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**THE ODONATA OF NEW YORK** *Thomas W. Donnelly* p. 1 - 27

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# THE ODONATA OF NEW YORK STATE

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## INTRODUCTION

The dragonflies and damselflies (order Odonata) of New York have been studied intensively for a century and a half. The first comprehensive state list was that of P.P. Calvert (1895), who also published a supplement (1897). Calvert drew heavily on the collections of noted early New York state entomologists, such as Beutenmüller, Banks, Davis, Lintner, and Van Duzee. Curiously, his own collections (mainly in the Catskills) were made in 1897 and 1898, after these papers were published.

The second major contributor to the Odonata fauna of the state was William T. Davis, who for many years ranged from his Staten Island base to Long Island and to the Pine Barrens of New Jersey, becoming one of the major students of the insect fauna of this region. Davis's major contribution was a paper (1913) which summarized the knowledge of Odonata within a fifty mile radius of New York City. Regrettably, some of the fauna on this list has probably been subsequently extirpated.

The late Professor James G. Needham of Cornell University, the best known of the New York odonatists, published several papers on the state fauna, of which the two most notable drew heavily from his early experiences in the Adirondacks (1901, 1903). Needham was one of the earliest students of the order to concentrate on immature stages of these insects, and for this, as well as his devotion to several generations of students, he will be justifiably remembered. His 1901 paper, which concentrated on Anisoptera, described for the first time larva of 42 New York species of Anisoptera, the single largest contribution to North American larval studies ever made. The 1903 paper, which concentrated on Zygoptera, added descriptions of larvae of 14 New York species. Needham's taxonomic judgments, however, were often questioned, even in his own time, and his reputation in later years suffered accordingly.

Needham published a state list (1928), which remains the most current account of the state's fauna. This list, which contained 150 species now recognized as valid, is now seriously out of date. The present list shows that 175 species of Odonata have been taken in the state, and, of these, two have two subspecies each, totaling 177 species and subspecies. Needham listed Calvert, Walker, and Davis as collaborators on this list, but some inconsistencies raise questions as to their role in this project. In this summary I have attributed the earlier records of all of these authors to the 1928 summary.

Eleven species from the 1928 list have not been subsequently recorded. *Calopteryx dimidiata*, *Argia bipunctulata*, *Progomphus obscurus*, and *Libellula flavida* are found commonly on the coastal plain north to New Jersey and are likely to occur only on Long Island. *Enallagma*

*minusculum* and *Williamsonia lintneri* are found in coastal or near coastal localities of New England and should be sought on Long Island, also. The type locality of *Williamsonia lintneri* is near Albany, which is the only occurrence more than a few dozen miles from the ocean anywhere in the range of this interesting insect. It appears to have been extirpated in its original locality. *Cordulegaster erronea* has a southern piedmont or montane occurrence. *Stylurus amnicola* and *Gomphus ventricosus* are widespread midwestern stream gomphids which range sporadically to the east. *Somatochlora albicincta* and *S. kennedyi* are bog and swamp species commonly found in more northern localities and might be found in the Adirondacks. In addition to these, *Stylurus plagiatus* has been seen recently on the Hudson River but not collected.

Two other pre-World War II records have not been found subsequently. *Libellula auripennis* was recorded for Allegany State Park on the basis of a general female specimen by Donald Borror. Although this record is at the limit of the range of this species, Borror's familiarity with this species elsewhere suggests that it is reliable. I consider it provisional. The 1938 record of *Calopteryx angustipennis* from Allegany State Park should be considered provisional for the same reason. The older Rockland Co. record for this species is valid.

## Physiography of New York State and Characteristic Odonata

New York state has been divided for this study into five general areas: Northern, Central, Western, Hudson Valley and Downstate. These areas do not correspond to drainages, which are somewhat intricately distributed in the state. The Mississippi drainage (Allegany River) is represented by southern Chautauqua and Cattaraugus Counties. The Susquehanna drainage is approximately in the southern tier counties from Steuben east to Delaware, and also Chenango, Cortland, and Otsego. The Hudson River counties correspond roughly to a tier of counties along each side of that river. The major Mohawk drainage is within Oneida, southern Herkimer, Madison, Onondaga, Fulton and Montgomery. The remaining upstate counties drain mainly into the Great Lakes and St. Lawrence, with the northeasternmost counties draining directly into Lake Champlain.

The Adirondacks consist of a high (eastern) portion mainly in Essex county, a forested, hilly, lower elevation main portion, and farmed lowlands close to Lake Ontario and the Mohawk and St. Lawrence drainages. This area is underlain by ancient gneisses and granites, and many of the rivers are sandy to rocky, with sandy shored lakes. Rivers are commonly dark with tannin, and conifer forests and lakes of all sizes are abundant. Bogs are widespread. This area is one of the largest contiguous boreal habitats in the eastern United States.

Table 1

## COUNTIES OF NEW YORK STATE

The number in parentheses is the number of odonate taxa recorded from the county.

## NORTHERN, mainly Adirondacks

Clinton (7)	Fulton (6)	Jefferson (4)	Oswego (21)
Essex (68)	Hamilton (72)	Lewis (8)	St Lawrence (50)
Franklin (70)	Herkimer (37)	Oneida (28)	Warren (13)

## CENTRAL

Broome (100)	Delaware (27)	Otsego (55)	TIO Tioga (57)
Cayuga (18)	Madison (18)	Schoharie (19)	Tompkins (98)
Chenango (57)	Montgomery (5)	Seneca (46)	
Cortland (53)	Onondaga (12)	Sullivan (55)	

## WESTERN

Allegany (13)	Erie (56)	Niagara (23)	Steuben (33)
Cattaraugus (58)	Genessee (24)	Ontario (26)	Wayne (19)
Chautauqua (6)	Livingston (9)	Orleans (16)	Wyoming (20)
Chemung (1)	Monroe (42)	Schuyler (65)	Yates (27)

## HUDSON VALLEY

Albany (42)	Orange (71)	Saratoga (6)	Westchester (101)
Columbia (7)	Putnam (32)	Schenectady (1)	
Dutchess (12)	Rensselaer (3)	Ulster (73)	
Greene (34)	Rockland (49)	Washington (3)	

## DOWNSTATE

New York City (69)	Nassau (11)
Long Island unspecified (6)	Suffolk (79)

I have lumped subdivisions of New York City and identified them by their borough, rather than their county, names (Brooklyn instead of Kings, Staten I instead of Richmond, Manhattan instead of New York).

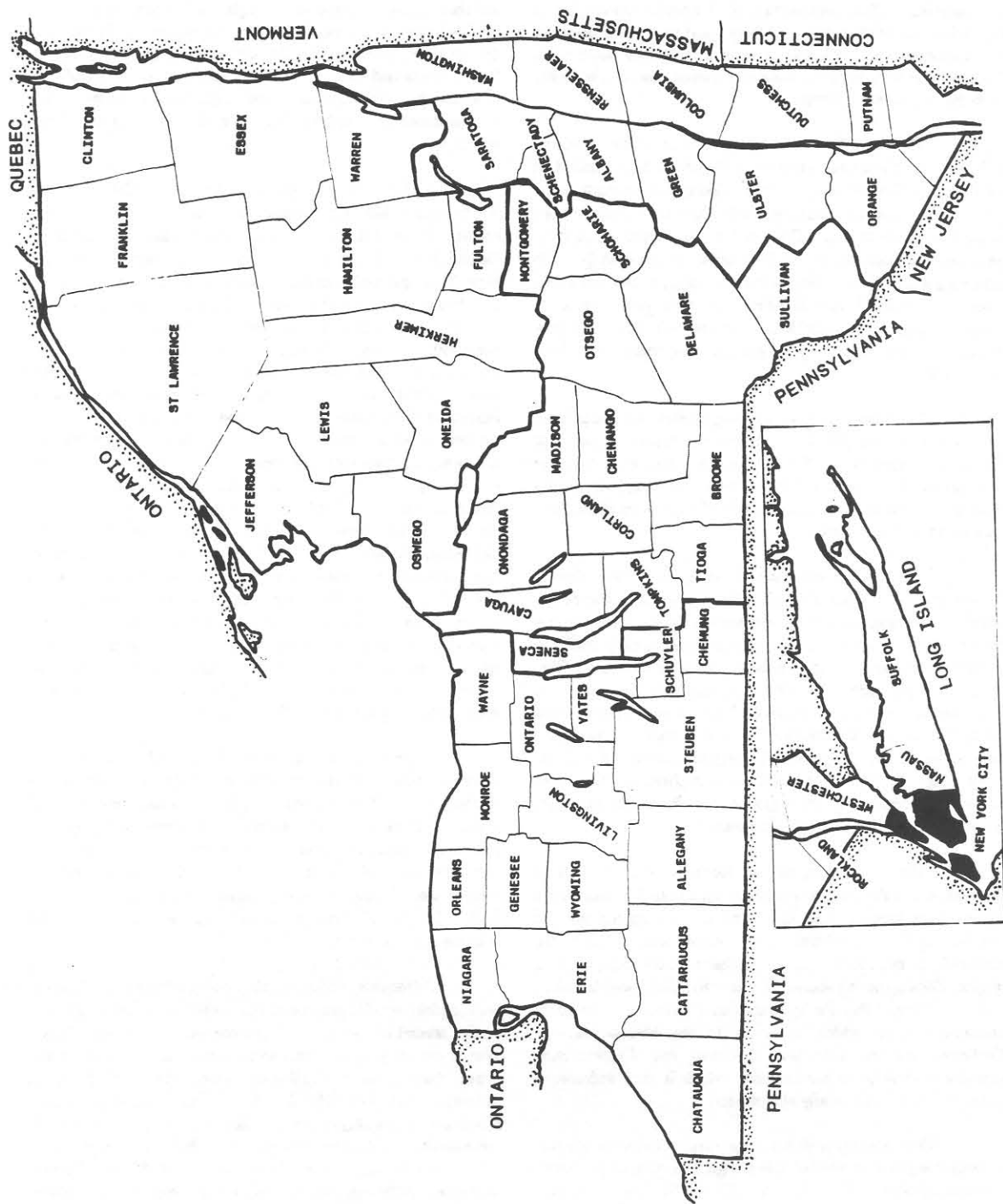


Fig. 1 Map of New York state, showing counties

The odonate fauna is dominated by boreal species. Characteristic species include: *Calopteryx amata*, *Aeshna interrupta*, *A. eremita*, *Boyeria grafiana*, *Somatochlora elongata*, *S. williamsoni*, *S. walshii* and *Sympetrum costiferum*. Less common *Somatochlora* include *S. minor*, *S. forcipata*, and *S. tenebrosa*. The prominence of *Hagenius brevistylus* is surprising, considering that it is very local in the remainder of the upstate region. *Ischnura posita* has only been taken once. The southern species *Erythrodiplax berenice* has been recorded from the St. Lawrence River.

The Catskills center within Greene, Ulster, Sullivan, and Delaware Counties. They are a dissected plateau underlain by flat-lying Paleozoic sandstones. Their predominant forest type is hardwood, and their aquatic habitats are mainly streams of small to medium size. The Catskills have been a relatively poor area for Odonata, except for portions of Sullivan Co. with numerous small lakes. The major linear valley to the east of the Catskills (Bashkill and Rondout Cr) may prove to be a rewarding area. The upper Delaware river has been studied only in a cursory fashion, but several gomphids of interest have been taken there.

Partly because pond and bog habitats are scarce here, the odonata of the Catskills are mainly upstate rather than Adirondack species. Some northern species, such as *Tetragoneuria spinigera* and *Sympetrum costiferum*, are locally common, and there are several records of *Boyeria grafiana* from the eastern part of this area.

The Hudson and Mohawk valleys are rather sharply incised and lack broad alluvial valleys, even near the ocean, where the Hudson has a fjord-like aspect. Aquatic habitats are dominated by streams; lakes are infrequent and mainly artificial. There is a large amount of forested upland near New York City, where the glaciated bedrock is metamorphic rock and is unsuitable for agriculture. Some of the most interesting habitats are in Orange and Westchester Cos. where there are numerous small lakes in the topographically rugged, almost Adirondack-like setting. Perhaps surprisingly, pressure from the New York City area has apparently not degraded the wild aspect, and there is a rich odonate fauna within these counties.

The lower part of the Hudson valley is rich in Odonata, and is the only presently known part of the state for the rare southern species *Ischnura prognata*, *Gomphus rogersi*, and *Libellula axilena*. Several Long Island species reach the highlands of the lower Hudson as the northern limit of their ranges: *Enallagma traviatum*, *E. laterale*, *Ischnura kellicotti*, *Ladona exusta*, *Libellula cyanea*, and *L. vibrans*. Southern estuarine species which penetrate to the Hudson include *Enallagma durum*, *Libellula needhami*, and *Erythrodiplax berenice*. *Ophiogomphus carolus*, which is very widespread just to the west is essentially absent here.

