

Fine Structural Analysis of the Silk Producing Apparatus in Funnel-web Spider, *Agelena limbata*

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The silk producing apparatus of the funnel-web spider, *Agelena limbata* were located at the ventral end of the abdominal part, and were composed of internal silk glands and external spinning tubes. Among the three pairs of spinnerets, the posterior pairs were highly elongated along the body axis. 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. This spider has four kind of silk glands which are ampullates, tubuliforms, pyriforms, and aciniforms. Each type of the silk gland was consisted of their typical secretory sac and duct respectively. Among the 4 types of silk glands, the ampullate glands and tubuliform glands have spigots (large spinning tubes) whereas, pyriform glands and aciniform glands have spools (small spinning tubes) characteristically. All of the these spinning tubes are composed of flexible basal segments and elongated terminal segments.