

THE SOUTHERN HOUSE SPIDER, FILISTATA HIBERNALIS HENTZ

(ARANEAE: FILISTATIDAE)¹

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INTRODUCTION: The southern house spider (Filistata hibernalis Hentz) is a conspicuous arachnid due to its relatively large size and its distinctive web. It is common throughout Florida and much of the southern United States wherever man lives. Males of this species are frequently mistaken for the notorious brown recluse spider (Loxosceles reclusa Gertsch and Mulaik, family Loxoscelidae) because of their color and general shape. Southern house spiders are not known to be dangerous; in fact, they appear to be harmless to humans.

SYSTEMATICS: The nomenclature of Filistata hibernalis has remained remarkably stable since the species was first described by Hentz in 1842. The only other name formerly used for this spider is F. capitata, which was described by Hentz in the same paper as F. hibernalis. The name F. hibernalis has page priority over the name F. capitata. The few other junior synonyms are virtually unused.

Filistatids most frequently are associated systematically with other families which have structures called a cribellum (a silk-producing plate found anterior to the spinnerets) and a calamistrum (a row of specialized setae on the 4th metatarsus used for pulling silk from the cribellum). Recent evidence suggests that the cribellum may be a primitive structure (Lehtinen, 1967) and that families with this structure may not necessarily be related. Filistatids also have the chelicerae fused at the base, a lamella opposing the cheliceral fang, and the labium fused to the sternum (Levi, 1982). These characters seem to relate the family to the superfamily Scyto-doidea.

DIAGNOSIS: Filistata hibernalis is a species which exhibits striking sexual dimorphism. Females (fig. 3) are 13-19 mm in length, uniformly brown to nearly black, often with dusky patches on the carapace. The abdomen is elongate-ovoid, and at times can be considerably distended, e.g., after feeding or if the female is gravid. When distended, the abdomen tends to be gray in color. Males (fig. 1, 2) are 9-10 mm in length, yellow to amber in color, and have very long, thin legs and palpi (the distal segments of the latter fold back along the proximal segments). Males also have a brown stripe from behind the eye prominence which narrows quickly to include only the thoracic groove. The violin mark of the brown recluse is conspicuously wider and continues to the posterior edge of the carapace. Also, males are usually larger than L. reclusa, have much longer legs and palpi, and have 8 eyes grouped together on a raised prominence, rather than the 6 eyes in 3 diads possessed by L. reclusa.

HABITS AND HABITAT: Females and juveniles make specialized webs (fig. 4) which are occasionally found under tree bark but are frequently seen on houses, barns, bridges, and other man-made structures. Here a spider seeks out a sheltered crevice for a nest, around which a distinctive web is made on the adjoining substrate. Under microscopic inspection, the silk of this web appears to be "woolly", an appearance created by the action of the calamistrum pulling silk from the cribellum. This web lacks sticky droplets which are characteristic of entrapment strands in webs of some other spider families; rather, with F. hibernalis, the structure of the

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web itself is responsible for entangling prey. Males do not build webs but instead wander in search of females in order to mate. Females lay about 200 eggs which are loosely swathed in a silken ball about 15 mm in diameter and are kept with the female in her nest. In Florida, all stages of development seem to be present throughout the year. Females may live up to 8 years (Kaston, 1972).

Although the webs tend to accumulate debris and may be unsightly to some, this harmless spider is beneficial and captures many pest insects, including house flies, horse flies, mud daubers, cockroaches, and May beetles.

SURVEY AND DETECTION: The distinctive tangled, unkept web easily identifies the presence of this spider. The eye protuberance, size and color of both sexes, and the long legs and palpi of males aid in field identification. Wandering males are easily captured in shell vials; females must usually be trapped outside the nest on the web. Spiders can be preserved in 70% isopropyl or ethyl alcohol.

