Discussion

Diversity. In the current monograph the systematics of the New World dobsonfly genus Corydalus have been revised and updated. Types of all described species (except C. cornutus) were studied, with the outcome of 35 original nominal species and subspecies being reduced to 18, and 12 new species being added, giving a total of 30 named valid species. Adult males and females of all species (except C. amazonas, known only from females) were diagnosed, described, and photographed, and male genitalia of all species (female genitalia only of selected species) were illustrated. Females of 5 presumably undescribed species were diagnosed but not named because corresponding males remain unknown. A species identification key for males of all species has been constructed. Locality records of all examined specimens, from ≈50 museums, have been included providing the 1st comprehensive distribution records for the genus. A number of male and female specimens of each species were measured. Tables of those results provide the first summary of morphometric (and allometric) variation in the genus. A survey of comparative morphology across Corydalus species and a summary of homologies and terminology used in male genitalia are presented. I propose for the 1st time that the male 10th sternite might represent fused apodemes, probably serially homologous with the apodemes of the 9th gonostyli. I also contend that the 10th sternite lobes (10th gonostyli sensu Glorioso) are not appendicular but may be sensory structures serially homologous to setose lobes at the base of the 9th gonostyli of Chloroniella.

In all, 30 species are considered valid, of which 12 were unnamed, 16 species and 1 subspecies were synonymized (15 of those are new syn-