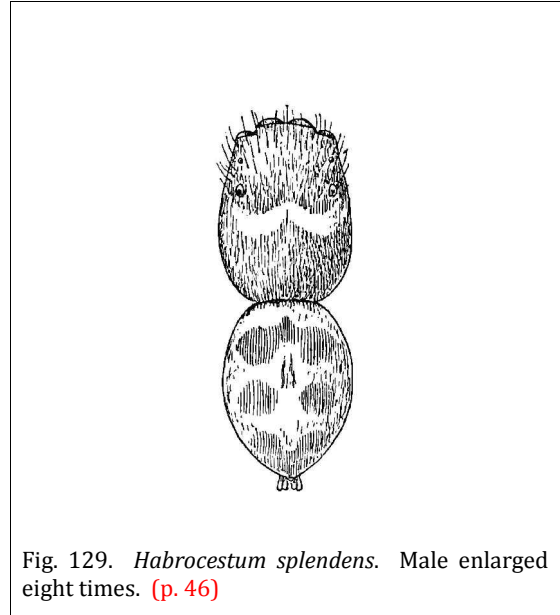


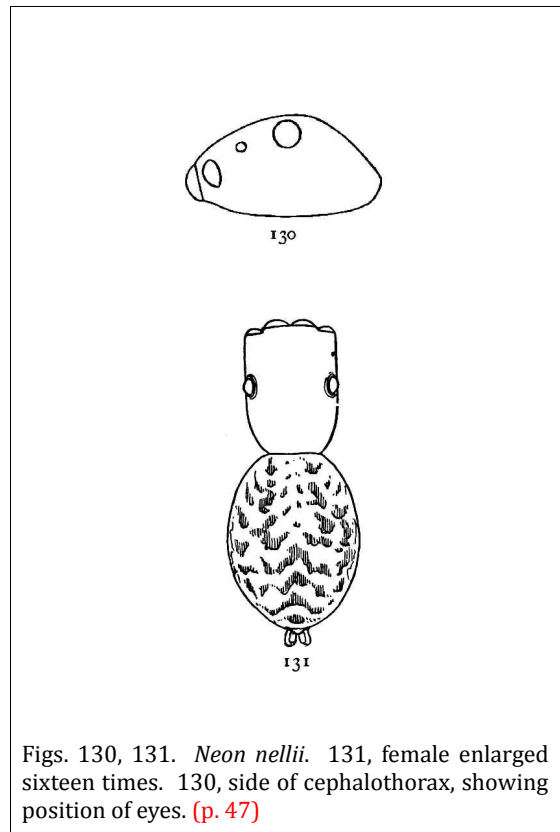
Fig. 129. *Habrocestum splendens*. Male enlarged eight times. (p. 46)

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reflections. The abdomen is covered with bright red shiny scales mixed with fine black hairs. It is lighter in front and at the sides, and in the middle shows indistinctly through the scales dark markings like those of the female (fig. 129). The legs are dark like the cephalothorax.

Mr. Peckham says that when the male approaches the female he lifts his abdomen into an almost vertical position so that the red color shows from in front. Then he rises on the tips of his feet and, with the front legs off the ground and pointing forward, he dances back and forth sidewise in front of her, gradually drawing nearer. At intervals he stops and turns his back to her, then faces her and dances again.

***Neon nellii*.**— This is one of the smallest spiders of the family, only a tenth of an inch in length. The general color is dark gray, darkest toward the head. The cephalothorax is high, the highest part being a little behind the middle, from which it curves downward to the front eyes and slopes abruptly backward (fig. 130). The eyes are large and prominent, the front row nearly straight and as wide as the widest part of the cephalothorax.



Figs. 130, 131. *Neon nellii*. 131, female enlarged sixteen times. 130, side of cephalothorax, showing position of eyes. (p. 47)

The posterior eyes are nearly as large as the front middle pair and are in the

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middle of the cephalothorax. The abdomen is a little longer and wider than the cephalothorax (fig. 131). The cephalothorax is smoky gray, darker toward the front and darker in males than females. The abdomen is gray, with yellowish markings in a herringbone pattern through the middle. Common under stones and leaves at all seasons.

***Zygoballus bettini***. — This is a very beautifully colored spider, having in life spots of white hairs and shining scales of the color of copper and bronze. The cephalothorax of both sexes is high and wide in the middle and slopes down steeply from the posterior eyes under the front of the abdomen (fig. 132). The top of the cephalothorax between the eyes is nearly square. The posterior eyes are almost the full width of the cephalothorax apart, and the front row of eyes is nearly as long. The cephalothorax is dark brown covered with iridescent scales. The legs are pale, except the dark femora of the first pair and dark spots on the ends of the joints of the fourth pair. In the male all the legs are a little darker than in the female and without the spots on the fourth leg. The abdomen of the female is light brown, marked with white in a row of irregular spots. In the male the abdomen is brown, covered with shining scales and with a

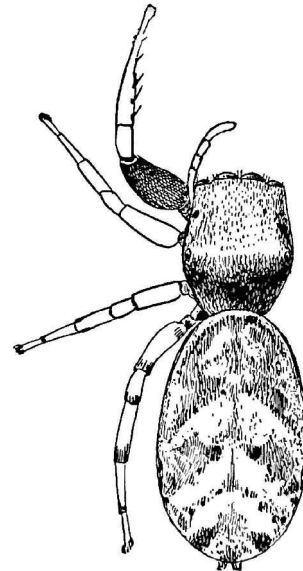


Fig. 132. *Zygoballus bettini*. Female enlarged eight times. (p. 47)

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white band around the front and two white spots on each side. The mandibles of the male are much elongated and bent apart at the ends to make room for the long claw. At the inner angle is a large tooth, and there is another one of complicated shape on the middle of the under side.

***Phidippus multiformis***. — This is a very common spider on plants throughout the summer. It matures in July, and the males and females are so little alike as to be taken for different species. The males (fig. 134) are black, with white and orange markings on the abdomen, while the females are brown mixed with black, white, and yellow scales and small white spots.

The usual length is about a third of an inch in both sexes. The cephalothorax is nearly as broad as long, and the abdomen of the female as wide as the thorax and a little longer.

