Spider Beetles

Order: Coleoptera (Beetles)
Family: Anobiidae (Deathwatch and Drugstore Beetles)
Subfamily: Ptininae (Spider Beetles)

Identification and Descriptive Features: Spider beetles are moderately sized beetles, about 2-4 mm long (1/16"-1/8"). On most species the abdomen is globular and the head is oriented downward so that it is concealed from above. The antennae and legs are thin, Most species are brown to reddish brown and the body is covered with fine hairs or scale; patches of colored hairs mark the bodies of some spider beetles. The name of the family derives from some of the species that are most globular in form and less hairy, which superficially resemble spiders. Larvae are dirty white, C-shaped grubs with well developed legs.

Figure 1. American spider beetle (*Mezium americanum*.

Figure 2. Whitemarked spider beetles (*Ptinus fur*).

Distribution in Colorado: Most spider beetles found in the state are cosmopolitan in their distribution. They are moved easily in many types of stored products. Because most spider beetles have fairly high humidity requirements in Colorado spider beetles are typically found in damp basements, crawl spaces or similar other sites.

Life History and Habits: Spider beetles are scavengers that primarily feed on materials of plant origin - seeds, grain debris, herbs, dried fruit and fungi. Animal matter such as feathers and dead insects are also eaten and spider beetles may develop in the refuse of rodent nests. They are considered moderately important as pests of stored products and may infest warehouses, mills and grain storage facilities.

Perhaps the whitemarked spider beetle is the most common species found in the state and its life history largely follows that of the other species. Females lay eggs singly over a period of several weeks and eggs hatch in 2-3 weeks. Larvae go through 3 instars and development requires about

Figure 3. Whitemarked spider beetle male (top) and female (bottom). Lower picture courtesy of Jospeph Berger.

2-3 months to complete with development accelerated by higher humidity as well as higher temperature.

The feeding larvae may glue together pieces of food and feed sheltered amongst it. When full grown they often scatter and may excavate a pupal chamber in wood or some other substrate. The full-grown larvae spin a tough cocoon and either go into an extended diapause (7-8 months) or pupate immediately.

The pupal stage takes about 16-20 days to complete but the adult remains within the cocoon for a month or more during which time the exocuticle hardens and they become sexually mature. Upon emergence adults feed and mate. They live for several months, the females usually surviving substantially longer than the males. Males, but not females, of the whitemarked spider beetle can fly. Among other species both sexes may fly.

Related Species: The spider beetles are a subfamily (Ptininae) within the family Anobiidae. Other prominent member of this family associated with stored plant products products include the **drugstore beetle**, *Stegobium paniceus* (L.), and the **cigarette beetle**, *Lasioderma serricornis* (F.). They have a similar general appearance with the head directed downward and a somewhat humped body form. They are light brown-reddish brown but have more elaborate antennae (serrated, clubbed) than do spider beetles. The drugstore beetle and cigarette beetle sometimes attract attention because they are good fliers and can be strongly attracted to lights.

Table 1. Spider beetles known or suspected to be present in Colorado. The most common spider beetles found in North America have cosmopolitan distribution and other species could present within the state.

Gibbium psylloides (Czempinski) (**hump beetle**)
Mezium americanum (Laporte)
Ptinus californicus Pic
Ptinus clavipes (Panzer) (**brown spider beetle**)
Ptinus fur L. (**whitemarked pider beetle**)
Ptinus villiger Reitter (**hairy spider beetle**)
Trigogenius globulum Solier (**globular spider beetle**)