Materials and Methods

Because many people collected the material used for this study, details of collecting method vary and in some cases are not known. Generally, however, mites were found on living plants in the field by examining longitudinally sectioned flowers. When disturbed in this way, hummingbird flower mites are easily detected as they run rapidly over the floral tissue. Usually, both floral parts and mites were placed directly into 70–90% ethanol. In the case of very large flowers, mites were sometimes collected with a size 0000 artist's paintbrush and placed directly into ethanol instead. When the host plant was not known to the collector and voucher specimens were not collected for the host plant, the inclusion of floral parts with the mites virtually always allowed identification of the host plant at least to genus. (Botanists who aided in identifying plants are named in the acknowledgments.)

In the case of mites collected from museum collections of floral specimens, mites were collected from the preserving fluid (usually FAA) with a fine wire loop mounted on a needle holder and placed in 70–90% ethanol. Intact flowers were sectioned longitudinally when necessary. Host identifications in these collections relied on the museum records for the plant specimens.

With regard to mites from hummingbirds, Colwell and his collaborators collected all mites from mist-netted birds. Each bird was quickly removed from the net, not only for the safety and well-being of the bird, but to prevent the mites from escaping onto the threads of the net (they apparently sense the distress of the bird and rapidly leave the nares). Any visible mites were first suctioned from the surface of the bill and the feathers