The general color of the adult female is yellowish brown, with black and white markings (fig. 133). Around the front of the abdomen is a white band, and on the back are two indistinct longitudinal black stripes in which are four pairs of white spots. The general brown color is produced by a mixture of scales and hairs of various colors. The females are most brightly colored just before reaching maturity, and then there is a large proportion of yellow and orange scales in their covering and the black stripes and white spots are more distinct. The hairs and scales are of various shapes, the most common being that of slightly flattened hairs. The yellow and orange scales are wider and less pointed, and

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the white spots have short and wide scales. Under the abdomen the color is light gray, with two parallel darker stripes. The legs are pale in the middle of the joints and dark toward the ends and covered with gray and black hairs. The palpi are light yellow.

In alcohol the orange color disappears almost entirely, the black and white markings become less distinct, and all the colors browner. The colors of the male (fig. 134) are entirely different. The cephalothorax and legs to the end of the tibia are black. The palpi are black, with a stripe of

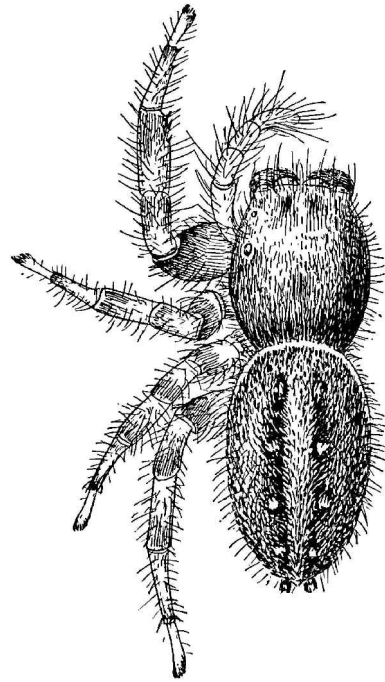


Fig. 133. *Phidippus multiformis*. Female enlarged six times. (p. 48)



Fig. 134. *Phidippus multiformis*. Male enlarged six times. (p. 49)



white scales on the upper side. Around the front end of the abdomen is a white stripe; the sides are bright orange red and the middle black. Between the orange and black are three pairs of white spots. They make a bag of white silk among leaves, in which in the early summer a male and female may sometimes be found together and in which the female later makes a cocoon of eggs. The young hatch soon and become half grown before winter.

***Phidippus mystaceus***. — A stout species half an inch long, gray and hairy, in alcohol turning brown. The abdomen is light gray at the sides and dark in the middle, with four pairs of white spots, the third pair largest (fig. 135). The cephalothorax is round and nearly as wide as long. The front row of eyes is little longer than half the greatest width of the cephalothorax. The cephalothorax is flat on top for almost its whole length and in front about twice the diameter of the largest eyes in height. The mandibles are large and bright metallic green in front (fig. 118). The legs are stout and short, the fourth pair

extending little beyond the spinnerets. The first and fourth pairs are of the same length, but the first are twice as thick as the fourth. The legs are without markings and darker toward the head. The abdomen is longer than the cephalothorax and as wide or wider. There is little difference between the sexes, the males being only a little darker colored and larger in front. Usually found under stones in a thick silk nest.

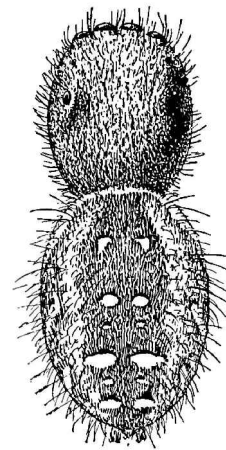


Fig. 135. *Phidippus mystaceus*, enlarged six times. (p. 50)

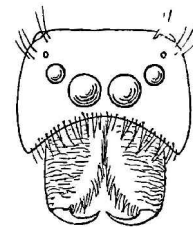


Fig. 118. Front of head of *Phidippus mystaceus*, showing eyes and mandibles. (p. 41)

***Phidippus tripunctatus***. — Black, with three bright white spots on the back of the abdomen (fig. 136). Large females are half an inch long and the males a little smaller. Though the general color is black, it is modified, especially in fresh specimens, by white hairs on parts of the body. The joints of the legs are grayish in the middle and black toward the ends. There are white hairs on the front of the head and upper side of the palpi and a white band around the front of the abdomen, plainest in the males. The three large white spots on the abdomen correspond to the second and third pairs in *mystaceus* (fig. 135) and *multiformis* (fig. 133), and the other pairs, though generally present, are small and inconspicuous. On the under side of the abdomen are usually two gray stripes. This is a common spider all over the country. It lives under stones and sticks and passes the winter half grown in a thick silk bag.

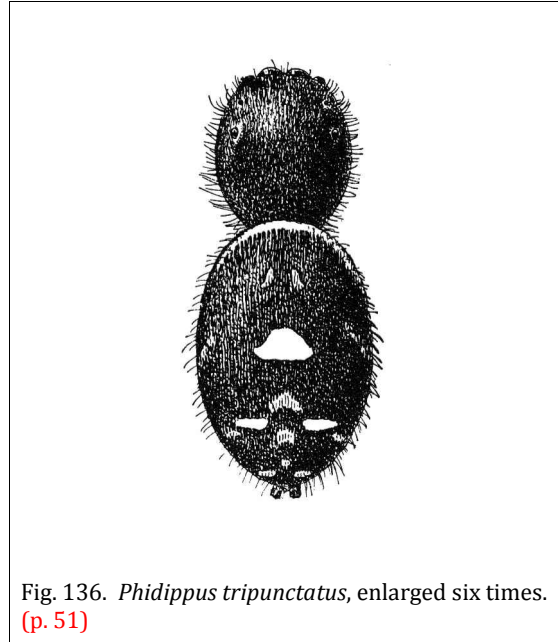


Fig. 136. *Phidippus tripunctatus*, enlarged six times. (p. 51)

***Plexippus puerperus***. — Very variable in size, from a third to half an inch in length. The females (fig. 137) are pale, light yellow, or almost white, with a few black spots, while the males (fig. 138) have the cephalothorax and legs brown, sometimes almost black. In both sexes the mandibles are large and the cephalothorax high and flat on the top as far back as