The remainder of the upstate region (western and part of central regions) is divided into a higher (southern) and lower (northern) portion. The Allegheny plateau (flat-lying Paleozoic sandstones and shales) dominates the southern portion; it is incised by major rivers such as the Susquehanna and Chemung, which have well developed riverine Odonate faunas. There are relatively few lakes in this region. Although once heavily

farmed, this area is covered today with abundant scrub and new forest developed on abandoned farm land.

Lying to the north of the Niagara escarpment in the northern quarter of western New York are lowlands adjacent to the Great Lakes. This area is underlain by limestones, shales, and thick glacial deposits and is highly cultivated. This area has a milder climate, and Odonata with more southern affinities, than the southern portion. In the drainage divide (between the Susquehanna and Great Lakes drainages), which runs east-west at about the northern limit of the southernmost counties, there are numerous bogs and small lakes in the moraines that define this divide.

The upstate (except for the Catskills and Adirondacks) has the northeastern part of the widespread odonate fauna of the Midwest and Appalachian regions of the United States. There are no especially characteristic species in New York, but the gomphid *Arigomphus furcifer*, which ranges both to the west and east of New York, is especially conspicuous in this area. There are several local occurrences of more northerly species: *Coenagrion resolutum*, *Somatochlora elongata*, *S. williamsoni*, *S. walshii*. Some northern species occur episodically in considerable number here: *Aeshna interrupta*, *Sympetrum costiferum*, and *Lestes unguiculatus*. The southern species *Dorocordulia lepida*, *Celithemis eponina*, and *Lestes vigilax* form local but apparently stable populations in the upstate region. Sporadic southern species include *Lestes disjunctus australis*, *Enallagma divagans*, *E. doubledayi*, *Anax longipes*, *Nasiaeschna pentacantha*, *Tachopteryx thoreyi*, *Celithemis fasciata*, and *Libellula semifasciata*. *Epiaeschna heros*, *Pantala hymenaea*, and *P. flavescens* regularly wander into the area from the south during warm summers. The southwestern species *Enallagma basidens*, which has been extending its range for several decades, has recently (1989) appeared in the upstate. In the western part of the state *Sympetrum rubicundulum* and *Epiaeschna heros* are well established; they are apparently vagrant elsewhere.

Long Island consists of glacial end moraine in the northern third and flat, permeable glacial outwash in the southern part. There are abundant small streams and ponds in lower areas where the shallow water table intersects topography. Population pressure from New York City has probably extirpated most of the once-rich fauna of the City itself and Nassau Co. There are good habitats in central and eastern Suffolk Co. (mainly small ponds and bogs) but their preservation is by no means assured.

Odonate species which are limited to Long Island are coastal plain species near or at the northern part of their range. Sadly, several of the species have not been taken since World War II and might have been extirpated: *Calopteryx dimidiata*, *Argia bipunctulata*, *Enallagma minusculum*, *Progomphus obscurus*, and *Libellula flava*. Extant species include *Enallagma doubledayi* (one old record upstate), *E. pictum*, *E. recurvatum*, *Ischnura ramburii*, *Nehalientia integricollis*, *Tetragoneuria semiaquea*, *Celithemis martha*, and *Ladona deplanata*. Although pond habitats are abundant on Long Island, several very conspicuous upstate pond species are absent here: *Enallagma ebrium*, *E. hageni*, *Aeshna canadensis*, *Gomphus spicatus*, *Cordulia shurtleffi*, and *Ladona julia*.

Implications for Conservation

The failure to collect in recent years species that are historically known from the state may be due to pure chance: many species are sporadic at the limits of their range and appear and disappear for reasons which are not yet understood. However there are three types of habitats which have been shrinking due to developmental encroachment or are being otherwise degraded. Special attention should be paid to these habitats with the possible goal of recommending measures for protection of their aquatic fauna.

Larger rivers are the preferred habitats to several gomphid dragonflies and a few other riverine species such as *Neurocordulia yamaskanensis*. Riverine gomphids remain the most enigmatic part of the state odonate fauna. Several are apparently rare in the state, including *Gomphus fraternus* (for which there is a recent record from a lentic habitat), *G. quadricolor*, *G. vastus*, *G. viridifrons*, *Stylurus notatus*, and *Ophiogomphus anomalus*. It has not been determined for any of these whether they are sporadic or whether they have elusive habits which results in their being overlooked by collectors. Although there is widespread feeling that larger rivers have become seriously polluted, the odonata fauna suggests that insect diversity may be greater than suspected. In the Susquehanna River, just upstream of Binghamton, several species (*Gomphus vastus*, *G. abbreviatus*, *Ophiogomphus rupinsulensis*) have been present for a few years and then apparently vanished - possibly to reappear at some future time. The population dynamics of large rivers need to be addressed before recommendations can be made for conservation measures.

A second type of habitat that is undisputably under threat is represented by small ponds, sandy streams, and bogs on Long Island. Several of the historic species not recently recorded in the state (*Nehalonia integricolis*, *Calopteryx dimidiata*, *Argia bipunctulata*, *Progomphus obscurus*, *Libellula flavida*, *Enallagma minusculum*, and *Williamsonia lintneri*) have not been recently seen but may still exist somewhere in Suffolk County.

A third habitat under threat consists of bogs and swamps in upstate areas, especially but not only in the Adirondacks. The relatively small representation of *Somatochlora* (especially outside of the Adirondacks) in the state may reflect the draining, filling, or other modes of degradation of these habitats. Other bog species, such as *Nannothemis bella* and *Nehalonia gracilis*, may be facing severe restriction for the same reason.

#### Taxonomic and Distributional Problems among New York Odonata

There are several very interesting current problems posed by New York Odonata. The distribution of several northern (Adirondack and Catskill) species (such as *Lestes unguiculatus*, *Aeshna constricta*, *A. interrupta*, and *Sympetrum costiferum*) suggests that these species may wander or irrupt episodically to the south and west. At least in the case of the *Lestes unguiculatus*, the species may persist in outlying localities for several years. On the other hand, some southern species (such as *Libellula semifasciata* and *Lestes disjunctus australis*) episodically appear in numbers in southern upstate New York but do not persist to the following year. Very little is known about the population dynamics of these species. Other strong-

lying southern species (*Pantala hymenaea* and *flavescens*, *Anax longipes*, *Epiaeschna heros*) appear sporadically in the upstate area, especially in warm summers. Evidently several southern species are regular visitors to New York but may not breed there.

An interesting taxonomic and ecological problem is the co-occurrence within the state of closely related (sibling) species that might not be completely genetically separated taxa. One interesting example is *Enallagma c. cyathigerum* and the subspecies *E. c. vernale*, which can both be found in several places in the state (Donnelly, 1989). The former is found in bogs and grassy ponds, while the latter is common on some small, slow rivers. I have suggested that these forms are not genetically separated, but the details of their relationship have yet to be investigated. It is interesting that the nominate subspecies prefers ponds and bogs with relatively few fish, but that *vernale* seems to coexist with large and vigorous fish populations.

Another sort of problem occurs within the abundant dragonfly genus *Sympetrum*. The most abundant species, *internum*, flies locally with a closely related southern species *rubicundulum* but appears to maintain a genetic barrier with this species. The occurrence of persistent populations of *rubicundulum* in the range of *internum* is noteworthy. The species *internum* also flies with the sibling species *obtusum* in the northern part of the state. At least one case of a hybrid between these two has been found. The genetics and population dynamics of these three species would form the basis of a rewarding study.

The discovery of the two species of *Lanthus* emerging together in Allegany State Park poses still another sort of problem. These two species are very similar; generally they are indistinguishable except in the hand. The two species might prove to be separated ecologically as larvae. From available evidence it appears that *vernalis* occupies tiny, spring-fed streams and *parvulus* slightly larger streams. The extent of overlap has not been determined. An ecological / behavioral study to show how the two species recognize their own species would be a valuable contribution.

Finally, the closely related taxa *Lestes forcipatus*, *L. d. disjunctus*, and *L. d. australis* pose another problem. While *forcipatus* resembles *d. australis* closely, it seems morphologically more distinct from *d. disjunctus*. Also, its flight season overlaps that of *d. australis*, whereas *d. disjunctus* and *d. australis* do not overlap in time. At least one specimen intermediate between *forcipatus* and *d. australis* has been noted in New York (Walker, 1952, noted others elsewhere in the range of these taxa).

#### ARRANGEMENT OF THE LIST

The state is divided into five areas, and the counties from each area are grouped in a paragraph. There are no counties lacking records, only 12 with 10 or fewer species, and 19 counties with 50 or more records.

I have arbitrarily listed all records for 72 of the taxa; an additional 12 taxa have some complete records. Remaining records are given for the county only, with references as listed below. Older localities that I have been unable to locate are omitted for this list, except for a few given in parentheses.

A few sight records are included where there is little doubt as to the authenticity. Examples are *Neurocordulia yamaskanensis* (seen on the Susquehanna R at Binghamton; specimens have been taken a few miles upstream in Pennsylvania), and the large or vividly marked species *Anax longipes*, *Epiaeschna heros*, *Tramea carolina*, *Pantala hymenaea* and *flavescens*, and *Tachopteryx thoreyi*.

The dates of capture are for occurrences over the entire state. Very early or very late dates are likely to be Long Island records. For a few species, the dates of larval emergence are given; these commonly precede the first capture of adults by at least a week. The old New York list (1) gave only month. Where there is a record with the day of the month available, I have used it, rather than the month alone.

The localities are those available in a standard gazetteer, such as DeLorme's (1987) Atlas & Gazetteer. I have also located some places using the microfiches of the National Cartographic Information Center of the U.S. Geological Survey, Reston, Virginia, which contain a record of the names that have appeared on U.S. Geological Survey topographic maps (quadrangles).

There are several localities that remain mysterious. In some cases, I have used the context to determine the location. Kenwood, a suburb of Albany, is selected for some New York State Museum specimens, rather than the small village of this name in Madison County. Bethlehem is the town that includes Kenwood, and old records under these two names may refer to the same locality (e.g., *Gomphus adelphus*). Fair Haven (also written Fairhaven) in Cayuga Co. is selected because of the popularity of this location with naturalists, and also because of related records from North Fair Haven, which is unambiguous, rather than a small hamlet in Cortland Co. Sackets Harbor, Jefferson Co., is selected rather than Sacketts Harbor, Livingston, or (very minor) Chenango Co. Elizabethtown, Essex Co., is selected rather than a very minor locality of that name in Herkimer Co.). In other cases I can make no choice (e.g., Hyde Park: Dutchess or Otsego Co.). In still other cases, an earlier name was apparently never accepted as official and has never appeared on a U.S.G.S. topographic map (e.g., Catskill Lake, Caledonia Cr., Ilex Pd); such localities remain unknown to me.

Where localities occur on a county line, I have assigned the counties according to the placement of the nominal locality; the actual capture could have been from across the county line. Thus Portage is assigned to Livingston Co. (border of Wyoming); Trenton Falls is assigned to Oneida Co. (border of Herkimer); Niagara R and Tonowanda Cr are assigned to Erie Co. (border of Niagara). Cinnamon Lk spans Steuben and Schuyler Cos.; records from that lake are attributed to both counties.

#### SOURCES OF INFORMATION

1) the Odonata portion of the list of the Insects of New York (Needham, 1928). Several records have been reevaluated in light of changing taxonomic concepts. Some specimens were reidentified by T. Donnelly. Where earlier records in references 12 through 18 (below) are given in (1), no additional reference to the earlier publication is made.

