

## THE DRAGONFLIES OF McLENNAN COUNTY, CENTRAL TEXAS, UNITED STATES

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**Abstract** — 19 zygopteran and 53 anisopteran spp. are listed *Macromia pacifica* and *Neurocordulia xanthosoma* are scarce in collections, but both spp. are well established in this county. An association with springs by *Belonia croceipennis* is discussed.

**Introduction**

The following list is based upon my own collection and photography of specimens from 1960 to present date. 19 Zygoptera and 52 Anisoptera are listed; however *Archilestes grandis*, *Anax longipes*, *Epiaeschna heros* and *Macromia wabashensis* are poorly or not at all established. Moreover, the status of *Macromia wabashensis* seems uncertain. I believe the list of Anisoptera may be complete. Certainly, many Zygoptera were missed, as much less time was devoted to them. The dates given are from my records, and do not propose to indicate the earliest and latest dates that each species may be seen.

**Sites**

Most of the sites listed were visited many times. To save space, they shall be designated by numbers, 1 to 10, and the appropriate number(s) placed after each species listed.

(1) Lake Waco; NW of Waco within city limits; — (2) Hog Creek; flows into the W side of Lake Waco; several small widely separated springs trickle into the main stream; — (3) Middle Bosque River; flows into the W side of Lake Waco; — (4) South Bosque River, 6 miles W of Waco city limits at Tx 84; flows into the southwestern end of Lake Waco; — (5) Harris Creek; 10 miles W of Waco city limits at Tx 84; an intermittent stream; — (6) Tehuacana Creek; 12 miles S of Waco at Tx 6; this stream is very muddy; — (7) Brazos River; a major river traversing McLennan County from N to S; — (8) Lake Creek Reservoir; on Farm to Market Road 1860, 5 miles W of Riesel; — (9) The

stream from the spillway of Lake Creek Reservoir; numerous small springs trickle into it; — (10) Ponds near Lake Waco and Lake Creek Reservoir.

Note: Sites 2, 3, 4 and 5 have rock and gravel bottoms with mud in the deeper pools.

**List of species**

Coenagrionidae: *Anomalagrion hastatum*: 1, 8, 10 (12 March-11 Nov.); — *Argia apicalis*: 1, 2, 4, 7, 8 (13 April-18 Sept); — *A. immunda*: 5, 9 (6 Aug.-18 Oct.); — *A. moesta*: All sites (May-Nov.); — *A. nahuana*: 5 (10 July-7 Aug.); — *A. plana*: 5, 9 (29 Aug.-7 Nov.); — *A. sedula*: 2, 3, 4, 5, 7, 9 (13 April-3 Oct.); — *A. translata*: 4, 5, 9 (23 July-27 Oct.); — *Enallagma basidens*: 1, 4, 5, 8, 10 (18 April-18 Oct.); — *E. civile*: 1, 8, 10 (1 May-11 Nov.); — *E. exsulans*: 4, 9 (13 May-16 June); — *E. signatum*: 1, 5, 8 (2 April-18 Oct.); — *Ischnura posita*: 1, 8, 10 (7 March-9 June); — *I. ramburi*: 1, 8, 10 (18 April-23 Sept.); — *Telebasis salva*: 1, 5, 9, 10 (20 July-11 Oct.).

Lestidae: *Archilestes grandis*: 2 (20 May, 1 specimen and 2 Aug., 1 specimen. Also 13 May, 1 specimen collected in adjoining Falls County); — *Lestes disjunctus*: 10 (25 April-27 Nov.).

Calopterygidae: *Hetaerina americana*: 2, 3, 4, 5, 9 (10 April-12 Nov.); — *H. titia*: 2, 3, 4, 9 (22 June-1 Aug.).

Gomphidae: *Dromogomphus spoliatus*: 1, 8, 10 (25 June-3 Sept.); — *Erpetogomphus designatus*: 2, 3, 4, 7, 9 (16 May- 1 Sept.); — *Gomphoides albrightii*: 2, 4, 9 (12 June-9 Aug.); — *G. stigmatus*: 1, 2, 4, 8, 9 (28 May-20 Aug.); — *Gomphus (Arigomphus) lentulus*: 1 (26 April-15 May); — *G. (A.) submedianus*: 1, 8, 10 (26 April-5 July); — *G. (Gomphurus) externus*: 1, 6, 9, abundant at 6 (8 April-26 May); — *G. (Gomphurus) vastus*: 3, 4, 7, 9, most numerous at 7 (9 May-2 Aug.); — *G. militaris*: all sites (7 May-15 Aug.); — *G. (Stylurus) plagiatius*: 1, 4, 7, most numerous at 7 (15 June-7 Nov.); — *Progomphus obscurus*: 4, 6, 9 (7 May-26 Aug.).