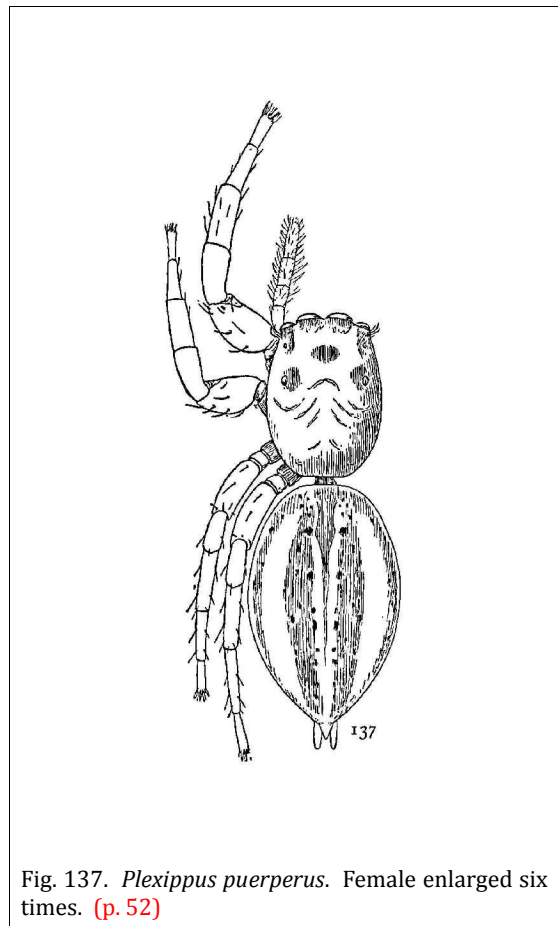


Fig. 137. *Plexippus puerperus*. Female enlarged six times. (p. 52)

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the hinder eyes. The front middle eyes nearly touch each other. The lateral eyes are half their diameter higher than the front ones. The middle eyes are nearer the lateral than the dorsal. In the males the front eyes are nearly their diameter above the mandibles, and below them is a white band and a line of white hairs from the middle of the head down to the base of the first legs.

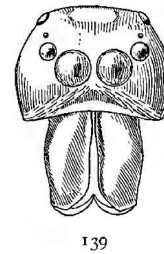
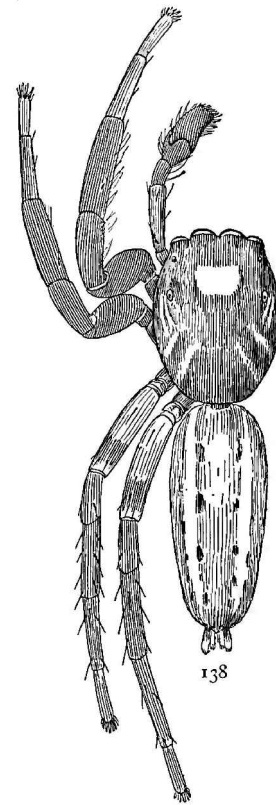
The legs are rather slender in both sexes and long in the males. The fourth pair are longest in females, and in males the first and fourth are the same length. The markings of the abdomen are much alike in both sexes, with two light stripes,

more definite in the males, bordered by a few small black spots irregularly arranged. The stem of the abdomen is long, and the abdomen and thorax appear farther apart than in many species. In the females the cephalothorax is pale, with a few gray

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spots from the middle toward the sides. In the males the legs are dark brown except the inner half of the femur of the third and fourth, which is light like the abdomen. The male cephalothorax is dark and has a square white spot between the eyes, two white lines pointing up from the third and fourth legs each side, and two short white lines under the dorsal eyes. The under side of the thorax and legs is dark or light like the upper side. The under side of the abdomen is usually darker in the middle and sometimes has a few black spots each side. This is a common spider in the southern states and has been found as far south as Brazil.



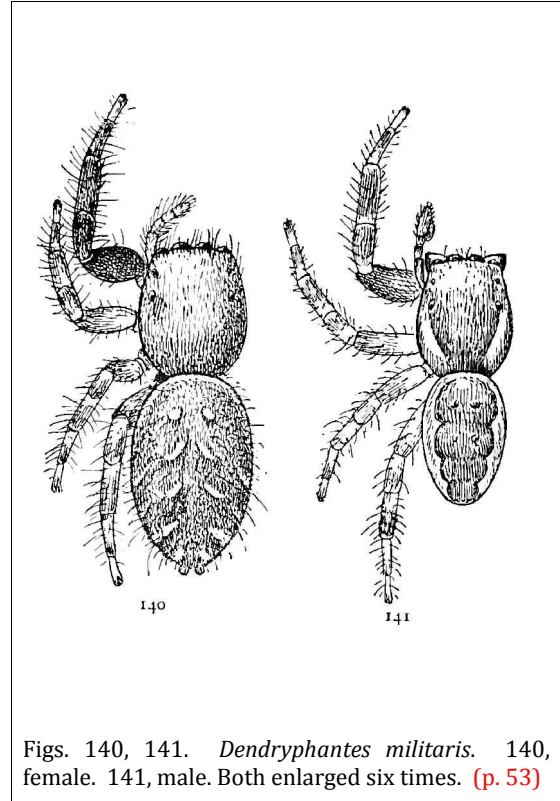
Figs. 138, 139. *Plexippus puerperus*. 138, male enlarged six times. 139, front of head of male. (p. 52)

***Dendryphantes militaris***.— This spider resembles in many ways the next species, *Dendryphantes aestivalis*, but is one-half larger and has a shorter and wider cephalothorax. The general color is brown, covered with gray and black hairs. The abdomen of the female is brown, with white at the front end and four pairs of oblique white marks in the middle and four at the sides (fig. 140). In the male the cephalothorax has a white band on each side under the eyes and a white band around the abdomen, with a dark middle area (fig. 141). The dark parts of the legs and cephalothorax are darker than the same parts in the female. The palpi are

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slender in both sexes, and in the male the palpal organs are small for so large a spider. The mandibles of the male are widened at the end and have a strong projection with two teeth on the inner corners.