- 2) Johnson (1974)
- 3) Johnson (1973a)
- 4) Hood (1932)
- 5) Beatty and Beatty (1968)
- 6) Walker (1925)
- 7) House (1982) with some subsequent corrections by T. Donnelly
- 8) Needham (1943)
- 9) Walker (1958)
- 10) Garber (1988)
- 11) Johnson (1973b)
- 12) Davis (1913) additional records not included in (1)
- 13) Calvert (1895) additional records not included in (1)
- 14) Calvert (1897) additional records not included in (1)
- 15) Davis (1914) additional records not included in (1)
- 16) Needham (1897) additional records not included in (1)
- 17) Needham (1901) additional records not included in (1)
- 18) Needham (1903) additional records by P. Calvert not included in (1)
- ab) Collections of A. Barlow, Hackensack, NJ
- bms) Buffalo Museum of Science; specimens loaned by Wayne Gall
- cu) specimens in the Cornell Univ. collection, Ithaca
- db) Unpublished list of Odonata from Cattaraugus Co. by the late Donald Borror; also some records from Chautauqua Co. (archives of IORI, communicated by S. Dunkle)
- dp) specimens in collection of Duke Power Co., Huntersville NC, communicated by T.C. Folsom
- fc) collections of F. Carle, Warren, NJ
- fh) collections and information from F. Hough, Accord
- fsc) specimens in the Florida State Collection of Arthropods, Gainesville, communicated by Sid Dunkle
- hw) field notes and specimens in collection of H. White, Newark DE
- iori) specimens in the collection of the International Odonata Research Institute, Gainesville, communicated by Sid Dunkle
- jb) records from John Belshe, Warrensburg MO



- kk) collections of K. Knopf, Gainesville FL
- ks) collections of K. Soltesz, South Salem
- kt) collections of K. Tennessen, Florence AL
- mcz) Museum of Comparative Zoology, Cambridge MA, collection
- ny) New York State Museum collection, mainly collected by T. McCabe
- ob) collections of O. Blanchard, Huntingdon Station
- rc) field notes and specimens in collection of R. Charlton, Geneva
- rg) field notes and specimens of the late R.H. Gibbs.
- rl) Long Island Odonata collected by Roy Latham in 1953 and 1954 and identified by T. Donnelly
- td) field notes and specimens in collection of T. Donnelly, Binghamton
- tw) collection of T. White, Oakland, NJ
- usnm) specimens in the U.S. National Museum collection, Washington D.C. communicated by Ms. Nancy Adams. Most of these specimens were collected by Robert H. Gibbs, Jr. or Roy Latham.

There is some duplication in the records. Many of the Roy Latham records which are recorded under his initials are also represented in the National Museum. The same is true for Fred Hough's specimens in the Florida State collection. Most of the Robert Gibbs specimens are now in the National Museum and attributed to the museum; the small number of records specifically attributed to him are in addition to these and do not do justice to his major contribution.

I have not examined all the specimens listed below. For certain genera (e.g. *Sympetrum*) I have been reluctant to include records that I have not been able to verify. I have examined numerous specimens from the extensive collections of the New York State Museum, Buffalo Society of Natural History, Bob Gibbs, Ken Soltesz, Skip Blanchard, and Ralph Charlton.

In the following species list I have included only the synonymy for the referenced papers.

#### Nomenclature

There is some disagreement about generic nomenclature in the Odonata. In this list I have generally chosen to follow traditional usages, such as are found in Needham and Westfall (1955), or Walker (1953, 1958), and Walker and Corbet (1975). Readers should be alerted to the following:

*Anomalagrion hastatum* is subsumed in *Ischnura* by some workers.

For the subgenera of *Gomphus*, I have followed Needham & Westfall (1955) and Walker (1958), although there is increasing evidence that this grouping is not satisfactory. Following nearly universal practice, however, I have recognized two of their subgenera (*Arigomphus*, *Stylurus*) as separate genera. If the European type species of the genus, *vulgatissimus*, can be shown to be consubgeneric with the North American *Hylogomphus*, then that name will have to be dropped. The placement of *rogersi* is especially problematical, although no reasons have been published for excluding it from *Gomphurus*.

Although reasons for separating *Erythemis* from *Lepthemis* seem very weak, I have retained the former as the traditional generic name for *simplicicollis* pending revisionary treatment.

The species *Libellula lydia* has almost always been placed in the genus *Plathemis*. It is undoubtedly congeneric with the European species *L. depressa*, which many but not all workers recognize as the type of the genus. The entire problem is complex and awaits a careful treatment; in the meantime it seems safest to include *lydia* with the genus *Libellula*.

I prefer to recognize the two genera *Epicordulia* and *Tetragoneuria* rather than lump them with the oriental genus *Epiheca*.

#### ACKNOWLEDGMENTS

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Many of my earlier years were spent collecting around Ithaca with the late Bob Gibbs, later an ichthyologist with the U.S. National Museum. This paper is dedicated to him for the pleasant memories of our many adventures.

## CALOPTERYGIDAE

## [1] CALOPTERYX AEQUABILIS Say

*Agrion aequabile* (12)

Northern: ESSEX (1,2); FRANKLIN (td,rc); HERKIMER (1,hw); ST LAWRENCE (2,hw)

Central: BROOME (td); CORTLAND (td); DELAWARE (td); MADISON (td); SULLIVAN (2); TIOGA (td); TOMPKINS (1)

Western: ONTARIO (rc); SCHUYLER (td)

Hudson: WESTCHESTER (ks)

Downstate: NEW YORK CITY: Bronx (1)

21 May - 14 Aug

Local on medium sized, clean streams and small rivers.

This species tends to perch conspicuously in open places.

## [2] CALOPTERYX ANGUSTIPENNIS (Selys)

Western: CATTARAUGUS: Allegany St Pk, a single female specimen, 13 July 1931 (db)

Hudson: ROCKLAND: Ramapo, "June" (yr?), E.G. Love (bms)

These records are the northeasternmost for this Appalachian species, which has also been recorded for Ohio and Indiana. The year for the Ramapo specimen is not given but Love was active in the early years of this century. The Cattaraugus Co. record is not completely satisfactory. The specimen might have been confused with *amata*; however, I believe that Borror was familiar with this species. The species is at the limit of its range in New York.

## [3] CALOPTERYX AMATA Hagen

*C. amatum* (1)

Northern: ESSEX (1); FRANKLIN (1,rc); HAMILTON (hw); ST LAWRENCE (2,4,fscs)

Central: CHENANGO: Smithville Flats (td); SULLIVAN (2), Roscoe (fscs)

2 June - 27 July

Local on small, clean streams, preferring to perch among the vegetation along the shore and on emergent vegetation in shallow water.

## [4] CALOPTERYX DIMIDIATA Burmeister

*C. dimidiatum* (1), *Agrion dimidiatum apicale* (12)

Hudson: WESTCHESTER (3)

Downstate: NEW YORK CITY (1)

June

The 1928 list also includes records from Monroe Co. (Rochester) and Franklin Co. Johnson (1973) rejected the record from Monroe Co. but did not comment on an equally doubtful Franklin Co. record. This is a coastal plain species which is probably restricted to Long Island and adjacent downstate counties.

## [5] CALOPTERYX MACULATA (Beauvois)

*C. maculatum* (1), *Agrion maculatum* (12)

Northern: CLINTON (1); ESSEX (1); FRANKLIN (1,rc); HAMILTON (hw,ny); HERKIMER (hw); ONEIDA (1,rc); ST LAWRENCE (hw,fscs)

Central: BROOME (td); CHENANGO (td); CORTLAND (td,rc); MADISON (1,td); ONONDAGA (td); OTSEGO (7); SENECA (rc); SULLIVAN (ks); TIOGA (td); TOMPKINS (1,fscs,usnm,td,rc)

Western: ALLEGANY (rc); CATTARAUGUS (td,db,bms); ERIE (1,bms); GENESEE (usnm,rc,bms); ONTARIO (rc);

ORLEANS (usnm); SCHUYLER (td,rc); WYOMING (1,bms); YATES (rc)

Hudson: COLUMBIA (fscs); ORANGE (ob,ks) (td); PUTNAM (ks); ROCKLAND (ks); SCHENECTADY (1); ULSTER (fh); WESTCHESTER (ks)

Downstate: NEW YORK CITY (1), Staten I (1); NASSAU (ob); LONG ISLAND (1)

5 May (emer.) 17 May - 12 Sept

Widely distributed on tiny streams to small rivers; prefers clean water.

## [6] HETAERINA AMERICANA (Fabricius)

Northern: ESSEX: Keesville (1)

Central: BROOME (11); TOMPKINS: Ithaca (1)

Western: CATTARAUGUS (db); ERIE: Hamburg (bms); NIAGARA (11)

Hudson: ALBANY: Albany (1), Slingerlands (1); ULSTER: Bloomington (fh)

1 Aug - 20 Sept

Local; infrequently seen in the state. This is a widely distributed stream and river species throughout the entire United States except for the Pacific northwest. The large number of records from New England and Ontario raises the question as to why there are relatively few records from New York. Mr. Fred Hough reports an apparently stable population on the Greenkill, near Bloomington. There is also a recent capture in Hamburg, Erie Co.

## LESTIDAE

## [7] LESTES CONGENER Hagen

Northern: ESSEX (td); FRANKLIN (1,18,usnm); HAMILTON (td,ny)

Central: BROOME (td); CORTLAND (td,kt); OTSEGO (7, as *L. dryas*); SENECA (rc); TOMPKINS (18,fscs,usnm,td,kt)

Western: ERIE (bms); SCHUYLER (kt); WAYNE (rc); WYOMING (1); YATES (rc)

Hudson: ORANGE (ks); ULSTER (fh); WESTCHESTER (ks,1)

Downstate: NEW YORK CITY: Staten I (1), Queens (1); SUFFOLK (1,usnm,ob)

14 June - Nov

Widely distributed and locally abundant around small ponds. This is the latest flying member of the genus in New York.

## [8] LESTES D. DISJUNCTUS Selys

*L. disjuncta* (13), ?*L. forcipatus* (18)

Northern: ESSEX (1,td); FRANKLIN (1,td); HAMILTON (hw,td); HERKIMER (ny); LEWIS (fscs,kt); ST LAWRENCE (1,td,rc)

Central: BROOME (td); CHENANGO (usnm,td,kt); OTSEGO (7); SULLIVAN (1); TIOGA (td); TOMPKINS (1,7,18,fscs,kt)

Western: CATTARAUGUS (db); MONROE (ny); SCHUYLER (usnm); WAYNE (ny)

Hudson: GREENE (18); ORANGE; ULSTER (fscs,fh); WESTCHESTER (ks)

Downstate: SUFFOLK (1)

1 July - 23 Sept

An abundant, widespread late season damselfly around small ponds. Some of the older records might be the less common *forcipatus*.

**LESTES DISJUNCTUS AUSTRALIS** Walker

Central: BROOME: SUNY Binghamton (td), Hawkins Pd, town of Windsor (td); CHENANGO: Jam Pd, town of German (td); TOMPKINS: Ithaca (usnm)  
 Western: YATES: Milo (rc)  
 Hudson: WESTCHESTER: Pound Ridge Res (td)  
 Downstate: SUFFOLK: Quogue Res (ob)  
 29 May - 14 July

The southern subspecies is sporadic in upstate New York. It is an early season damselfly whose flight season does not overlap that of the nominate subspecies. In some years (e.g., 1970, 1983) it has been taken at several localities around Binghamton, suggesting episodic irruptions. It is easily confused with *L. forcipatus* (q.v.), from which it can be distinguished by reference to Walker (1952).

**[9] LESTES DRYAS** Kirby

*L. uncatatus* (1), *L. uncatata* (14,18)

Northern: ESSEX(1); FRANKLIN (1,18); HAMILTON (ny); OSWEGO (fsca)  
 Central: BROOME (td); CORTLAND (usnm,td,rc); TIOGA (td); TOMPKINS (1,18,fsca)  
 Western: CATTARAUGUS (db); ERIE (1,bms); GENESEE (1,bms); ORLEANS (usnm); YATES (rc)  
 Hudson: ULSTER (fh); WESTCHESTER (1,ks)  
 10 June - 19 Aug  
 Local and infrequent, preferring bogs or small ponds.

**[10] LESTES EURINUS** Say

*L. eurina* (13,18)

Northern: FRANKLIN (18)  
 Central: BROOME (td); CHENANGO (fsca,td); CORTLAND (td); TIOGA (usnm)  
 Western: MONROE (1)  
 Hudson: ULSTER (fh); WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Bronx (1), Staten I (1); SUFFOLK (1,usnm)  
 28 May - 30 July  
 A local but widely distributed, early season species on small lakes.

**[11] LESTES FORCIPATUS** Rambur

*L. forcipata* (13,14)

Northern: HAMILTON (ny); LEWIS (fsca)  
 Central: BROOME (td); CORTLAND (td,usnm,kt); OTSEGO (7, as *L. d. australis*); TIOGA (td,kt); TOMPKINS (1,fsca,kt,ny)  
 Western: CATTARAUGUS (db); MONROE (1,ny); NIAGARA (fsca); SCHUYLER (rc)  
 Hudson: ULSTER (fh); WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1,rl,ob)  
 9 June - 13 Oct

Local around highly vegetated ponds. Some specimens with this name in the collection of the New York State Museum have been found to be the similar *L. d. disjunctus*. Older records should be re-evaluated in light of Walker's (1952) description of the very similar *L. disjunctus australis*. Walker noted that intergrades between *forcipatus* and *disjunctus* are found. Of two specimens of *forcipatus* from Ithaca taken together, one has the male superior appendage and the abdominal segments 2 and 3 intermediate between the two species.

Although the two subspecies of *disjunctus* are separated by their time of flight, *forcipatus* and *disjunctus australis* fly at much the same time, allowing opportunities for interbreeding.

