

## A NEW SPECIES OF GOMPHUS AND ITS NEAR RELATIVES.

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*Gomphus viridifrons* n. sp. Length of the abdomen about 33 mm., hind wing about 27 mm.; black, face and occiput green; prothorax with anterior margin and three spots green or yellow; thorax green with spaces at base of wings, lateral suture and six bands before black, the two middle bands are abbreviated anteriorly and separated by the mid-dorsal carina which is very feebly green. Abdomen black, a dorsal band and sides of first two or three segments yellowish, a yellow spot at base of each of segments four to seven, and sides of eight and nine usually yellowish.

Abdominal appendages of the male straight, about as long as the tenth segment, from above, widest at base, gradually narrowed from apical third and acute at apex; from the side prominently widened at base, with a strong tooth beneath at two-thirds of the length. Hamules large, of nearly the same width for the whole length and ending behind in a hooked process. Vulvar scale almost as long as

the ninth abdominal segment, gradually narrowed, apical third divided and the two parts divaricate.

Described from fourteen males and a female taken at Loudonville, Ohio, June 14, 1900; and a male and female taken at Ohio Pile, Pa.—the latter two specimens by E. B. Williamson.

The species averages larger than either *brevis* or *abbreviatus* and may be separated from the former readily by its green face, by the striking differences in the vulvar lamina and by the hamules and male appendages. In *brevis* the tooth on the appendage is nearer the end and the space from it to apex is noticeably curved while in *viridifrons* this space is practically straight.

It has more points in common with *abbreviatus*, but in that species the vulvar scale is short and triangular, the hamules are smaller and shorter, and the tooth on the superior appendage of the male is much farther from the apex.

Through the kindness of Dr. Calvert and Mr. Williamson I have at my disposal, specimens from which many of the accompanying drawings were made. In *viridifrons*, *brevis* and *abbreviatus* I have made drawings from different specimens of the same species to show slight variations.

This is *Gomphus* sp. Williamson, Dragonflies of Indiana, 294.