***Dendryphantes aestivalis***. —One of the most common Attidae, on all kinds of bushes and small trees, and one of the most variable in size and color. Large females are from a fifth to a quarter of an inch long, and the males are smaller. The females are of two varieties, which run into each other. The light variety (fig. 144) has the light parts white or light yellow and the dark parts dark brown covered with white hairs and scales. The cephalothorax is dark brown, thinly covered with scales, so that the dark color shows between them in places. The legs are light yellow and translucent, indistinctly ringed with brown at the base and, near the tip of each joint, all covered with greenish white hairs. The palpi are light and without rings except on the femur and patella. The abdomen is brighter yellow than the thorax, with four pairs of purplish brown spots, the second pair largest, connected with a paler brown middle marking. The abdomen has beneath a purple brown stripe in the middle and oblique brown marks at the



Figs. 140, 141. *Dendryphantes militaris*. 140, female. 141, male. Both enlarged six times. (p. 53)

sides. Sternum, maxillae, and mandibles light brown. The dark

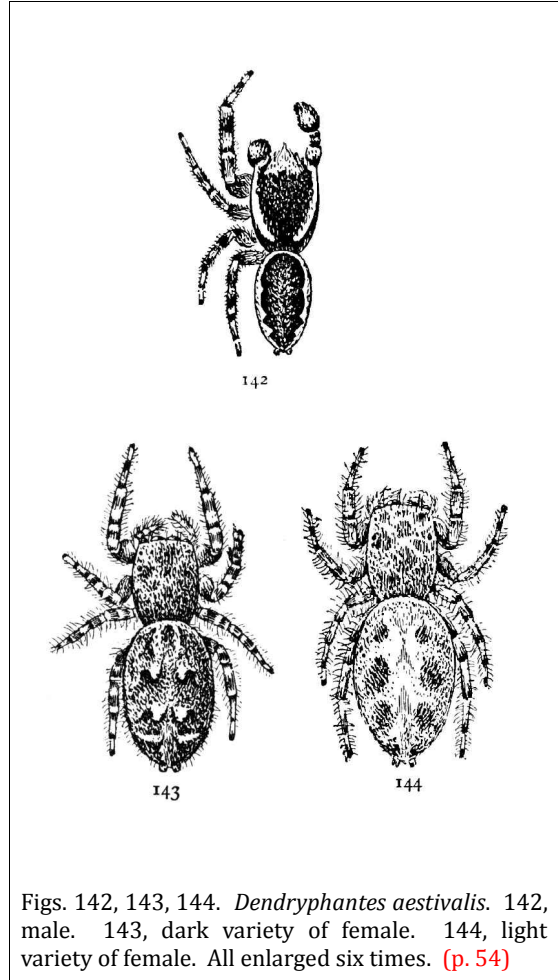
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variety (fig. 143) is generally smaller and covered with longer hairs and scales. The legs and palpi are more distinctly ringed with brown. The dark spots on the abdomen are larger and more closely connected, so that the markings appear as light spots on a dark ground.

In alcohol they become bright red and afterward fade to a dull red color that remains for a long time, both varieties in this condition looking much alike.

The males (fig. 142) differ, at first sight, extremely from the females. The legs are ringed as in the female and the brown parts are wider and less obscured by white hairs, while the white parts are whiter. The cephalothorax is dark brown, with a white stripe on each side under the eyes bending toward each other but not connected. The front of the head is also white and covered with long white hairs. The palpi have the femur dark brown at the base and white at the end. The patella and tibia are brown, and the tarsus is brown, with white hairs on the upper side. The abdomen is white in front and around the sides. The middle is dark brown, with a few yellow and greenish scales. The brown area is often notched at the sides in four points and sometimes indistinctly divided into four pairs of spots, as in the female. The male palpi are large for the size of the spider, and the palpal organ extends back beyond the tibia.



Figs. 142, 143, 144. *Dendryphantes aestivalis*. 142, male. 143, dark variety of female. 144, light variety of female. All enlarged six times. (p. 54)

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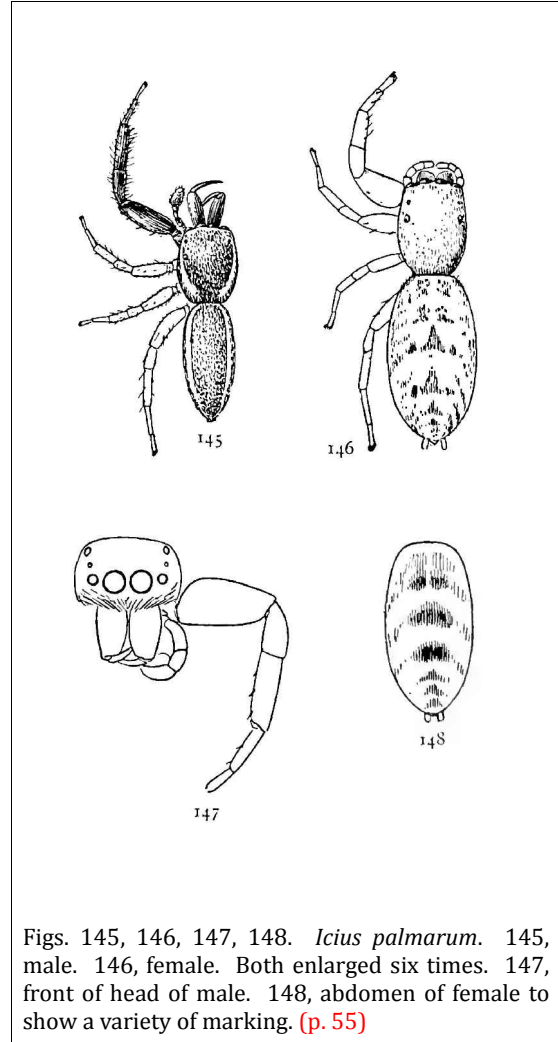
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*Icius palmarum*. — This is very common on trees and bushes, and may be mistaken for *Dendryphantes aestivalis*, which it much resembles. It differs from *aestivalis* in both sexes in being a little smaller and more slender and in the females lighter colored. In the males the

head is wider, the front legs longer and darker colored than in *aestivalis*, and the mandibles longer and more nearly horizontal (figs. 145, 147).

The living female has the legs and palpi transparent white, sometimes a little darker at the ends of the joints. The whole body is covered with light gray or white scales mixed with fine black hairs. The abdomen has a row of darker triangular spots in the middle and oblique rows of small spots at the sides (fig. 146). In alcohol the legs become yellow and the rest of the body red, as in *aestivalis*, afterward fading to a dirty yellow. The markings of the abdomen become more distinct and in some individuals form four large dark brown spots (fig. 148).