**[12] LESTES INAEQUALIS** Walsh

Northern: HAMILTON (fsca)

Central: BROOME (fsca,td); CHENANGO (td); DELAWARE (td); OTSEGO (7); TIOGA (td); TOMPKINS (fsca,td,kt)  
 Western: MONROE (4,rc); SCHUYLER (fsca,td); STEUBEN (fsca,td,rc); WAYNE (4)  
 Hudson: ALBANY (fsca); WESTCHESTER (ks)  
 Downstate: NEW YORK CITY: Staten I (1,18); SUFFOLK (1,rl,td,ob)  
 24 May - 5 Aug  
 Common on small lakes.

**[13] LESTES RECTANGULARIS** Say

Northern: ESSEX (td); FRANKLIN (td); HAMILTON (hw); OSWEGO (fsca); ST LAWRENCE (td)  
 Central: BROOME (fsca,td); CHENANGO (td); CORTLAND (td,rc,kt); DELAWARE (fsca); MONTGOMERY (td); ONONDAGA (td); OTSEGO (7); SCHOHARIE (1); SENECA (rc); SULLIVAN (1); TIOGA (usnm,td,kt); TOMPKINS (1,fsca,usnm,rc,kt)  
 Western: ERIE (1,bms); MONROE (1); NIAGARA (fsca); ORLEANS (usnm); SCHUYLER (fsca,td,rc); STEUBEN (fsca); WAYNE (rc); WYOMING (bms); YATES (rc)  
 Hudson: GREENE (1); SARATOGA (1); ULSTER (fsca,fh); WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Queens (1,usnm), Staten I (1); NASSAU (ob); SUFFOLK (1,rl,usnm,td,ob)  
 14 June - 5 Oct  
 The most commonly encountered *Lestes* in the state, with a broad range of habitats and a long flight period.

**[14] LESTES UNGUICULATUS** Hagen

*L. unguiculata* (13)

Northern: ESSEX (1); FRANKLIN (1); HAMILTON (td); OSWEGO (fsca)  
 Central: BROOME (td); CORTLAND (rc,kt); OTSEGO (7); TOMPKINS (fsca,kt)  
 Western: CATTARAUGUS (db); ERIE (bms); MONROE (1); NIAGARA (fsca); ORLEANS (fsca)  
 Hudson: ULSTER (fh); WESTCHESTER (1)  
 Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1,rl)  
 19 June - Sept

This species is sporadic in its occurrences in the state. On the SUNY Binghamton campus it suddenly appeared in 1981, and was successively less common in subsequent years until its last recorded catch in 1986.

**[15] LESTES VIGILAX** Hagen

Northern: HAMILTON (hw,td); HERKIMER (1); OSWEGO (td)  
 Central: CHENANGO (td); OTSEGO (7); SULLIVAN (1); TOMPKINS (td)  
 Western: YATES (rc)  
 Hudson: ALBANY (usnm); GREENE (18); ORANGE (ob); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (ks)  
 Downstate: SUFFOLK (1,18,fsca,rl,usnm,td,ob)  
 29 May - 30 Aug

A southern species common on Long Island and locally distributed in the upstate area.

## COENAGRIONIDAE

### [16] AMPHIAGRION SAUCIUM (Burmeister)

Northern: ONEIDA (1)  
 Central: BROOME (td); DELAWARE (1,td); MADISON (fsca); SCHOHARIE (1); SENECA (rc); SULLIVAN (ks); TIOGA (td); TOMPKINS (1,fsca,usnm,td)  
 Western: ALLEGANY (rc); CATTARAUGUS (rc,bms); ERIE (1,bms); GENESEE (rc); MONROE (1)  
 Hudson: ALBANY (1); GREENE (ny); ORANGE (ks); PUTNAM (ks); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (13,ks)  
 Downstate: NEW YORK CITY: Staten I (1); NASSAU (ob); SUFFOLK (1,fsca,ri,usnm)  
 19 May - 1 Aug  
 Locally abundant around tiny, grassy seeps.

### [17] ANOMALAGRION HASTATUM (Say)

Northern: ESSEX: Keesville (1)  
 Central: TOMPKINS: Ithaca (1)  
 Hudson: WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1,ob); LONG ISLAND (1)  
 1 June - Nov  
 This southern species is scarce in upstate New York. It prefers grassy margins of lakes and ponds.

### [18] ARGIA APICALIS (Say)

Central: BROOME: Binghamton (td), Kirkwood (td)  
 Hudson: ULSTER (fh); WESTCHESTER (ks)  
 Downstate: NEW YORK CITY: Staten I (1)  
 18 June - Aug  
 A southern species found on the banks of large rivers, generally away from vegetation.

### [19] ARGIA BIPUNCTULATA (Hagen)

"NY" (1)  
 Another southern species which is found north to New Jersey. The species prefers grassy seeps and small creeks. There is no information on the New York record, which is attributed to Nathan Banks.

### [20] ARGIA FUMIPENNIS VIOLACEA (Burmeister)

*A. violacea* (1,12,13)  
 Northern: ESSEX (1); FRANKLIN (1,18,td); HAMILTON (hw,td,ny); HERKIMER (1); ST LAWRENCE (1); WARREN (1,bms)  
 Central: BROOME (td); CORTLAND (fsca); MADISON (usnm); ONONDAGA (usnm,td); OTSEGO (7); SENECA (rc); SULLIVAN (1); TOMPKINS (1,fsca,td,kt,bms)  
 Western: CATTARAUGUS (db); CHAUTAUQUA (db); ERIE (1); ORLEANS (usnm); WAYNE (usnm)  
 Hudson: GREENE (18); ORANGE (td,ks,ab); PUTNAM (fsca,ks); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Queens (1), Staten I (1); NASSAU (ob); SUFFOLK (1,fsca,ri,usnm,ob)  
 28 May - 11 Sept  
 A very widespread damselfly on slow, vegetated streams.

### [21] ARGIA MOESTA (Hagen)

### *A. putrida* (13,18)

Northern: ESSEX (1,fsca); FRANKLIN (1,18); HAMILTON (hw,fsca); ST LAWRENCE (hw,fsca)  
 Central: BROOME (usnm,td); CORTLAND (kt); DELAWARE (td); OTSEGO (7); SCHOHARIE (1); SULLIVAN (td); TIOGA (td); TOMPKINS (1,18,fsca,usnm,td,bms)  
 Western: CATTARAUGUS (db); ERIE (1); MONROE (1); NIAGARA (1); ONTARIO (rc); WYOMING (bms); YATES (rc)  
 Hudson: GREENE (ny); ORANGE (ks); ULSTER (fh); WESTCHESTER (ks)  
 6 June - 24 Aug  
 Widely distributed; generally found along large rivers or lakes. This species is moderately tolerant of pollution.

### [22] ARGIA TIBIALIS (Rambur)

Hudson: ORANGE: Pine I (1,ks)  
 June 27  
 A southern species, generally found on small, shaded streams.

### [23] ARGIA TRANSLATA Hagen

Central: BROOME: Kirkwood (td); SULLIVAN: White Lk (1)  
 Hudson: WESTCHESTER: Lk Oscaleta (ks)  
 1 July - 11 Sept  
 A southern species which prefers large rivers.

### [24] CHROMAGRION CONDITUM (Hagen)

*Erythromma conditum* (13)  
 Northern: ESSEX (1); FRANKLIN (1,18); HAMILTON (hw,ny); ONEIDA (rg); ST LAWRENCE (hw,td)  
 Central: BROOME (rg,td); CHENANGO (td); CORTLAND (td); SULLIVAN (ks); TIOGA (td); TOMPKINS (1,18,usnm,td)  
 Western: ALLEGANY (rc); CATTARAUGUS (rc,bms); ERIE (1); SCHUYLER (rc); WYOMING (1)  
 Hudson: GREENE (ny); ORANGE (td,ks); PUTNAM (ks); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (ks)  
 Downstate: NASSAU (ob)  
 15 May - 16 Aug  
 Widely distributed in the upstate area, especially in wooded swamps.

### [25] COENAGRION RESOLUTUM (Hagen)

Northern: ESSEX (ny); HAMILTON (fsca); ONEIDA (usnm)  
 Central: BROOME (td)  
 Western: STEUBEN (rc); SCHUYLER (1)  
 Hudson: GREENE (ny)  
 26 May - 9 July  
 A northern species sporadic in New York. The species prefers vegetated margins of ponds.

### [26] ENALLAGMA ANTENNATUM (Say)

*E. fischeri* (14)  
 Northern: ESSEX (1); ST LAWRENCE (1)  
 Central: BROOME (td); SENECA (rc); TOMPKINS (1,cu,td)  
 Western: CATTARAUGUS (db); ONTARIO (rc); ORLEANS (cu,usnm); SCHUYLER (rc); WAYNE (4)  
 11 June - 25 July

An uncommon species that prefers relatively open habitats. In New York it is often found in modified habitats where the diversity of Zygoptera is low.

[27] *ENALLAGMA ASPERSUM* (Hagen)

Northern: HAMILTON (fsca)  
 Central: BROOME (td); CORTLAND (usmm,td,rc); SULLIVAN (1)  
 Western: ERIE (bms); NIAGARA (1); SCHUYLER (rc)  
 Hudson: ULSTER (fh); ROCKLAND (ks); WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Staten I (1); NASSAU (ob); SUFFOLK (1,td,ob)  
 10 June - 13 Sept  
 A local species which prefers bog and other small ponds. This species flies late in the season.

[28] *ENALLAGMA BASIDENS* Calvert

Central: CORTLAND: Gracie, 8 July 1989, (td); SENECA: Willard Wildlife Management Area, 8 June 1991 (rc)  
 Until recently this species occurred no further north than central Pennsylvania. It has recently been taken in southernmost Ontario, along Lake Erie. It is an opportunist species which invades disturbed habitats, such as quarry or other artificial ponds, and it has been documented (Montgomery, 1966; Cannings, 1989) as having spread northward from the southernmost United States during this century. Its Cortland Co. occurrence in a boggy kettle hole pond at an elevation of 1200 feet is remarkable. The Seneca Co. locality is more typical.

[29] *ENALLAGMA BOREALE* Selys

*E. calverti* (1)  
 Northern: ESSEX (ny); HAMILTON (ny); ONEIDA (usmm)  
 Central: BROOME (td); CHENANGO (td); OTSEGO (7); TIOGA (td); TOMPKINS (1)  
 25 May - 10 July  
 An early season pond species that is often conspicuous in marginal or modified habitats.

[30] *ENALLAGMA CARUNCULATUM* Morse

Northern: ESSEX (1); FRANKLIN (td); HAMILTON (1); ONEIDA (hw); ST LAWRENCE (1); WARREN (1)  
 Central: BROOME (td); CORTLAND (fsca,kt); OTSEGO (7); TIOGA (td); TOMPKINS (fsca,usmm)  
 Western: CATTARAUGUS (db); ERIE (1); NIAGARA (1); SCHUYLER (kt); WAYNE (kt)  
 Hudson: ALBANY (ks); SARATOGA (1); ULSTER (fh); WESTCHESTER (1,ks)  
 late June - 28 Sept  
 A local upstate species which prefers streams and open ponds.

[31] *ENALLAGMA CIVILE* (Hagen)

Central: BROOME (td); CORTLAND (td,kt); SENECA (rc); TOMPKINS (usmm,td,kt)  
 Western: ERIE (bms); MONROE (1); ONTARIO (rc); SCHUYLER (kt); WAYNE (rc)  
 Hudson: ALBANY (ks); COLUMBIA (ks); DUTCHESS (ks); ROCKLAND (ks,ab); SARATOGA (ks); ULSTER (fh); WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Queens (1,ob), Staten I (1); NASSAU (ob); SUFFOLK (1,rl,usmm,ob)  
 17 June - 6 Oct

This species prefers oligotrophic or modified ponds, and it is especially conspicuous late in the summer. Ken Soltesz reports that it is found in salt marshes with salinity about 2/3 that of sea water.

[32] *ENALLAGMA C. CYATHIGERUM* (Charpentier)

*E. cyathigerum* var. *annexum* (15)  
 Northern: ESSEX (1); FRANKLIN (1,rc); HAMILTON (hw,fsca) (ny); ONEIDA (usmm)  
 Central: BROOME (td); CHENANGO (fsca,td); CORTLAND (td); TOMPKINS (1)  
 Hudson: ORANGE (1); ULSTER (fh)  
 Downstate: SUFFOLK (usmm,ob)  
 25 May - Aug  
 An infrequent early season damselfly at bogs or small, highly vegetated ponds. Older records should be re-examined to see if some specimens are the following subspecies. In New York this subspecies is morphologically highly variable, suggesting that mixing with the following subspecies occurs regularly.