Aeshnidae: *Anax junius*: all sites (1 March-27 Oct.); — *A. longipes*: 2, 4 (19 May-14 June) three specimens collected and only four more have been seen; — *Basiaeschna janata*: 2, 3, 4, 9 (27 March-5 May); — *Epiaeschna heros*: 2 (July), only three records; — *Nasiaeschna pentacantha*: all sites (22 April-20 Sept.).

Macromiidae: *Didymops transversa*: 2, 8, 9 (19 March-8 April); — *Macromia annulata*: 2, 3, 4, 9 (23 May-5 Aug.); — *M. georgina*: 2, 4, 6, 9 (24 May-1 Aug.); — *M. pacifica*: 2, 3, 4, 9, only one specimen at 9 (21 May-11 July); — *M. taeniolata*: 2, 4, 7, 8, 9 (2 June-4 Aug.); — *M. wabashensis*: 4, 9, only one specimen at each site; one additional specimen collected in adjoining Falls Co. (June-July).

Corduliidae: *Epicordulia princeps*: all sites (8 May-20 Aug.); — *Neurocordulia xanthosoma*: 1, 2, 3, 4, 9 (13 May-9 Aug.); — *Tetragoneuria cynosura*: 1, 8, 10 (18 March-4 May); — *T. petechialis*: 1, 2, 10 (18 March-5 May).

Libellulidae: *Belonia croceipennis*: 2, 9 (13 May-8 Nov.); — *Brachymesia (Cannacria) gravida*: 8 (19 March-1 July); — *Brechmorhoga mendax*: 2, 3, 4, 9 (8 April-14 June); — *Celithemis elisa*: 1, 8, 10 (27 April-3 Sept.); — *C. eponina*: 1, 8, 10 (27 April-20 July); — *Dytthemis fugax*: 2, 3, 4, 5 (28 April-31 Aug.); — *D. velox*: 1, 2, 3, 4, 9 (1 May-7 Nov.); — *Erythemis simplicicollis*: all sites (4 May-10 Oct.); — *Erythrodiplax umbrata*: 1, 10 (1 May-15 July); — *Ladona deplanata*: 1, 8, 10 (20 April-26 May); — *Leptthemis vesiculosa*: 1, 3, 9, 10 (24 April-14 June); — *Libellula comanche*: 9 (30 May-2 July); — *L. incesta*: 1, 10 (15 June-30 Aug.); — *L. luctuosa*: all sites (10 May-7 Sept.); — *L. pulchella*: 2, 4, 10 (6 May-1 Oct.); — *L. vibrans*:

1, 8, 10 (March-July); — *Orthemis ferruginea*: 2, 3, 4, 8, 10 (10 April-10 Oct.); — *Pachydiplax longipennis*: 1, 8, 10 (20 March-2 Nov.); — *Pantala flavescens*: all sites (5 June-1 Oct.); — *P. hymenea*: all sites (11 May-9 Sept.); — *Perithemis tenera*: 1, 4, 8, 9, 10 (20 April-5 Oct.); — *Plathemis lydia*: all sites (6 May-15 Aug.); — *Sympetrum ambiguum*: 1, 8, 10 (20 May-31 Oct.); — *S. vicinum*: 2, 3, 4 (25 Oct.-28 Dec.); — *S. (Tarnetrum) corruptum*: 1, 8, 10 (Jan.-Dec.); — *Tramea lacerata*: all sites (10 April-2 Oct.); — *T. onusta*: all sites (10 April-23 Sept.).

#### Discussion

*Macromia pacifica* and *Neurocordulia xanthosoma* are well established in McLennan County; however both species are generally scarce in collections. Although *M. pacifica* is few in numbers, it has a dependable flight season. Usually, but not every year, *N. xanthosoma* is abundant; however it hides during daylight hours, and can be seen in large numbers only at dawn and dusk in feeding flights over the water.

*Belonia croceipennis* is associated with springs. I have seen this species only at sites Nos 2 and 9. In adjoining Falls County, it is abundant at a short, but entirely spring-fed stream, June, 1975 Ken Knopf of Gainesville, Florida collected many larvae from the springs at site 9. He wrote to me in July that 2 males and 2 females had emerged from the larvae. I have collected larvae many times from the main stream, site 9, but have never found larvae of *B. croceipennis*. At site 2 the springs are widely separated. I have seen females ovipositing in the springs and have seen adults only in the vicinity of the springs.

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