The males have the front legs very dark brown. The other legs are transparent white. The cephalothorax and abdomen are dark reddish brown mixed with shining greenish white scales and sometimes copper red around the eyes. On each side is a white stripe the whole length of the body, the two meeting in front below the eyes. The mandibles, maxillae, and palpi are dark brown. Some males show indistinctly dorsal markings of the abdomen like the female. The mandibles of the male are longer than those of the female and more or less turned forward according to their length. In some the mandibles are only a little longer than those of the female, and in these the patella and tibia of the front legs are not much longer than the femur. In others, usually larger spiders, the mandibles are nearly as



Figs. 145, 146, 147, 148. *Icius palmarum*. 145, male. 146, female. Both enlarged six times. 147, front of head of male. 148, abdomen of female to show a variety of marking. (p. 55)

long as the cephalothorax and extend forward horizontally, the maxillae are longer, and the first pair of legs have the patella and tibia one and a half times as long as the femur. The female is longer in proportion to its width than in *aestivalis* and has the front legs stouter. The epigynum has two small anterior openings

directed forward instead of toward each other, as in *aestivalis*. This and the next species live on low bushes all summer.

***Icius mitratus*.** — This species closely resembles *Icius palmarum*, differing mainly in color. The legs are all white in both sexes, and the mandibles of the male are white and not long and horizontal, as in *palmarum*. The females resemble *palmarum* so closely that it is difficult to tell them apart. The cephalothorax is a trifle wider, and the abdomen narrower, and the front legs longer than in *palmarum*. The general color is whiter, and the spots on the abdomen are more distinct, as in fig. 148. The male has the legs white or a little greenish, with long white hairs, those on the front legs longer than the diameter of the legs. The rest of the body is white, except a light brown stripe in the middle of the cephalothorax and abdomen, covered with light yellow hairs, through which three or four dark spots show indistinctly on the abdomen (fig. 149). When fighting with other males, or when approaching the female, the hairy front legs are straightened and extended sidewise.

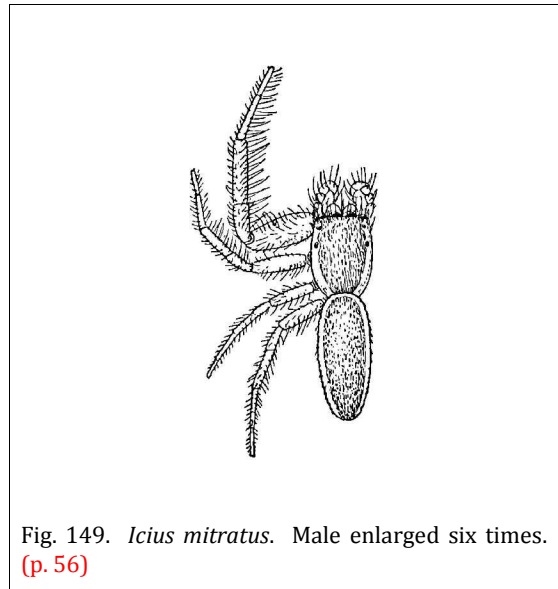
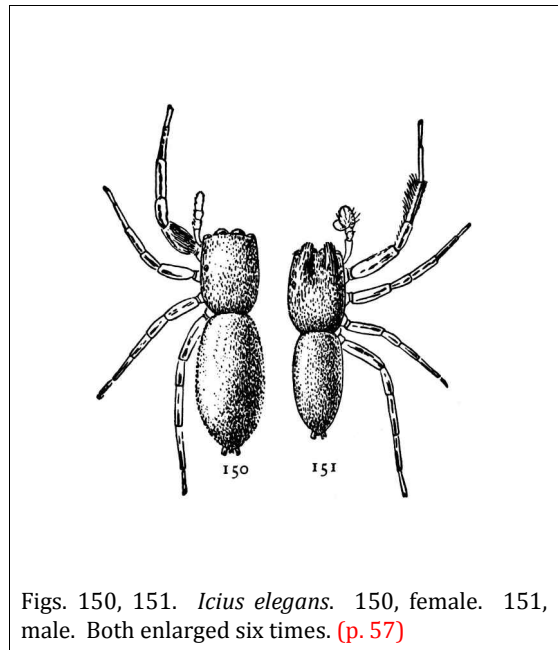


Fig. 149. *Icius mitratus*. Male enlarged six times. (p. 56)

***Icius elegans*.** — A little bronze green spider, from a sixth to a quarter of an inch long. The cephalothorax is two-thirds

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as wide as long, with the sides nearly straight and parallel in the female but widened behind the middle in the male. The abdomen of the female is oval and nearly twice as long as wide (fig. 150). The color is bronze green, changing in some lights to copper red. The legs are yellow, with longitudinal dark stripes, except the front femora, which are dark brown. The males (fig. 151) are much more brightly colored. The legs are orange, darker toward the ends, with fine dark longitudinal stripes. The ends of the front tibiae are dark brown and have brown hairs on the inner and upper side. The palpi are orange, darker toward the end. The sides and hinder



Figs. 150, 151. *Icius elegans*. 150, female. 151, male. Both enlarged six times. (p. 57)

part of the cephalothorax are orange, and there is a white line over the coxae. The upper part of the cephalothorax and abdomen is covered with greenish yellow scales. On the front of the head are two tufts of long hairs, yellow mixed with black, pointing forward and a little inward between the middle and lateral eyes. On the hinder end of the abdomen is an iridescent purple spot. The abdomen is green on the under side, and the sternum and coxae are orange. In alcohol all the colors become dull. The mandibles are slender, and the claw short and strongly curved inward toward the point. In the male the mandibles are a little longer and hollowed a little on the inner side. The male has the first pair of legs much longer and larger than the others. In the female the fourth legs are longest.

***Maevia vittata***.—This is a brightly colored spider about a third of an inch long and with unusually long legs for this family, the fourth pair longest in the females and the first and fourth of equal length in the males. The female (fig. 152) has the legs and palpi translucent yellow or greenish white. They are marked with indistinct light gray rings and black spots at the base of the hairs and spines. The cephalothorax is dark brown between the eyes and translucent like the legs in the thoracic part. There is a fine black line in the middle and one on each side and a few gray marks radiating from the dorsal groove. The whole top of the cephalothorax is covered with greenish yellow scales mixed with gray hairs. The eyes are black, and sometimes there is a red stripe under the eyes at the sides. The abdomen is covered with scales which in the middle and at the sides are gray and mixed with black hairs. There are two longitudinal bands of light red and indistinct angular marks of the same color in the middle of the hinder half. On the under side the colors are light gray and yellow, with spots of darker gray on the abdomen.