*ENALLAGMA CYATHIGERUM VERNALE*

Gloyd

Central: BROOME: Marsh Pd, town of Sanford (td); CORTLAND: Tioughnioga R at Preble (td); MADISON: Sangerfield R at Hubbardsville (td)  
 6 - 26 June  
 This damselfly was originally described from Michigan as *E. vernale*, and is now found to be a widespread form around the Great Lakes. It is considered by me to be a subspecies of *E. cyathigerum* (Donnelly, 1989). In our area it is morphologically stable, but some specimens of the nominate subspecies are similar. In central New York it prefers small, slow rivers, in contrast to the habitats of the nominate subspecies.

[33] *ENALLAGMA DIVAGANS* Selys

Central: TOMPKINS: Ithaca (1)  
 Western: MONROE: Rochester (1)  
 Hudson: ROCKLAND (ks); ORANGE (ks,td,ab); PUTNAM (ks), WESTCHESTER (ks)  
 Downstate: LONG ISLAND (1)  
 30 May - 4 Aug  
 A southern species which is rare in upstate New York.

[34] *ENALLAGMA DOUBLEDAYI* (Selys)

Central: TOMPKINS: Ithaca (1)  
 Downstate: SUFFOLK (1,rl,td,ob)  
 19 June - Aug  
 A southern species found which is very common in Long Island ponds.

[35] *ENALLAGMA DURUM* (Hagen)

Hudson: ALBANY (ks); COLUMBIA (ks); DUTCHESS (ks); ROCKLAND (1,ks,ab); WESTCHESTER (ks)  
 Downstate: SUFFOLK (1), Montauk Pt (ob)  
 June - 15 Sept  
 A southern species associated with slightly saline, estuarine rivers. In 1991 this species was found to be abundant in many places along the Hudson River shoreline.

[36] *ENALLAGMA EBRIUM* (Hagen)

Northern: ESSEX (1,td); FRANKLIN (rc); HAMILTON (hw,fsca,ny); OSWEGO (td); ST LAWRENCE (1,fsca,td); WARREN (1)

Central: BROOME (9,td); CHENANGO (td,kt); CORTLAND (rc); DELAWARE (td); MADISON (fsca); OTSEGO (7); SCHOHARIE (1); SENECA (rc); SULLIVAN (1); TIOGA (td,kt); TOMPKINS (1,18,fsca,td,rc)

Western: ALLEGANY (rc); CATTARAUGUS (db); ERIE (bms); NIAGARA (fsca); ONTARIO (rc); SCHUYLER (td,rc); STEUBEN (td); WYOMING (bms); YATES (rc)

Hudson: GREENE (1); ULSTER (1,fb)

26 May - 11 Sept

One of the most frequently collected upstate damselflies around highly vegetated, open ponds.

[37] *ENALLAGMA EXSULANS* (Hagen)

Northern: ESSEX (1); FRANKLIN (1,18); HAMILTON (hw); HERKIMER (1); ST LAWRENCE (hw)

Central: BROOME (td); CHENANGO (td); CORTLAND (kt); DELAWARE (td); MADISON (usnm); OTSEGO (7); SENECA (rc); SULLIVAN (td,ob); TOMPKINS (1,18,fsca,td,kt,bms)

Western: CATTARAUGUS (db); ERIE (1,bms); GENESEE (bms); MONROE (1); ORLEANS (fsca,usnm)

Hudson: GREENE (18); ORANGE (1); PUTNAM (ks); SARATOGA (1); ULSTER (fb); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Bronx (1)

3 June - 1 Sept

This species is often abundant along the banks of medium to large, slow rivers.

[38] *ENALLAGMA GEMINATUM* Kellicott

*E. piscinarium* (1,18); *E. geminata* (14)

Northern: ESSEX (1); OSWEGO (1,usnm)

Central: BROOME (fsca,td); CHENANGO (td); OTSEGO (7); SENECA (rc); SULLIVAN (1); TIOGA (td); TOMPKINS (1,18,td,rc,kt)

Western: CATTARAUGUS (rc); CHAUTAUQUA (db); ERIE (bms); MONROE (rc); ONTARIO (rc); SCHUYLER (td,rc)

Hudson: ALBANY (usnm); GREENE (18); PUTNAM (ks); ROCKLAND (ks); WESTCHESTER (ks)

Downstate: NEW YORK CITY: Queens (1), Staten I (1); SUFFOLK (1,r,usnm,td,ob)

28 May - 5 Oct

A widespread and often common species which prefers vegetated ponds. Variations in coloration caused earlier workers to identify some specimens as the synonymous *E. piscinarium*, which is listed in (1) as a separate species.

[39] *ENALLAGMA HAGENI* Walsh

Northern: ESSEX (1); FRANKLIN (1,td,rc); HAMILTON (1,hw,fsca,ny); ONEIDA (usnm); ST LAWRENCE (hw,fsca,td)

Central: BROOME (td); CHENANGO (fsca,td,kt); CORTLAND (td); DELAWARE (td); ONONDAGA (dp); OTSEGO (7); SENECA (rc); SULLIVAN (1); TIOGA (td); TOMPKINS (1,18,fsca,td,rc)

Western: ALLEGANY (rc); CATTARAUGUS (db); ERIE (1); MONROE (rc); SCHUYLER (rc); STEUBEN (rc); WAYNE (1); WYOMING (1); YATES (rc)

Hudson: GREENE (ny); PUTNAM (ks); RENSSLAER (1); ROCKLAND (ks); ULSTER (fb); WESTCHESTER (ks)

4 June - 5 Sept

Only slightly less common in the upstate area than *E. ebrium*, with which it flies.

[40] *ENALLAGMA LATERALE* Morse

Hudson: WESTCHESTER: Lk Oscaleta (ks)

Downstate: SUFFOLK: Riverhead (rl), Crooked Pd (td,ob)

27 May - 22 June

An uncommon coastal plain lake species which has also been taken in the uplands of Westchester Co. This species has been found locally in the Appalachians of Pennsylvania.

[41] *ENALLAGMA MINUSCULUM* Morse

Downstate: SUFFOLK: Wading R, 26 June 1917 (1), Long Pd (1)

A rare coastal plain species not taken in recent years.

[42] *ENALLAGMA PICTUM* Morse

Downstate: SUFFOLK (1,r,ob)

17 June - 27 July

A bright red coastal plain species found on small ponds in sandy soil.

[43] *ENALLAGMA RECURVATUM* Davis

Downstate: SUFFOLK: Wyandanch (1), Riverhead (rl), Calverton (rl), Cold Spring Harbor (usnm), Sandy Pd, Peconic R (ob), Crooked Pd (td,ob)

4 May - 6 July

A locally distributed coastal plain pond species. The type locality is Wyandanch (12).

[44] *ENALLAGMA SIGNATUM* (Hagen)

Northern: ST LAWRENCE (hw)

Central: BROOME (td); CHENANGO (td); CORTLAND (td,kt); OTSEGO (7); SULLIVAN (1); TIOGA (td); TOMPKINS (1,18)

Western: ERIE (1,bms); GENESEE (bms); MONROE (1,rc); ONTARIO (rc); ORLEANS (usnm); SCHUYLER (rc); WYOMING (bms); YATES (rc)

Hudson: COLUMBIA (usnm); GREENE (18); ORANGE (td); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Queens (1), Staten I (1), SUFFOLK (1,r,usnm,ob)

24 May - 10 Sept

Widely distributed on ponds. This species tends to fly late in the afternoon.

[45] *ENALLAGMA T. TRAVIATUM* Selys

Hudson: ORANGE: Little Cedar Pd nr Lakeville (td); WESTCHESTER: Lk Oscaleta (ks)

Downstate: SUFFOLK (1), Cold Spring Harbor (usnm)

23 June - 21 Aug

In the east the nominate subspecies is most often found on the coastal plain, but it has been taken several times in the Appalachians of Pennsylvania. The western subspecies *E. t. westfalli* is found in western Pennsylvania and should be sought in western New York.

[46] *ENALLAGMA VESPERUM* Calvert

*E. pollutum* (18)

Northern: FRANKLIN (td); HAMILTON (hw)

Central: OTSEGO (7); SULLIVAN (1)

Hudson: WESTCHESTER Lk Oscaleta (ks)

Downstate: SUFFOLK (1,r)

29 May - Sept

This pond species is somewhat local. It flies mainly in the early morning and again very late in the afternoon.

[47] *ISCHNURA KELLICOTTI* Williamson

Hudson: WESTCHESTER: Lk Oscaleta (ks)  
 Downstate: SUFFOLK: Greenport (rl), North Sea (rl),  
 Sandy Pd, Peconic R (ob)  
 25 May - 19 July  
 A southern species which inhabits small ponds with floating  
 vegetation.

[48] *ISCHNURA POSITA* (Hagen)

Northern: ST LAWRENCE (rc)  
 Central: BROOME (td); CHENANGO (td); CORTLAND  
 (td,rc,kt); MADISON (td); MONTGOMERY (td);  
 ONONDAGA (td); SENECA (rc); TIOGA (td); SENECA (rc);  
 TOMPKINS (1,18,fscs,usnm,td,rc)  
 Western: CATTARAUGUS (db); GENESEE (bms);  
 MONROE (1,rc); ONTARIO (rc); ORLEANS (usnm);  
 SCHUYLER (rc); WAYNE (usnm,rc); WYOMING (bms);  
 YATES (rc)  
 Hudson: DUTCHESS (ks); ORANGE (td,ks); PUTNAM  
 (ks); ROCKLAND (ks); ULSTER (fscs,fh); WESTCHESTER  
 (ks)

Downstate: NEW YORK CITY: Manhattan (1), Staten I (1);  
 SUFFOLK (1,rl,ob)  
 25 Apr - 20 Sept

This species is generally very common in grassy shores of  
 ponds and lakes, but it is inconspicuous and often overlooked. It  
 occurs over most of the eastern United States north to Quebec  
 and Nova Scotia, but it has been taken only once in the  
 Adirondacks.

[49] *ISCHNURA PROGNOTATA* (Hagen)

Hudson: WESTCHESTER: Pound Ridge Res., 16 June  
 1990, John Michalkski  
 This southern species was previously known as far north as  
 southeastern Pennsylvania.

[50] *ISCHNURA RAMBURII* Selys

Downstate: NEW YORK CITY (1), Staten I (1); SUFFOLK  
 (1,rl)  
 9 July - Oct

This coastal plain species is very widespread in tropical  
 America but barely reaches New York.

[51] *ISCHNURA VERTICALIS* (Say)

Northern: CLINTON (1); ESSEX (1,usnm); FRANKLIN  
 (1,td); HAMILTON (hw,fscs,ny); HERKIMER (1,hw);  
 ONEIDA (rc); OSWEGO (td); ST LAWRENCE (1,hw)  
 Central: BROOME (td); CHENANGO (td); CORTLAND  
 (td,rc,kt); DELAWARE (1,td); MADISON (fscs,usnm,td);  
 MONTGOMERY (td); ONONDAGA (dp,td); OTSEGO (7);  
 SENECA (usnm,rc); SULLIVAN (1,fscs); TIOGA (td);  
 TOMPKINS (1,fscs,usnm,td,rc,kt)  
 Western: ALLEGANY (rc); CATTARAUGUS (rc,db);  
 CHAUTAUQUA (db,bms); ERIE (1,fscs,bms); GENESEE (rc);  
 MONROE (rc); NIAGARA (1,fscs); ONTARIO (rc);  
 ORLEANS (usnm); SCHUYLER (td,rc); STEUBEN (td);  
 WAYNE (usnm,rc); WYOMING (1,bms); YATES (rc)  
 Hudson: ALBANY (usnm,ny); DUTCHESS (usnm);  
 GREENE (18,fscs); ORANGE (td,ks); PUTNAM (ks);  
 ROCKLAND (ks); SARATOGA (1); ULSTER (1,fscs,fh);  
 WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Manhattan (1), Staten I (1);  
 SUFFOLK (1,rl,usnm,ob)  
 1 May - 6 Oct

Probably the most widespread odonate in New York. It flies  
 at virtually all ponds, lakes, and bogs, and can be found  
 throughout the season.

[52] *NEHALLENIA GRACILIS* Morse

Northern: FRANKLIN (1,18,rc); HAMILTON (hw)  
 Central: BROOME (td); CHENANGO (td); TOMPKINS  
 (usnm)  
 Western: CATTARAUGUS (db)  
 Hudson: ORANGE (fc); WESTCHESTER (ks)  
 Downstate: SUFFOLK (1,fscs,rl,usnm,ob)  
 2 June - 22 Aug  
 An uncommon damselfly found in bogs.

[53] *NEHALLENIA INTEGRICOLLIS* Calvert

Downstate: SUFFOLK: Greenport (rl), Cutchogue (rl),  
 Mattituck (rl), Sag Harbor (rl)  
 27 June - 27 July  
 A southern coastal plain species which has been taken only  
 by Roy Latham in New York.