LITERATURE CITED:

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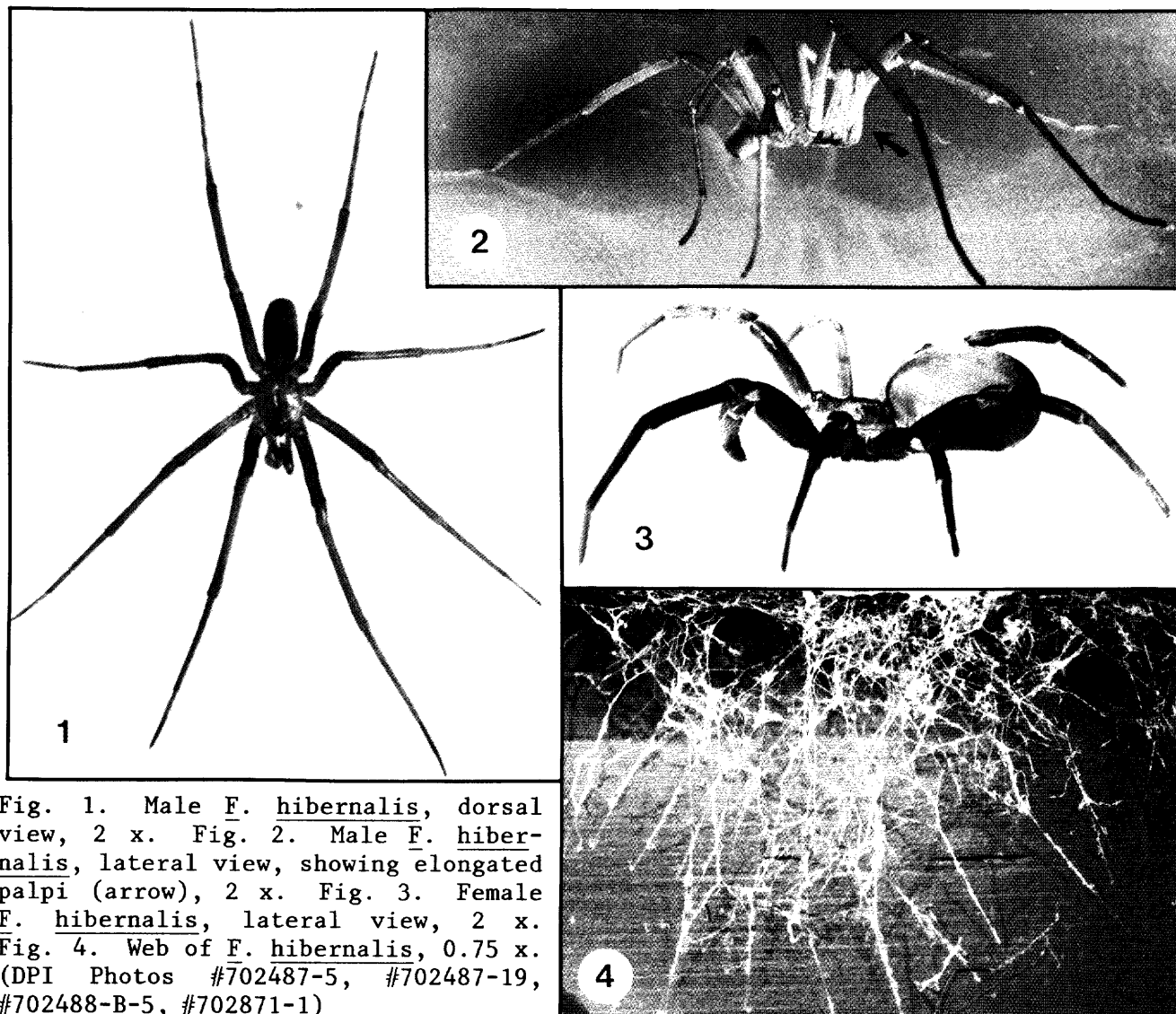


Fig. 1. Male F. hibernalis, dorsal view, 2 x. Fig. 2. Male F. hibernalis, lateral view, showing elongated palpi (arrow), 2 x. Fig. 3. Female F. hibernalis, lateral view, 2 x. Fig. 4. Web of F. hibernalis, 0.75 x. (DPI Photos #702487-5, #702487-19, #702488-B-5, #702871-1)