



This male Arizona brown spider was found on its silken shelter on the underside of a fallen saguaro cactus.

The Arizona Brown Spider

by Floyd G. Werner*

Since the announcement of the discovery that the bite of the brown recluse spider, *Loxosceles reclusa* Gertsch and Mulaik, causes persistent ulceration and other symptoms in man (Atkins *et al.* 1957), that spider has received a considerable amount of study and publicity. Two groups of workers have described its life cycle in some detail (Hite *et al.* 1966, and Horner and Stewart 1967). The symptoms of the bite in man have been described by Dillaha *et al.* (1964). There is apparently little or no pain felt at the time of the bite, but pain and local swelling are experienced in from two to eight hours. A blister forms at the bite, this becoming a center of

swelling and reddening. Later symptoms include long lasting ulceration of the wound and a variety of general reactions including fever and nausea. Dillaha *et al.* (1964) state that two deaths had been reported in small children up to that date.

The brown recluse spider does not range into Arizona, but two closely related species have been reported from here. Dr. W. J. Gertsch (1958) has described all of the North American species of *Loxosceles* in detail. The two species found in Arizona are so similar to the brown recluse spider that distinguishing them from that species

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is a matter for a student of spiders. The most obvious features are small differences in proportions. Of the other species, *Loxosceles arizonica* Gertsch and Mulaik, quite abundant in southern Arizona. This is the spider we are calling the Arizona brown spider. Gertsch reports *Loxosceles unicolor* Keyserling from this area also. It seems to be much less abundant.

For all practical purposes the brown recluse spider and the two species known from Arizona can be grouped together for purposes of identification. The photographs show both sexes of the Arizona brown spider. The body of an adult spider is almost exactly one-third of an inch long. The legs, which are much longer in the male than in the female, bring the span up to an inch or more. The general color is from tan to brown, and there is a distinctive lyre-, or violin-shaped, darker marking on the front part of the body. The only spider found commonly in Arizona that is very much like *Loxosceles* is the giant crab spider, *Olios fasciculatus* Simon. This spider is of the same general shape, but it has heavier legs, a narrow dark streak down the middle of the front portion of the body, and it grows much larger. The body of a fully grown female measures as much as an inch long. Only the immature individuals are in the size range of *Loxosceles*. The feature that clinches the identification of *Loxosceles* is the presence of only three pairs of eyes across the front of the body. These show up well in the photograph of the male. The giant crab spider has four pairs of eyes across the front, and almost all other spiders have four pairs of eyes in one position or another. Unfortunately, the eyes are small enough that they are difficult to see without a hand lens. But they provide a sure basis for the identification of a spider that has bitten a person.

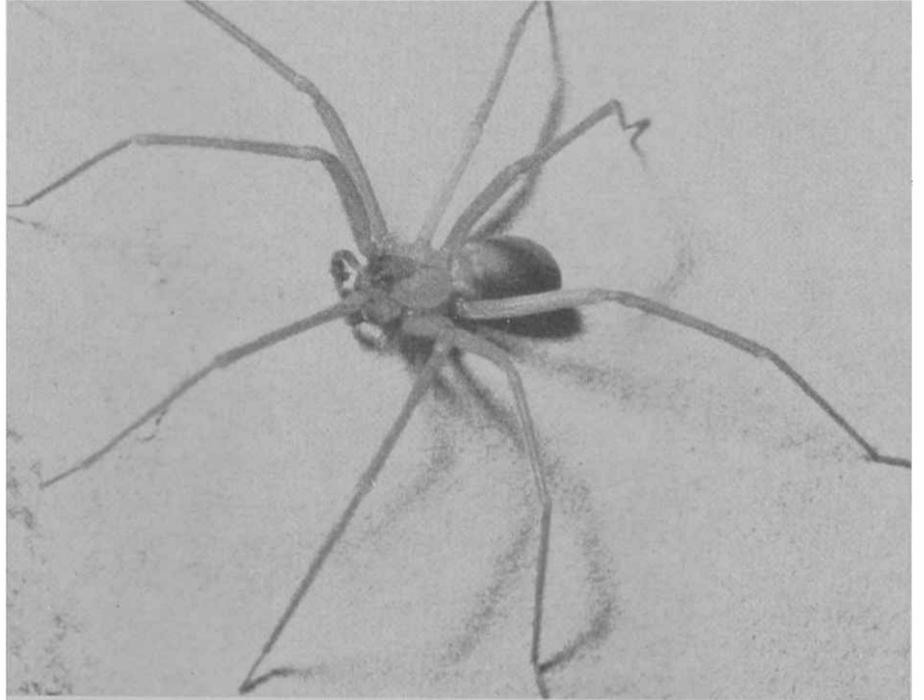
The normal habitat of the Arizona brown spider is under pieces of wood, dead cacti, and similar objects in the desert, but they do move into dark places in buildings in desert locations. In our experience they do not thrive in irrigated areas, but they might be brought into homes on firewood or pieces of cactus skeleton picked up on the desert. In their normal habitat they spin an almost formless web of very white silk (see photograph), on which they are usually found, at least in the daytime. They apparently forage out from their web at night in search of prey.