[54] *NEHALLENIA IRENE* (Hagen)

*N. carlota* (1)  
 Northern: ESSEX (1,ny); FRANKLIN (1,usnm);  
 HAMILTON (hw,fscs,td,ny); HERKIMER (1); ONEIDA (rc)  
 Central: BROOME (fscs,td); CHENANGO (td);  
 CORTLAND (usnm,td,rc); MADISON (fscs); OTSEGO (7);  
 SENECA (rc); SULLIVAN (ks); TIOGA (td); TOMPKINS  
 (1,fscs,rc)  
 Western: ALLEGANY (rc); CATTARAUGUS (db); ERIE  
 (bms); MONROE (1); SCHUYLER (rc); STEUBEN (rc);  
 YATES (rc)  
 Hudson: DUTCHESS (ks); GREENE (ny); ROCKLAND  
 (1,ks); ULSTER (fscs); WESTCHESTER (1,ks)  
 Downstate: NEW YORK CITY: Brooklyn (1), Staten I (1);  
 SUFFOLK (1,ob)  
 29 May - 16 Aug  
 A very common damselfly around grassy margins of ponds  
 and small lakes.

AESHNIDAE

[55] *AESHNA CANADENSIS* Walker

Northern: ESSEX (cu); FRANKLIN (1); HAMILTON  
 (hw,td,ny); JEFFERSON (cu); ONEIDA (rc)  
 Central: BROOME (td); CHENANGO (td,kt); CORTLAND  
 (td); OTSEGO (7); TIOGA (td); TOMPKINS (1,fscs,usnm,kt)  
 Western: CATTARAUGUS (db); ERIE (bms);  
 SCHUYLER (fscs,cu,usnm,rc); STEUBEN (fscs,cu,rc)  
 Hudson: ORANGE (ks); ULSTER (fh); WESTCHESTER  
 (ks)  
 Downstate: NEW YORK CITY: Staten I (1)  
 14 June - 10 Oct  
 The most widespread member of the genus in New York.  
 This species prefers medium to large ponds and lakes with a  
 grassy shoreline.

[56] *AESHNA CLEPSYDRA* Say

Northern: FRANKLIN (1); ST LAWRENCE (1)  
 Central: BROOME (td); SCHOHARIE (1); TOMPKINS (1)  
 Western: SCHUYLER (fscs); STEUBEN (fscs)  
 Hudson: ALBANY (1); ORANGE (1)  
 Downstate: SUFFOLK (1)  
 June - 22 Sept

This is mainly a New England species, which occurs locally throughout most of New York. In Broome Co. it inhabits an island of floating vegetation in the middle of a lake.

[57] *AESHNA CONSTRICTA* Say

Northern: ESSEX (1); FRANKLIN (1); JEFFERSON (fsca); OSWEGO (td); ST LAWRENCE (td)

Central: BROOME (td); CAYUGA (1); CHENANGO (td); OTSEGO (td); SCHOHARIE (1); SENECA (rc); TIOGA (1); TOMPKINS (1, cu, usnm, rc, kt)

Western: ERIE (1, db); NIAGARA (1); SCHUYLER (fsca, usnm, td, rc); STEUBEN (fsca); WAYNE (rc)

Hudson: ALBANY (ny); ULSTER (fsca, fh); WESTCHESTER (1, ks)

Downstate: NEW YORK CITY (1), Brooklyn (1), Staten I (1)

June - 5 Oct

This species is fairly common close to the Great Lakes. Periodically it occurs, sometimes in numbers, in Broome and nearby counties.

[58] *AESHNA EREMITA* Scudder

Northern: ESSEX (1, fsca, cu); FRANKLIN (1, td); HAMILTON (hw, td, rc); ST LAWRENCE (rc)

31 July - 22 Sept

This species is confined in New York to the high country of the Adirondacks.

[59] *AESHNA INTERRUPTA* Walker

Northern: ESSEX (cu, usnm, td); FULTON (cu, usnm); FRANKLIN (1); HAMILTON (hw, td); HERKIMER (hw)

Central: BROOME (td); CHENANGO (td, kt); TIOGA (kt)

Hudson: ALBANY (cu); ULSTER (fh)

16 Aug - 18 Sept

This is a northern species with sporadic occurrences, sometimes in considerable numbers, south and west of the Adirondacks. In some years it is common at Binghamton.

[60] *AESHNA MUTATA* Hagen

Central: TIOGA: Owego (td), Apalachin (td)

Western: STEUBEN, SCHUYLER: Cinnamon Lk (cu, td)

Hudson: ULSTER: Krumville (fsca), Kripplebush (fh)

11 June - 9 July

This species flies in the early summer on large ponds. It is usually associated with spatterdock (*Nuphar*), in the stems of which the females oviposit.

[61] *AESHNA SUBARCTICA* Walker

Central: CHENANGO: Jam Pd, town of German 23 Aug 1973 (kk), 26 Aug 1979 (td).

A specimen from "New York" is in the G.H. Beatty III collection (Beatty and Beatty, 1968); unfortunately, the exact locality is unknown. This is a European and Canadian species; in the U.S. it is known elsewhere only from northern Michigan and Mt Desert I, Maine. The species inhabits sphagnum bogs.

[62] *AESHNA TUBERCULIFERA* Walker

*A. tuberculata* lap. cal. (1)

Central: BROOME (td); CHENANGO (kt); CORTLAND (td); ONONDAGA (td); OTSEGO (7); TOMPKINS (fsca, kt)

Western: SCHUYLER (fsca, rc); STEUBEN (fsca); WYOMING (1)

Hudson: ALBANY (cu); ORANGE (ks); ROCKLAND (ab); ULSTER (fh); WESTCHESTER (ks)

19 July - 10 Oct

This species flies with *A. canadensis*, but is generally far less common.

[63] *AESHNA U. UMBROSA* Walker

*A. constricta* (17, 18)

Northern: ESSEX (usnm, td); FRANKLIN (1, usnm, td); HAMILTON (hw, usnm, td, ny, rc); ONEIDA (1); ST LAWRENCE (fsca, rc)

Central: BROOME (td); CHENANGO (kt); CORTLAND (fsca, td); OTSEGO (7); SENECA (rc); TIOGA (kt); TOMPKINS (1, fsca, td, kt)

Western: CATTARAUGUS (db); ERIE (bms); GENESEE (rc); ONTARIO (1); SCHUYLER (fsca, usnm, td, rc); STEUBEN (fsca, rc); WAYNE (1)

Hudson: ALBANY (1, ny); GREENE (1, fsca); ORANGE (1); ULSTER (1, fh); WESTCHESTER (1, ks)

NEW YORK CITY (1), Queens (1), Staten I (1); SUFFOLK (1)

22 June - 17 Oct

This species flies in shaded places around small lakes, or around pools in the woods. There are many records of specimens which were found inside buildings which they evidently entered after dark.

[64] *AESHNA VERTICALIS* Hagen

*A. juncea* var. *verticalis* (13)

Northern: CLINTON (1)

Central: BROOME (td); SENECA (usnm, rc); TIOGA (1); TOMPKINS (fsca)

Western: SCHUYLER (kt); STEUBEN (rc)

ORANGE (ks); ULSTER (fh); WESTCHESTER (ks)

NEW YORK CITY: Staten I (1), Brooklyn (1); SUFFOLK (1)

June - Oct

A species of swampy ponds.

[65] *ANAX JUNIUS* (Drury)

Northern: ESSEX (1, usnm); FRANKLIN (1, 17); HAMILTON (hw, rc); HERKIMER (1); JEFFERSON (ny); ONEIDA (rc)

Central: BROOME (td); CHENANGO (td); CORTLAND (td, rc); DELAWARE (td); MADISON (td); OTSEGO (7); SCHOHARIE (1); SENECA (rc); SULLIVAN (1, ks); TIOGA (td); TOMPKINS (1, fsca, usnm, td)

Western: ALLEGANY (rc); CATTARAUGUS (rc, db); ERIE (1, bms); MONROE (rc); NIAGARA (1); ONTARIO (rc); SCHUYLER (1, td, rc); STEUBEN (1, td, rc); YATES (rc)

Hudson: ALBANY (1, ny); GREENE (1); ORANGE (ks, td); PUTNAM (ks); ROCKLAND (ks); ULSTER (1, fsca, fh); WESTCHESTER (1, ks)

Downstate: NEW YORK CITY: Manhattan (10), Staten I (1); LONG ISLAND (1); SUFFOLK (ri, ob)

16 Mar - Dec

This large dragonfly (called "green darter"), is the most commonly seen odonate in the state, and, indeed, in most of North America. It is ubiquitous on almost every pond and lake, and is frequently seen on rivers. In the spring it is commonly the earliest occurring species, and it may also be one of the latest. Very likely many of the April specimens seen in upstate New York emerged in southern states and drifted north on southerly winds. In October I have seen swarms flying over the ocean off Long Island well beyond the sight of land.



## [66] ANAX LONGIPES Hagen

Central: BROOME: SUNY Binghamton, seen 15 June 1974 (td); CHENANGO: Jam Pd, town of German, seen 14 Aug 1982 (td); TOMPKINS: Dryden Lk, seen 5 July 1976 (td)

Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1,td,ob)

June - 14 Aug

This very large, red-bodied dragonfly is one of the few odonates whose sight identification can be reliably made at a considerable distance. Davis discussed its occurrence on Long Island in (15). The species episodically wanders far from the coast. Established colonies of this species in the Appalachians have existed for decades, and similar colonies should be sought in New York.

## [67] BASIAESCHNA JANATA (Say)

Northern: ESSEX (1); FRANKLIN (1,rc); HAMILTON (hw,fscs,ny); ST LAWRENCE (hw,fscs); WARREN (1)

Central: BROOME (td); CORTLAND (td); DELAWARE (td); MADISON (td); OTSEGO (7); SENECA (rc); SULLIVAN (td,ks); TIOGA (fscs,usnm,td); TOMPKINS (1,17,usnm)

Western: CATTARAUGUS (rc); SCHUYLER (td,rc)

Hudson: ALBANY (ny); ORANGE (1,ks); PUTNAM (1,ks); ROCKLAND (1); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1)

5 May - 9 July

A common, early season dragonfly on rivers. It is somewhat less common on large ponds and lakes, preferring those with less vegetation along the shore.

## [68] BOYERIA GRAFIANA Williamson

Northern: ESSEX: Wilmington (cu), Heart Lk (cu); HAMILTON: Rock R (hw), 6 mi NW Speculator (td); HERKIMER: Old Forge (1); ST LAWRENCE: Little R, Oswegatchie (4), Wanakena (td)

Hudson: ALBANY: Rensselaerville (cu); GREENE: East Jewett (1); ORANGE: Ft. Montgomery (1); ULSTER: Napanoch (cu), Van Noy Kill Pd (cu)

18 Aug - 8 Oct

This is an uncommon late season dragonfly on larger streams and rivers.

## [69] BOYERIA VINOSA (Say)

(*Fonscolombia vinosa* (13))

Northern: CLINTON (rg); ESSEX (1,cu,td); FRANKLIN (17); HAMILTON (1,hw,fscs,td,bms); HERKIMER (1); OSWEGO (1); ST LAWRENCE (1,fscs)

Central: BROOME (td); CHENANGO (td); OTSEGO (7); SCHOHARIE (1); TOMPKINS (1,cu,kt)

Western: CATTARAUGUS (db); ERIE (1); SCHUYLER (td)

ALBANY (cu); GREENE (cu); RENSSELAER (ny); ROCKLAND (bms); WESTCHESTER (ks,ab)

Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1)  
June - 23 Oct

A common species on larger rivers are around lakes with relatively unvegetated shorelines. This species tends to fly well into the dusk.

## [70] EPIAESCHNA HEROS (Fabricius)

Northern: LEWIS (1); ONEIDA (rc)

Central: BROOME (td); CAYUGA (cu); SENECA (rc); TOMPKINS (1,cu)

Western: CATTARAUGUS (db); ERIE (1,bms); GENESEE (1); MONROE (1); SCHUYLER (rc)

Hudson: ALBANY (1); COLUMBIA (1); WASHINGTON (1); ORANGE (1); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1,bms), Queens (1), Staten I (1); SUFFOLK (1,cu,usnm,td)

21 May - 19 Aug

A large southern species which is fairly common downstate but in the upstate occurs most frequently around the Great Lakes. It commonly flies a long distance from water.

## [71] GOMPHAESCHNA FURCILLATA (Say)

Northern: HERKIMER (hw)

Central: BROOME (G. Dyer); CHENANGO (S. Dunkle); TOMPKINS (1)

Western: ERIE (bms); GENESEE (rc); MONROE (1); SCHUYLER (rc)

Hudson: ORANGE (1,ks); ROCKLAND (1,ks); WASHINGTON (cu); ULSTER (fh); WESTCHESTER (cu,ks)

Downstate: SUFFOLK (1)

(Ilex Pd, ?county, 1)

21 May - 2 July

An local early season species which prefers wooded swamps.