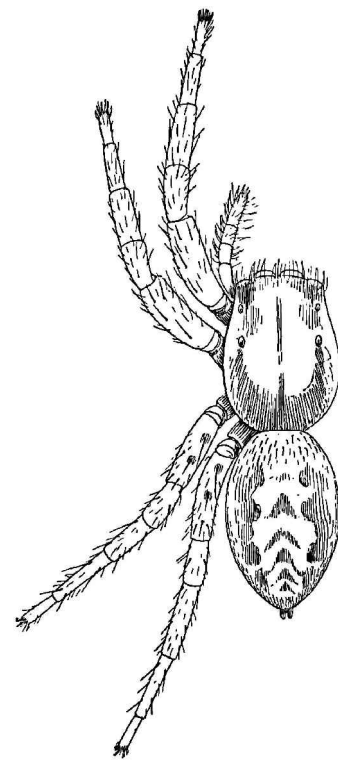
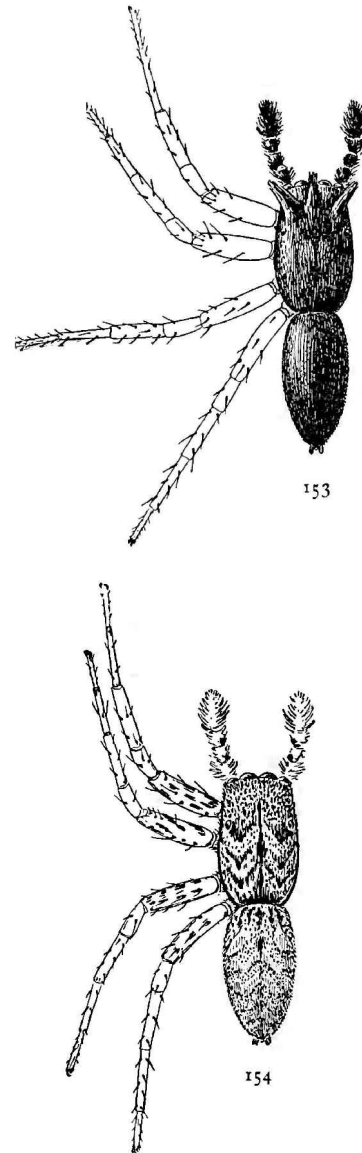


Fig. 152. *Maevia vittata*. Female enlarged six times. (p. 58)



The males are of two very different colors. One kind (fig. 154) resembles the female. The red bands on the abdomen are broken up into rows of spots connected with the middle angular markings. The gray and black spots on the legs and cephalothorax are larger, and there are several black marks on the front of the abdomen. The palpi are bright orange yellow, with the tibial hook black and a black spot on the inner side of each joint. The size of the black spots varies in different individuals, and so this passes into the other variety (fig. 153), in which the cephalothorax and abdomen are entirely black and the palpi black, except a few orange hairs on the outer side. The black cephalothorax and abdomen are covered with dark greenish shining scales. The legs in this variety are transparent white except the hairs, and on the front of the head are three tufts of long hairs which are wanting in the light-colored males.



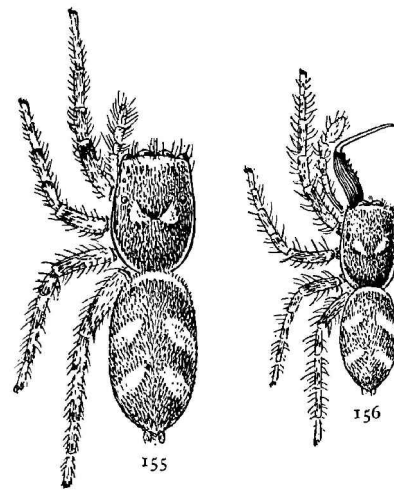
Figs. 153, 154. *Maevia vittata*. Males enlarged six times. 153, dark variety with long hairs on front of head. 154, light variety colored like the female. (p. 59)

***Epiblemum scenicum*.**—This is the common gray and white spider that lives on houses and fences (fig. 155). It is about quarter of an inch long, the cephalothorax half longer than wide, and the abdomen a little wider and longer. The front of the head around and above the eyes is white. There is a white stripe on each side of the cephalothorax, and in the middle two white spots, one each side of the dorsal groove. On the abdomen there is a white stripe across the anterior end, and two oblique marks on each side. The legs are gray, with white rings not

very distinctly marked, and the palpi white. On some individuals the white marks are more definite than on others, the gray ground having but few white scales mixed with it. In others yellow and white scales are largely mixed with the gray, and so the contrast with the white spots is less. The males (fig. 156) differ but little in size, color, or markings from the females, but the male mandibles are much larger and extend horizontally in front of the head, sometimes two-thirds as long as the cephalothorax. This is a common European, as well as American, spider. It is occasionally found on the ground or on plants, but commonly on and about houses.

***Marptusa familiaris*.**—This is another common species on fences and the outside of houses (fig. 157). When full grown it is half an inch long. The whole body is much flattened, and both the cephalothorax and abdomen are widened in the middle. The cephalothorax is rounded at the sides and three-quarters as wide as long, and the abdomen is half as wide as it is long. The legs are long and stout, the fourth pair one-half longer than the abdomen.

The general color is gray, with long gray and white hairs. The cephalothorax has a dark brown band along the edge on each side, which is larger and darker in



Figs. 155, 156. *Epiblemum scenicum*. 155, female. 156, male. Both enlarged six times. (p. 60)

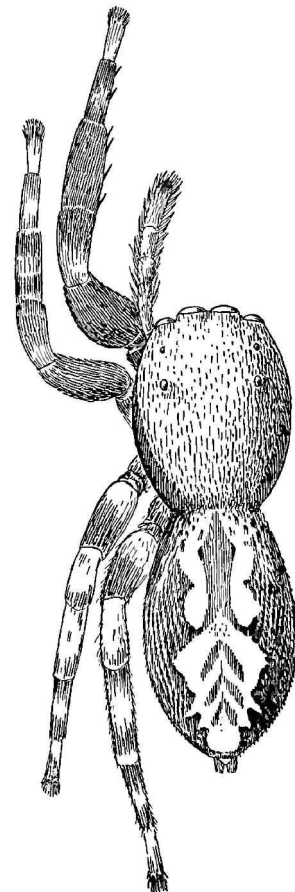


Fig. 157. *Marptusa familiaris*. Female enlarged six times. (p. 61)

the males. The abdomen has in the middle a yellowish white marking covering half its width, the front half straight and the hinder half notched at the sides. The legs are darker at the ends of the joints and light in the middle. The under side of the abdomen has a dark middle stripe.

