## 9 Nemouridae

Newman (1853) erected the family Nemouridae and included in it most of the present Euholognatha. Earlier North American workers, except Frison (1935, 1942), proliferated his broad definition of the family and included in it genera now assigned to the families Capniidae, Leuctridae, and Taeniopterygidae. Needham & Claassen (1925) and Claassen (1931) considered that the Nemouridae included the broadly defined genera Leuctra, Nemoura, and Taeniopteryx (plus Perlomyia) but was distinct from the Capniidae. Ricker (1952, 1959b) and Jewett (1968) continued this broad concept of the family, which contained the subfamilies Capniinae, Leuctrinae, Nemourinae, and Taeniopteryginae. Ricker (1952) used 11 primarily adult structural characters to define and construct a key to 12 North American subgenera of Nemoura—Amphinemura, Lednia, Malenka, Nemoura s.s., Ostrocerca, Paranemoura, Podmosta, Prostoia, Shipsa, Soyedina, Visoka, and Zapada. At that time, four subgenera were recognized in Europe—Amphinemura, Nemurella, Nemoura, and Protonemura (Kempny 1898)—two of which had no North American representatives; Kimmins (1940), Illies (1955), Winkler (1957), Hynes (1958), and Aubert (1959) recognized them as genera.

A more restrictive definition of the Nemouridae, prevailing today, began with Klapálek's (1905) division of Newman's (1853) diverse grouping into the four families Capniidae, Leuctridae, Nemouridae, and Taeniopterygidae. This system was essentially adopted by Frison (1935, 1942), in what he considered to be a more natural classification based on both adult and nymphal characters, although all North American species at that time were still included in the broadly defined genus *Nemoura*. lilies (1966) and Zwick (1973) used the Klapálek (1905) and Frison (1935) restricted sense of the family and elevated all 14 subgenera to generic status.

Baumann (1975) revised the family, based on a comprehensive study of all North American and many European and Asian species. He retained the strict definition of the family and the Illies (1966) genera; described the three new genera *Illiesonemoura*, *Indonemoura*, and *Mesonemoura*, none of which occurs in North America; divided the family into two subfamilies Amphinemurinae (new) and Nemourinae (Newman 1853); and provided illustrated keys to known males, females, and nymphs of world genera. The classification of the Nemouridae has remained stable since Baumann's (1975) revision.

The mature nymphs of Nemouridae have divergent, "swept-wing" wingpads, unlike those of Capniidae and Leuctridae. They can be separated from Taeniopterygidae nymphs, with which they share this character, by their second tarsal segments, which are shorter than the first, and by the absence of coxal gills. Nemourid nymphs can be separated from those of the Capniidae and Leuctridae by their abdomens (short relative to the hindleg length), which reflects the robustness of their body (see key to families). Gills are either present in the neck region (anterior thoracic or submental), or totally