## [72] NASIAESCHNA PENTACANTHA (Rambur)

*Aeschna pentacantha* (14)

Central: ONONDAGA: Baldwinsville (1,17), Clark Res., (cu)

Hudson: ORANGE: Little Cedar Pd nr Lakeville (td,fc), Harriman St Pk (ab); PUTNAM: Patterson (ks); WESTCHESTER: Pound Ridge Res (ks), Lk Oscaleta (ks)

Downstate: SUFFOLK: Manorville, (seen,td)

16 June - 25 July

A southern species which is frequent in coastal counties but rare in upstate New York.

## PETALURIDAE

## [73] TACHOPTERYX THOREYI (Hagen)

Northern: LEWIS: Houseville (fc, seen 1990)

Central: TOMPKINS: Coy Glen, Ithaca (1,cu), McLean (1)

Western: LIVINGSTON: Portage (1); SCHUYLER: Watkins Glen (hw, seen 1966)

Hudson: ORANGE: West Point (1), Ft Montgomery (1); ROCKLAND: Ramapo (1), Doodletown Lake Res, 1990 and 1991 (tw,ks)

7 June - 15 July

This southern species is quite local north of Washington D.C. It inhabits wooded swamps and is notably tame. The type locality is "environs of New York."

## GOMPHIDAE

## [74] ARIGOMPHUS FURCIFER (Hagen)

*Gomphus furcifer* (1), *Gomphus cornutus* (1)

Central: BROOME (td); CAYUGA (fscs,cu); CHENANGO (td); CORTLAND (td,rc); OTSEGO (7); SENECA (rc); TIOGA (td); TOMPKINS (1, in part as *Gomphus cornutus*) (fscs,cu,usnm,td)

Western: SCHUYLER (td,rc); STEUBEN (td)

ALBANY (fscu,cu); DUTCHESS (ks); ORANGE (ks); WESTCHESTER (ks)

19 May - 30 July

New York state seems to be the center of abundance of this species. The species flies with the next on ponds, but it prefers highly vegetated margins, and has a special fondness for low bushes along the shore. It often perches on *Lemna* floating on a pond surface.

[75] **ARIGOMPHUS VILLOSIPES** (Selys)

*Gomphus villosipes* (1,12,13)

Northern: OSWEGO (cu)

Central: BROOME (td); CORTLAND (td); MADISON (td); OTSEGO (7); SENECA (rc); SULLIVAN (ks); TIOGA (fscu,td); TOMPKINS (1,17,fscu,cu,usnm,td)

Western: ALLEGANY (rc); CATTARAUGUS (db); ERIE (1); SCHUYLER (rc)

Hudson: ORANGE (1,cu,td,ks); PUTNAM (ks); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (ks)

Downstate: NEW YORK CITY: Bronx (cu), Staten I (1); NASSAU (ob)

11 May (emer) 1 June - 9 Aug

A common pond dragonfly, often occurring with the former species. It prefers to perch on bare banks or dead logs.

[76] **DROMOGOMPHUS SPINOSUS** (Selys)

Northern: HERKIMER (1); FRANKLIN (17,td); HAMILTON (hw)

Central: BROOME (td); ONONDAGA (1); OTSEGO (7); SCHOHARIE (1); SULLIVAN (1,td); TOMPKINS (1,17)

Western: ONTARIO (1,17); WYOMING (1); YATES (fscu)

Hudson: ALBANY (1); ORANGE (1,ks); PUTNAM (ks); WESTCHESTER (ks)

Downstate: NEW YORK CITY: Bronx (1)

23 June - 19 Aug

A very common species on rivers and, less commonly, lakes. It is more commonly seen patrolling than perching on bare rocks.

**GOMPHUS subgenus GOMPHURUS**

[77] **GOMPHUS (GOMPHURUS) FRATERNUS** Selys

Western: ERIE: Buffalo, 2 July 1906 (cu), Niagara R (1); MONROE: Mendon Ponds Co Pk 10 June 1988 (rc)

A common midwestern species locally distributed in the east. The type locality is "New York".

[78] **GOMPHUS (? GOMPHURUS) ROGERSI** Gloyd

Hudson: ORANGE: Little Cedar Pd nr Lakeville (td,fc). Several were taken on 26 June 1989.

This is the northernmost record for this Appalachian species.

[79] **GOMPHUS (GOMPHURUS) VASTUS** Walsh

Western: CHEMUNG: Elmira 13 June 1940 (fscu)

Hudson: ALBANY: Bethlehem, 17 June 1876 (1, 14 from Kenwood, under the name *G. adelphus*)

"NY" (1)

This southern and midwestern species has been taken in recent years upstream of Binghamton on the Susquehanna R just across the Pennsylvania state line.

[80] **GOMPHUS (GOMPHURUS) VENTRICOSUS** Walsh

Northern: HERKIMER: Old Forge (1)

Hudson: ORANGE: Pine I (1)

June

This midwestern species has been recorded infrequently in the east.

**GOMPHUS subgenus GOMPHUS**

[81] **GOMPHUS (GOMPHUS) BOREALIS** Needham

Northern: FRANKLIN (1,17,rc); ST LAWRENCE (fscu,rc)

Central: BROOME (td); CHENANGO (td); DELAWARE (td); OTSEGO (7)

Western: CATTARAUGUS (rc); SCHUYLER (rc)

2 June - 11 July

This species prefers beaver ponds. It was originally described (17, type locality Saranac Inn) as a subspecies of *G. descriptus* Banks.

[82] **GOMPHUS (GOMPHUS) DESCRIPTUS** Banks

*Gomphus argus* Needham (8)

Northern: FRANKLIN (1,17,cu,rc); HAMILTON (hw,usnm,ny); HERKIMER (1); ST LAWRENCE (hw)

Central: CAYUGA (usnm,td); TIOGA (fscu,usnm,td); TOMPKINS (1,8,17,usnm,td)

Western: GENESEE (usnm); SCHUYLER (usnm,td,fscu)

6 May (emer) 25 May - 28 June

A widespread but somewhat local eastern stream species. The type locality is Ithaca.

[83] **GOMPHUS (GOMPHUS) EXILIS** Selys

Northern: ESSEX (1,fscu,cu); FRANKLIN (1,17,cu,rc); HAMILTON (hw,ny); HERKIMER (hw); ST LAWRENCE (fscu); WARREN (1)

Central: BROOME (fscu,td); CAYUGA (cu); CHENANGO (td); OTSEGO (7); SENECA (rc); SULLIVAN (td); TIOGA (td); TOMPKINS (1,fscu,td)

Western: MONROE (1,rc); SCHUYLER (1,cu); STEUBEN (1,cu)

Hudson: ALBANY (1,cu); GREENE (fscu); ORANGE (1,td,ks); PUTNAM (ks); ROCKLAND (ks,bms); ULSTER (fscu,fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Bronx (cu), Staten I (1); SUFFOLK (1,rl,ob)

11 May (emer) 27 May - Sept

This is a very common pond species which flies somewhat later in the season than *G. spicatus*, with which it often occurs.

[84] **GOMPHUS (GOMPHUS) LIVIDUS** Selys

*Gomphus umbratus* Needham, (16), *G. sordidus* (17)

Northern: HERKIMER (hw)

Central: CAYUGA (usnm,td); MADISON (td); TIOGA (fscu,usnm,td); TOMPKINS (1,16,17,usnm,td)

Hudson: COLUMBIA (fscu); ORANGE (1,td,ks); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (1,ks)

4 May (emer) 28 May - 26 June

A locally common species of larger streams and rivers.

[85] **GOMPHUS (GOMPHUS) QUADRICOLOR** Walsh

Central: BROOME: Kirkwood (td, exuv.); TOMPKINS: Ithaca (1,17); SCHOHARIE: Schoharie (1)

June

This elusive river species has been taken several times in recent years upstream of Binghamton on the Susquehanna R in Pennsylvania.

**[86] GOMPHUS (GOMPHUS) SPICATUS Hagen***G. spicata* (13)

Northern: ESSEX (cu); FRANKLIN (1,17,rc); HAMILTON (ny); HERKIMER (1,hw); ST LAWRENCE (fsca)

Central: BROOME (fsca,usnm,td); DELAWARE (td); OTSEGO (7); SENECA (rc); TIOGA (td); TOMPKINS (1,td)

Western: ERIE (1); GENESEE (rc); MONROE (rc); SCHUYLER (1,cu,rc); STEUBEN (1,cu); YATES (rc)

Hudson: ALBANY (cu); GREENE (fsca); ULSTER (1)

28 May - 14 July

This pond species is the most commonly taken gomphid in upstate New York. The type locality is "New York."

**GOMPHUS subgenus HYLOGOMPHUS****[87] GOMPHUS (HYLOGOMPHUS) ABBREVIATUS Hagen**

Central: BROOME: Chenango Valley St Pk (td,usnm); SULLIVAN: Callicoon (td), Pond Eddy (ks), Tutsen (ks), Barryville (ks); TOMPKINS: Ithaca (1,17)

Downstate: WESTCHESTER: Lk Oscaleta (ks)

30 May - 26 June

This is a species of large streams and rivers; it is probably more common than the records imply. It has been taken several times in recent years on the Susquehanna R just upstream of Binghamton in Pennsylvania.

A specimen in the New York Museum with no date or locality was taken by Lintner. It is probably from the Albany area and is somewhat morphologically aberrant.

**[88] GOMPHUS (HYLOGOMPHUS) ADELPHUS Selys***G. brevis* (1,13,17)

Northern: FRANKLIN (1,17); FULTON (cu); HAMILTON (hw); HERKIMER (hw)

Central: BROOME (td); DELAWARE (td); OTSEGO (usnm); SCHOHARIE (1); TIOGA (td)

Hudson: ALBANY Coeymans (identity uncertain,1)

19 June - July

This widespread stream species is sometimes found along larger rivers. The type locality is Bethlehem, Albany Co., collected by A. Fitch. Specimens in the New York State Museum under this name ("*G. adelphus*, 17 June 1876, det H. Hagen") are *G. vastus* Walsh.The species has been confused mainly with the more widely cited *G. brevis* Selys, which is a junior synonym, and whose type locality is Schoharie. These two names have been confused for a century, during which time all captures were referred to *brevis*. *G. adelphus* was regarded as an unknown and possibly extinct species; examination of the type by Minter Westfall (1985) has established its true identity. Older citations of *adelphus* (such as Coeymans, Albany Co.) are suspect; other species may have been mistakenly given this name.**[89] GOMPHUS (HYLOGOMPHUS) VIRIDIFRONS (Hine)**

Central: SULLIVAN: Barryville, 23 July 1940, M.B. Mittleman (fsca). The specimen is labeled "Berryville, Sullivan Co."

A southern river species. This record is the northernmost occurrence.

**[90] HAGENIUS BREVISTYLUS Selys**

Northern: ESSEX (cu); FRANKLIN (1,17,td); HAMILTON (hw,usnm); HERKIMER (1); OSWEGO (1); ST LAWRENCE (fsca); WARREN (1)

Central: SULLIVAN (bms); TOMPKINS (1,17,cu,td) MONROE (1)

Hudson: WESTCHESTER (ks)

Downstate: LONG ISLAND (1)

1 June (emer) 13 June - 16 Sept

This very large species is widespread over the entire eastern United States. It is unaccountably scarce in upstate New York, except for the Adirondacks.

**[91] LANTHUS PARVULUS Selys***Gomphus parvulus* (13)

Northern: ESSEX (cu); FULTON (cu)

Central: BROOME (td); CAYUGA (td); CHENANGO (td); CORTLAND (larvae,kt); TOMPKINS (1,cu,td,rc)

Western: CATTARAUGUS (rc,bms); GENESEE (rc); SCHUYLER (rc); LIVINGSTON (1)

Hudson: GREENE (1,ny); ROCKLAND (1)

21 May - Aug

A species of small streams, found commonly on low branches of overhanging trees.

**[92] LANTHUS VERNALIS Carle**

Western: CATTARAUGUS: Allegany St Pk, 27 May 1981 (bms)

Hudson: ROCKLAND: Harriman St Pk, 17 June 1990 (ab)

Wayne Gall collected three specimens of *vernalis* and one of *parvulus* emerging together in a small stream in Allegany State Park.

This southern species is fairly common in northern New Jersey and should be sought in the downstate area.

**[93] OPHIOGOMPHUS ANOMALUS Harvey**

Hudson: ORANGE: Port Jervis 13 July 1951, E.M. Walker (9)

This species has been taken rarely since its original discovery in Maine nearly a century ago. It is a species of large, rocky rivers. There is an additional record from Milford New Jersey, which is on the Delaware R downstream of Port Jervis. Recently it has been found again in Maine as well as Quebec and Wisconsin and should be sought on the upper Delaware.