The brown recluse spider of the midwest and southeast is more often found in houses. It apparently is partial to darkened closets and corners for the construction of its web, and it leaves the web during the night in search of prey. Most of the recorded bites have been on an arm or leg of the victim, and have resulted from disturbance of the spider on a web it has built inside a garment or chance pressing of an individual that has found its way onto a bed in its search of insect prey at night. While we have no exact information on the way the Arizona brown spider behaves in houses, it is likely that it would have similar habits and could end up biting people under the same circumstances.

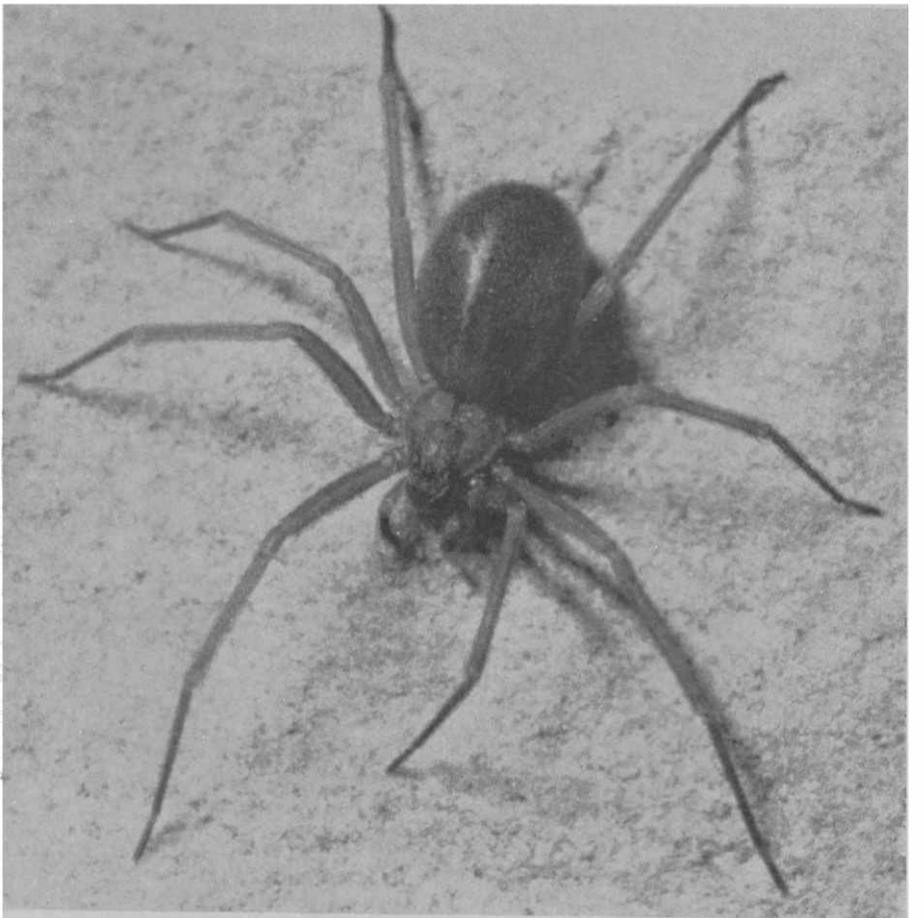
There is no reason for alarm at the presence of the Arizona brown spider in our area. Both it and the related species are native to Arizona, and they have undoubtedly been in contact with man here for a long time. But it would be only prudent to eliminate any household infestation, rather than take the risk of a bite. Preliminary studies by Hite *et al.* (1966) on control of the brown

recluse spider indicate that most of the residual insecticides commonly used in houses should be effective, DDT being a notable exception. If a person suspects that he has been bitten by one of these spiders, it would be most helpful if he would undertake a careful search of the sleeping area and closets and capture any spiders he encounters.

The presence of an Arizona brown spider could help the physician in diagnosing and treating the suspected bite. The spiders probably remain in the same area for long periods, so a search could be productive weeks after a bite was received. Even the smashed remains of an Arizona brown spider are identifiable if the front part of the body and part of the eyes are present.



This is a male Arizona brown spider. Note the distinctive brown marking and three pairs of eyes on the front part of the body.



The female Arizona brown spider has a heavier abdomen and legs that are shorter than those of the male.