

New Mexico. That species may occur over much of north Texas judging from Bick and Bick's (1957) report of the Odonata of Oklahoma.

The following species have their eastern limits of distribution within Texas, also occur north or both north and south into Mexico, and have their easternmost county records in parentheses. *Archilestes grandis* (Dallas), *Lestes alacer* (Matagorda), *Argia lugens* (Crosby), *A. nahuana* (Robertson), *A. plana* (Wood), *Enallagma praevarum* (Blanco), *Ischnura barberi* (Crockett), *I. demorsa* (Brewster), and *I. denticollis* (Garza).

The following species reach Texas from the south or southwest and have their northernmost county records in parentheses. *Lestes forficula* (Brazos), *L. sigma* (Gonzales), *Neoneura aaroni* (Caldwell), *Protoneura cara* (Kendall), *Argia barretti* (Kimble), *A. hinei* (Brewster), *A. munda* (Jeff Davis), *A. rhoadsi* (Cameron), *Enallagma novaehispaniae* (Hays), and *Hesperagrion heterodoxum* (Brewster).

Two species occurring in Texas are apparently absent from New Mexico and Louisiana but range north and south of the state. These species with eastern and westernmost county records respectively are *Argia imunda* (Rusk, Jeff Davis) and *A. translata* (Brazos, Howard).

SEASONAL DISTRIBUTION.—The seasonal distribution or adult flight season of most species extends over spring and summer months and may persist into cool weeks of early fall. Many dragonflies (Anisoptera) apparently have an obligate diapause associated with a massed, synchronized spring or early summer emergence. Such species consist of a homogenous adult age group, growth patterns require at least a full year's cycle, often longer, and adults vanish from the scene when their average life expectancy expires. Most damselflies appear to differ from this pattern by having growth controlled in a facultative manner. As soon as temperature conditions in the spring permit, emergence begins and continues throughout much of the summer.

Emergence in north Texas may therefore be several weeks later than for the same species in southern parts of the state. The populations have a heterogeneous age structure, and growth rates may permit more than one generation in a year. The lestids, calopterygids, and larger coenagrionids appear to require, for most species and habitats, a year's life cycle. The smaller coenagrionids may have two to three generations in a year. Life cycles are typically longer in species restricted to streams than in forms characteristic of lentic habitats. The date of emergence will vary from year to year for a given habitat as local climate varies. In areas where warm springs occur (ex. Palmetto State Park), adults fly earlier than in surrounding habitats having lower temperatures. Adults in southern counties will likewise exist later into the fall season than counterparts to the north and may have twice the generation number a year.

For these reasons, a comprehensive knowledge of flight seasons will require more ecological data than currently available. A few exceptions to these generalizations exist. The form of *Hetaerina titia* known as *tricolor* is characteristically a spring form in central Texas (Johnson, 1963).