

different types, and his selections agree, except in one instance, with my tentative separation on superficial characters.

After the sketches were made and verified, every other male in the series where the sexual structures were not fully retracted was closely examined, the scales being removed wherever necessary, so as to make sure of the correctness of the association. It is interesting to note that in the whole of what may be termed the *instabilis* series the penis sheath is unusually long, and is furnished at tip with a very long corneous spine, set at right angles to the stem. I am aware that I should have examined a series of females to determine the function of this structure, if possible; but that can be easily done later by some younger man with more leisure than I.

It was also noted that there were two types of uncus represented; one with a spear-shaped tip, the other tapering to a normal point. I am not quite sure how much absolute value should be attributed to this. All the eastern males, *hibisci* and *instabilis*, and all the Calgary males, have the spear-shaped tip. With one exception all the western forms, *pacifica* "Auct.," have the slender, gradually pointed tip.

The common eastern form will, if Gueneé's description based on a picture is accepted, be known as *hibisci*, with *confluens* Morr. as a synonym, and of this I have at present one ♀ from Long Island, N. Y. The more normal type, which is *instabilis* Fitch, is represented from New Jersey to Maine, Canada, and westward to Decorah, Iowa, and Volga, So. Dakota. It has a reddish-gray base, is mottled with darker brown, slender, transverse strigæ, not so closely placed as to obscure the maculation, s. t. line fairly marked, with obvious reddish-brown preceding shades. The median lines tend to become lost, especially in the female; but they are usually traceable as shadings if not otherwise. The reniform is always, the orbicular is usually uniformly dusky, and outlined by a narrow pale line. A reddish or somewhat dusky median shade may or may not be obvious. On the whole the species is a quietly-marked one, and its dominant impression is of a reddish-gray form.

The male genitalia are characteristic. The uncus is spear-shaped at tip, the clasper long, stout, curved, scarcely dilated medially; the harpes are inferiorly drawn out into a long tip, in an almost direct continuation of the inferior margin; upper angle acute, but not drawn out, the tip oblique and not arcuate. Reference is made to figure 1 of Plate VIII for a better understanding of the structure.

An intensification of this type occurs in Colorado, and may be known as *Brucei*. It is brighter, more reddish-gray, the transverse strigæ are less