EGG COCOON OF THE FILMY DOME SPIDER, *LINYPHIA MARGINATA* C. L. KOCH (ARANEAE: LINYPHIIDAE)

Neither McCook (Acad. Nat. Sci. Philadelphia 2:119, 1890) nor Kaston (Bull. Connecticut Geol. Nat. Hist. Surv. 70:123, 1948) could find the eggs of the very common filmy dome spider, *Linyphia marginata* C. L. Koch, but both referred to Blackwall *(A History of the Spiders of Great Britain and Ireland,* Ray Society, London, 1941), who reported that the female of this species attaches her cocoon "to withered leaves, or other objects situated near the snare." However, Blackwall's *L. marginata* is not *L. marginata* C. L. Koch, but instead is synonomous with *L. montana* Sundevall and *L. resupina* Wider. [According to Bristowe *(The Comity of Spiders,* Ray Society, London. 1941) *L. marginata* Blackwall is also synonomous with *L. resupina domestica* (Linnaeus).] Blackwall uses the name *L. triangularis* for *L. marginata* C. L. Koch and does not mention the egg cocoon. Eliminating Kaston's and McCook's incorrect references thus leaves no record of the filmy dome spider's egg cocoon.

In 1972 a study was made of *L. marginata* inhabiting ground junipers (*Juniperus communis*) in oak woods on the E. S. George Reserve, Pinckney, Michigan. During May and June I observed many females mate, become gravid, and later disappear, but failed to find any egg cocoons. During the next two months eight apparently gravid spiders were placed in separate isolators made of aluminum insect screening, 30 cm high and 20 cm in diameter, covered top and bottom with fiberglass screening. Each isolator contained dirt covered with oak leaves and was placed in the woods. The spiders built webs in the isolators, and six spiders had deposited single egg cocoons within six days of being introduced into the isolators. Two spiders died without laying eggs. Four cocoons were deposited under the leaves, on the dirt, and two were placed in the curl of a leaf. The

cocoons were loosely woven masses of white silk, approximately 7 mm in diameter and 4 mm high, surrounding nonagglutinated yellow eggs. Each egg was approximately 0.6 mm in diameter and weighed about 0.12 mg. The number per cocoon ranged from 63 to 93 (mean of 78) for five cocoons; eggs in the sixth cocoon were desiccated and could not be counted accurately. Eggs comprised about 95% of the cocoon's total weight and represented about 50% of the gravid female's weight.

These observations do not indicate how far from the web the female normally places her egg cocoon. It is clear that she leaves the eggs and either returns to her web or constructs a new one. Five spiders were marked and returned to juniper bushes; four remained and built webs but disappeared before becoming gravid again. The sixth female was fed fruit flies (*Drosophila melanogaster*) in an outdoor cage and appeared to be developing a second clutch of eggs, but she died without laying them.

L. marginata may not usually deposit its egg cocoon on the dirt; the exact location may depend upon the litter's depth and relative humidity. Inability to locate egg cocoons in nature and the location of eggs in the isolators lead to the conclusion, though, that *L. marginata* deposits its eggs deep in the litter, not on an exposed surface. Several other species of *Linyphia* place their eggs closer to the web or in more exposed locations (Nielsen, *The Biology of Spiders, with Especial Reference to the Danish Fauna.* Levin and Munksgaard, Copenhagen. 1931; Turnbull, Can. J. Zool. 38:859-873, 1960).

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