***Hyctia pikei***. — A slender species a quarter to a third of an inch in length, with the abdomen twice as long as the cephalothorax, and in general appearance like a seed or piece of straw (fig. 158). The whole body is covered with silvery white hairs mixed with a few longer black ones. The markings of the back in the male are a dark middle stripe on the abdomen, partly divided by notches into four spots and a fine middle line and two less distinct side lines on the cephalothorax. In the female the stripe on the abdomen is less definite and is broken up into spots, and in young spiders the whole body is pale yellow or greenish. The front legs are as long as the abdomen in both sexes, colored brown, and with the middle joints thickened. They are not much used in walking, being extended straight forward and raised enough to clear the ground while the spider walks with the other six. The other legs are pale and slender.

The elongated shape of this spider distinguishes it from all the other common Attidae. The markings and the position of the legs, two pairs pointing forward and two backward, increase the long appearance. The basal joints of the fourth legs are brought close together, and those of the first pair almost as close. The labium and maxillae are a little longer than usual and are partly covered by the first legs.

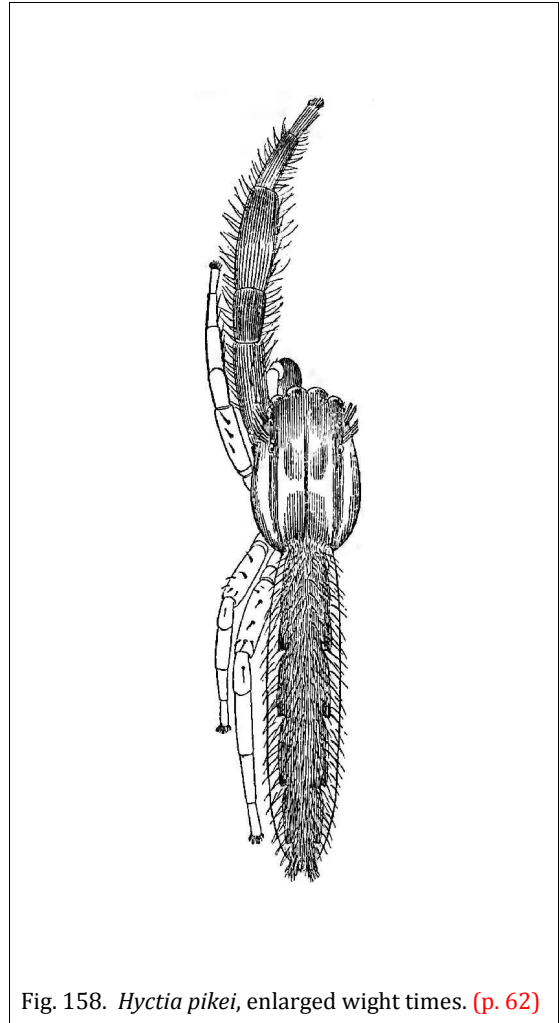
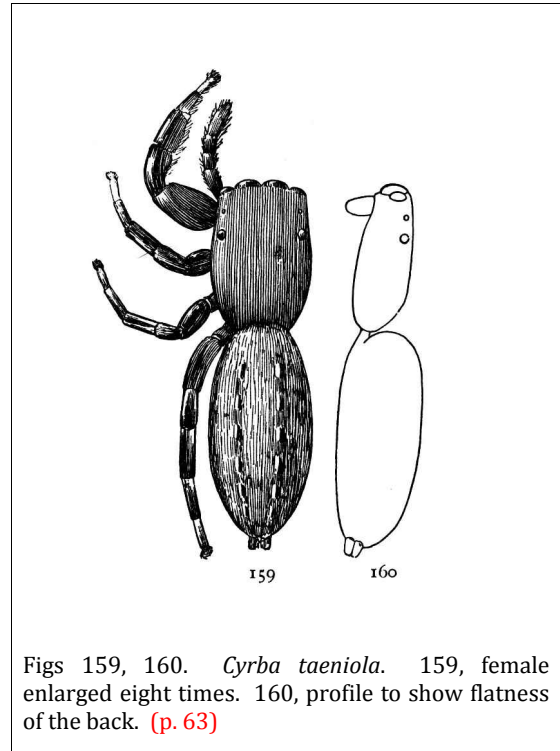


Fig. 158. *Hyctia pikei*, enlarged wight times. (p. 62)

I have found this spider common on sand grass, where nothing else grows, and the young lying lengthwise on the leaves could hardly be seen.

They mature in the middle of the summer. When the male approaches the female he raises the front legs at an angle of sixty degrees with each other, raises the abdomen a little, and advances by short runs, twitching the front legs and abdomen every few moments.

***Cyrba taeniola*.** — A small flat spider, nearly black, the females quarter of an inch long, and the males a sixth of an inch (figs. 159, 160). The cephalothorax is one-half longer than wide, very low and flat, with the sides parallel for half its length. The front middle eyes are large and close together, the lateral eyes half as large and a little separated from them. The first legs are twice as thick as the others and have the femora flattened, but in the female the fourth legs are longest. The abdomen is as wide as the cephalothorax and a little longer. The hairs all over the body are short. The cephalothorax is black, smooth, and without markings. The abdomen is dark gray, with two rows of white spots often indistinct and perhaps sometimes absent. The legs have the femora and patella and tibia of first and second pairs black or dark brown and the

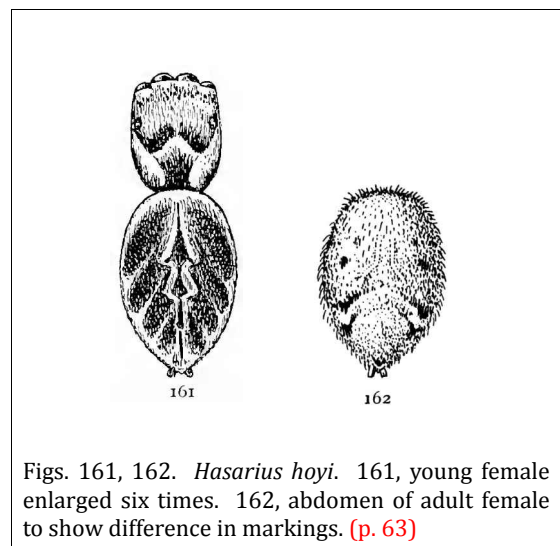


Figs 159, 160. *Cyrba taeniola*. 159, female enlarged eight times. 160, profile to show flatness of the back. (p. 63)

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other joints light and black at the ends. The under side is black. The sternum is very short, so that the basal joints of the front legs touch each other.

