

Z201    **Fine Structure of the Cutaneous Chromatophores in the Black Widow Spider, *Latrodectus mactans***

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Fine structure of the cutaneous chromatophores in the black widow spider, *Latrodectus mactans* are studied with light and electron microscopes. The cutaneous pigments are only observed in epidermal layer just beneath the cuticle, and are compactly distributed around the spinnerets which located at caudal area of the abdomen. According to the fine structural characteristics of the pigment granules, two main types of guanine pigment granules - electron dense carotenoid vesicles and electron lucent reflecting platelets - are distinguished. Marginal electron density of the carotenoid vesicle is different from that of internal region, whereas the reflecting platelets have laminated crystalline granules. Typical structures of these pigment granules are very similar to those of vertebrate's chromatophores, especially erythrophores and iridophores. Differentiation of these pigment granules are also initiated from the small vesicles of Golgi complexes similarly to those of vertebrates.

Z202    **Fine Structure of the Spinning Apparatus in Wolf Spider, *Pardosa astrigera* (Araneae: Lycosidae)**

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The spinning apparatus for the silk in wandering wolf spider, *Pardosa astrigera* was located at the ventral end of the abdominal part, and was composed of internal silk glands and external spinnerets. By the light and electron microscopic inspections, it was found that four types of silk glands were connected through the typical spinning tubes of each spinnerets. Anterior spinnerets comprise 2 pairs of the ampulate and 30 pairs of pyriform glands. Another 2 pairs of ampulate glands, 2 pairs of tubuliform glands, and 35 pairs of aciniform glands were connected on the median spinnerets. And 4 pairs of tubuliform and over 35 pairs of aciniform glands were on the posterior spinnerets respectively. The tubuliform glands were only observed in female spiders, and the aggregate and the flagelliform glands which had the function of sticky silk production in orb-web spiders were not observed in this wandering spiders characteristically.