***Hasarius hoyi*.** — This species may be known by its peculiar colors, the dark portions brown or black and the light parts white and orange brown (figs. 161, 162). These colors are, as usual, brighter and the markings more distinct in the males. In front around the eyes the cephalothorax is covered with white hairs. At the sides a white band extends backward under the eyes, turning inward but not reaching the middle line. There is a light band, part white and part orange, around the abdomen and several angular marks in the middle, two of them in the hinder half, sometimes united into a large spot.



Figs. 161, 162. *Hasarius hoyi*. 161, young female enlarged six times. 162, abdomen of adult female to show difference in markings. (p. 63)

In alcohol, and less plainly seen when alive, is a light band under the hairs, extending across the middle of the cephalothorax and forward on the sides under the eyes.

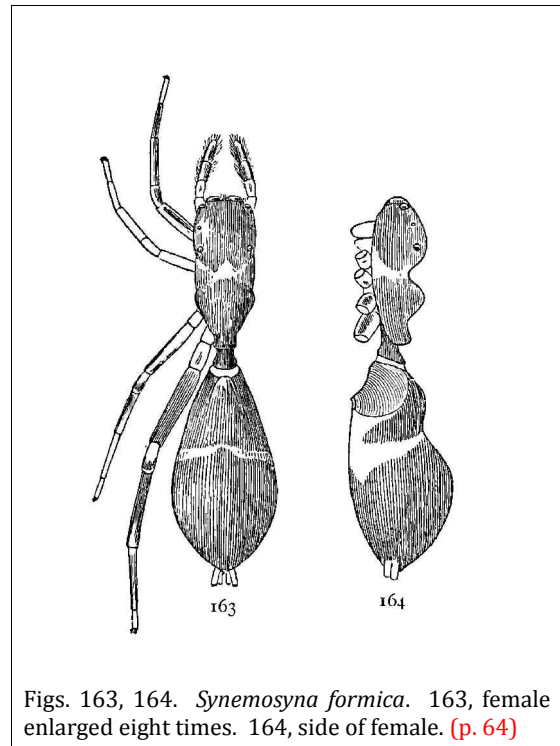
In females all these markings are less distinct, but traces of them can be found in most individuals. The colors are more brownish, and the markings of the abdomen smaller and more uniform in shape. The markings of the legs are dark on the middle joints and light at the base and on the tarsi, with strong contrasts in color in the males and little in the females. The length of this species is about a quarter of an inch for large females. The males are smaller.

***Synemosyna formica***. — A small spider so much like an ant as to be often mistaken for one (fig. 163). It is about quarter

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of an inch long and very slender. The cephalothorax is narrowed behind and the abdomen in front, and each has a deep depression in the middle. The stem of the abdomen is flat, and widened behind so that it is nearly as wide as the ends of the thorax and abdomen, which it connects. The front middle eyes are large and cover two-thirds of the width of the front of the head, and the rest of the eyes are small. The legs are all slender, the hind pair longest. The general color is black, with yellowish or orange-white markings. There is a triangular white spot in front of the dorsal groove, and one on each side widening downward under the posterior eyes. On the abdomen there is a white stripe extending downward from the dorsal depression on each side and uniting in a large white patch underneath (fig. 164). In pale individuals the whole front half of the abdomen is light yellow or orange brown. The second legs are entirely white, the others partly black. The male has the head higher and is darker colored and more slender.



This spider not only resembles an ant in form and color but moves like an ant. It does not jump like most Attidae, though it can do so, but walks and runs irregularly about and lifts its first legs high like the antennae of ants.

*Lyssomanes viridis*. — A bright green spider common in the southern states. The arrangement of the eyes differs from that usual in the Attidae by the front lateral eyes being higher and closer together, so that they are over and behind the front middle pair (fig. 165). The cephalothorax is narrow in front, not much more than half as wide as it is across the middle. The abdomen is narrower than the thorax and more than twice as long as wide. The female is a third of an inch in length, and the male quarter of an inch. The legs are long and slender,

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the first pair longest and thickest, in the male half an inch in length and in the female a little shorter. In the female the mandibles are vertical and about as long as the height of the head. In the male they are as long as the cephalothorax, curved apart, and extended almost horizontally in front of the head. The color is light transparent green, sometimes without any markings. Usually there are four pairs of small black spots on the abdomen, and there are black spots around the eyes, except around the front pair, where there is a little orange color. They live on low bushes and mature early in the summer.

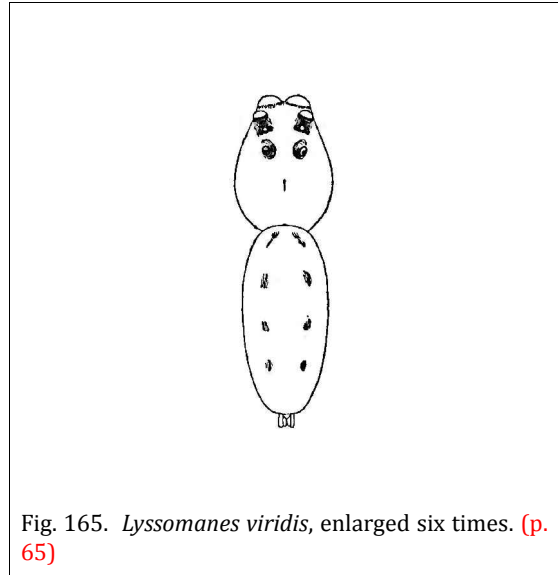


Fig. 165. *Lyssomanes viridis*, enlarged six times. (p. 65)