**[94] OPHIOGOMPHUS ASPERSUS Morse**

Northern: FRANKLIN: Saranac Inn (1,17,cu); HAMILTON: 10 mi N Long Lk (rg); 6 mi NW Speculator (td)

Central: SULLIVAN: Neversink R nr Port Jervis and Roses Point (ks)

Downstate: NEW YORK CITY: Bronx, Van Cortlandt Pk (1)

20 June - 18 Aug

This uncommon species prefers small rocky streams with overhanging small trees and bushy banks.

**[95] OPHIOGOMPHUS CAROLUS Needham**

Northern: LEWIS (td)

Central: BROOME (td); CAYUGA (td); CHENANGO (td); DELAWARE (td); SCHOHARIE (1); SULLIVAN (fsca,td); TIOGA (4,fsca,usnm) (td); TOMPKINS (1,4,16,17,td)

Western: ALLEGANY (usnm); CATTARAUGUS (td,bms); SCHUYLER (fsca,usnm,td); WYOMING (1)

Hudson: ALBANY (ny)

1 May (emer) 5 June - 12 July

This species is commonly found on small, sunny, rocky brooks; Needham unaccountably reported that it was rarely encountered in the adult state. The type locality is Ithaca (16).

[96] *OPHIOGOMPHUS HOWEI* Bromley

Central: BROOME: Binghamton, 30 May (?yr), N. Banks (mcz)

This is an elusive species of large rivers which evidently spends much of its adult life perching high above ground level in trees.

The species had not been collected for several decades before it was rediscovered by T. Donnelly in 1967 on the Susquehanna R upstream of Binghamton, just inside of Pennsylvania. Its continued existence is demonstrated by finds of exuvia, even though adults have not been subsequently seen. In recent years it has been taken in abundance in the New River, Virginia and has been found in several other states.

[97] *OPHIOGOMPHUS M. MAINENSIS* Packard

*Ophiogomphus johannus* Needham (16)

Northern: ESSEX: Keene Valley (1); HERKIMER: Wilmurt (1,16); HAMILTON: Rock R (hw); ST LAWRENCE: Oswegatchie (fsca)

Central: DELAWARE: Hancock (td), Beaverkill, 10 mi W Roscoe (td); SCHOHARIE (14); SULLIVAN: Lewbeach (td)

Hudson: ORANGE: Neversink R nr Roses Point (ks); WESTCHESTER: Pound Ridge Res (ks)

13 May (emer) 21 May - 27 July

This species occurs on large rocky streams or small rivers. All of the New York captures which have been examined are of the subspecies *mainensis*, but the subspecies *fastigiatus*, which is found in Sullivan, Clinton, and Centre Cos., Pennsylvania, should be sought.

[98] *OPHIOGOMPHUS RUPINSULENSIS* Walsh

*Herpetogomphus picta* Needham (16)

Northern: ST LAWRENCE (4)

Central: BROOME (td); DELAWARE (td); SCHOHARIE (1); SULLIVAN (td,ob); TIOGA (fsca,usnm); TOMPKINS (1,16);

Western: STEUBEN (cu); LIVINGSTON (4), CATTARAUGUS (db)

16 May (emer) 30 May - 7 Aug

This is a large-river gomphid which is locally conspicuous in mid summer.

[99] *PROGOMPHUS OBSCURUS* (Rambur)

*Gomphoides obscura* (1)

Downstate: SUFFOLK: Wading R (1), Deep Pd (1)

June - Aug

This is a southern species which in the northeast inhabits only very clean, sandy bottomed coastal plain streams and ponds. Its present status in New York is unknown.

[100] *STYLOGOMPHUS ALBISTYLUS* (Hagen)

*Lanthus albistylus* (1)

Northern: FRANKLIN (td); HAMILTON (hw); ST LAWRENCE (4)

Central: BROOME (td); CAYUGA (td); CHENANGO (td); OTSEGO (7); TIOGA (td); TOMPKINS (td)

Western: CATTARAUGUS (db); SCHUYLER (td)

Hudson: ROCKLAND (1); ULSTER (fh); WESTCHESTER (ks)

7 June - 18 Aug

This is a very common species on small, rocky brooks.

[101] *STYLURUS AMNICOLA* (Walsh)

*Gomphus amnicola*

Hudson: ALBANY: Bethlehem (1,17)

July

This is a midwestern river species which is sporadic in the east.

[102] *STYLURUS NOTATUS* (Rambur)

*Gomphus notatus* (1), *G. jucundus* Needham (8)

Northern: ESSEX: Crown Point, 30 July 1939 (8)

Western: MONROE: Rochester (1)

This is a large river species found today mainly in the midwest. It is sporadic in the east, but has also been taken on the lower St Lawrence R near Montreal.

[103] *STYLURUS PLAGIATUS* (Selys)

*Gomphus plagiatus* (1)

Hudson: DUTCHESS (ks,seen); WARREN: Lk George (1)

Downstate: LONG ISLAND (1)

Aug - Sept

A specimen of *S. spiniceps* from Bethlehem was included in (1) under this name.

This is a southern species found typically on large rivers. The species was seen but not collected by Ken Soltesz on the Hudson River at Tivoli, Dutchess Co., 13 Sept, 1991.

[104] *STYLURUS SCUDDERI* (Selys)

*Gomphus scudderii* (1)

Northern: FRANKLIN: Saranac Inn (1,17); HAMILTON: Browns Tract Pd (hw), Browns Tract Br (hw), Rock R (hw); 6 mi NW Speculator (td)

Central: CAYUGA: Lake Como (usnm,td); TOMPKINS: Ithaca (1), Ellis (fsca,usnm,td), McLean (cu)

Hudson: WESTCHESTER: Pound Ridge Res (ks)

11 June - 1 Sept

This species occurs locally on small to medium sized streams.

[105] *STYLURUS SPINICEPS* (Walsh)

*Gomphus spiniceps* (1)

Central: BROOME: Binghamton (td); TOMPKINS: Ithaca (1)

Hudson: ALBANY: Bethlehem (1); RENSSELAER: Hoosic Jct (cu)

18 Aug - 27 Sept

This large river species can be seen flying in numbers on the Susquehanna R at Binghamton from August to late September. Just across the state line in Pennsylvania the species has been seen emerging as early as 17 June but more typically the first week of July.

CORDULEGASTRIDAE

[106] *CORDULEGASTER DIASTATOPS* (Selys)

Northern: FRANKLIN (1,usnm,rc); HAMILTON (hw); HERKIMER (cu); ONEIDA (cu); ST LAWRENCE (rc)

Central: BROOME (td); CORTLAND (larvae,kt); DELAWARE (td); SULLIVAN (fsca); TOMPKINS (1,17,usnm,td)

Western: CATTARAUGUS (rc,db); ERIE (bms); GENESEE (cu,rc); SCHUYLER (rc)

Hudson: GREENE (ny); ORANGE (td,ks); ULSTER (fh); WESTCHESTER (ks)

16 May - 16 July

The most common member of the genus. It prefers small brooks or tiny, open streams in marshes.

[107] **CORDULEGASTER ERRONEA** Hagen

*C. erroneus* (1)

Northern: ESSEX: Keene Valley (1)

Central: TOMPKINS: Ithaca (1)

June

This southern species has not been recently recorded in New York.

[108] **CORDULEGASTER MACULATA** Selys

*C. maculatus* (1)

Northern: CLINTON (usnm); ESSEX (1,cu); FRANKLIN (17,rc); FULTON (cu,usnm,ny)

Central: TIOGA (td); TOMPKINS (fscs,usnm,td)

Western: CATTARAUGUS (db); SCHUYLER (td,rc)

Hudson: DUTCHESS (usnm); ROCKLAND (1); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Staten I (1), SUFFOLK (1)

18 May (emer) 9 June - July

This species inhabits small streams.

[109] **CORDULEGASTER OBLIQUA** (Say)

*C. obliquus* (1)

Central: BROOME: Hawkins Pd, town of Windsor (hw,td)

Hudson: ORANGE: Pine I (1), Little Cedar Pd nr Lakeville (td); ULSTER: Kripplebush (fh); WESTCHESTER: Bronxville (1)

Downstate: NEW YORK CITY: Bronx, Van Cortlandt Pk (1)

(Hyde Park, 10)

May - 1 July

This uncommon southern species prefers tiny streams in wooded areas.

**CORDULIIDAE - MACROMIINAE**

[110] **DIDYMOPUS TRANSVERSA** (Say)

Northern: ESSEX (1); FRANKLIN (1,17,cu); FULTON (cu); HAMILTON (ny); HERKIMER (1,hw); WARREN (1)

Central: BROOME (td); SULLIVAN (td); TOMPKINS (1)

Western: CATTARAUGUS (rc); ERIE (bms); LIVINGSTON (1); SCHUYLER (cu); STEUBEN (cu)

Hudson: ORANGE (td); ROCKLAND (1); ULSTER (fh); WESTCHESTER (ks)

4 May - 24 July

An early season species found especially on larger streams and rivers.

[111] **MACROMIA ILLINOIENSIS** Walsh

Northern: FRANKLIN (1); HAMILTON (hw); HERKIMER (hw); OSWEGO (1); WARREN (1)

Central: BROOME (td); OTSEGO (7); SULLIVAN (td,ks); TOMPKINS (1,cu)

Western: ERIE (1)

Hudson: ALBANY (1); ORANGE (1,ks); ROCKLAND (1)

May - 4 Sept

This strong flying species is common on rivers but scarce in collections. It also flies on large lakes.

**CORDULIIDAE - CORDULIINAE**

[112] **CORDULIA SHURTLEFFI** Scudder

Northern: ESSEX (cu,td,ny); FRANKLIN (1,17,cu,rc); HAMILTON (hw,ny); HERKIMER (1); ONEIDA (usnm,rc); ST LAWRENCE (fscs)

Central: BROOME (fscs,td); CHENANGO (fscs,usnm,td); CORTLAND (td); MADISON (td); TOMPKINS (4)

Western: CATTARAUGUS (db); SCHUYLER (td,rc); STEUBEN (td)

Hudson: GREENE (fscs); ORANGE (ks); ULSTER (1,fscs,fh)

26 May - 8 Aug

A very common and conspicuous early season species on vegetated ponds.

[113] **DOROCORDULIA LEPIDA** (Hagen)

*Somatochlora lepida* (13)

Northern: FRANKLIN: Saranac Inn (rc)

Hudson: ALBANY: Albany (1); WESTCHESTER (ks)

Central: BROOME: Marsh Pd, town of Sanford (td); CHENANGO: Jam Pd, town of German (td); SULLIVAN: Burnt Hill Pd (1), Mud Pd (1), Amber Lk (1)

Hudson: GREENE: North Lk Campground (fscs);

ORANGE: Little Cedar Pd nr Lakeville (fc)

Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1,r,usnm)

17 June - 2 Aug

A coastal plain species found on small ponds and lakes. The species is sporadic in upstate New York.

[114] **DOROCORDULIA LIBERA** (Selys)

*Somatochlora libera* (13)

Northern: ESSEX (1); FRANKLIN (1,17); HAMILTON (hw,fscs)

Central: BROOME (td); CAYUGA (cu); CHENANGO (fscs,usnm,td); CORTLAND (td); SULLIVAN (ks); TOMPKINS (td)

Western: SCHUYLER (1,fscs,cu); STEUBEN (1,fscs,cu)

Hudson: ORANGE (1,td); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1), Staten I (1); SUFFOLK (1)

May - 8 Aug

A very common pond species.

[115] **EPICORDULIA PRINCEPS** (Hagen)

Northern: FRANKLIN (1,17); OSWEGO (fscs); ST LAWRENCE (1,hw)

Central: BROOME (td); CAYUGA (cu); CHENANGO (td); OTSEGO (7); SENECA (rc); SULLIVAN (td); TOMPKINS (1,cu,td)

Western: ERIE (1); MONROE (1); SCHUYLER (cu)

Hudson: ALBANY (1); ORANGE (1,td,ks); PUTNAM (1,ks); ROCKLAND (ks); WESTCHESTER (ks)

Downstate: NEW YORK CITY: (1)

28 May - 20 Aug

A widespread species generally seen patrolling on large lakes and rivers.

[116] **HELOCORDULIA UHLERI** (Selys)

*Neurocordulia uhleri* (13)

Northern: FRANKLIN (1,17,cu); HAMILTON (hw,usnm,ny); HERKIMER (hw); ST LAWRENCE (4,fscs)

Central: BROOME (td); CAYUGA (1); DELAWARE (td); SULLIVAN (td); TIOGA (td); TOMPKINS (usmm)  
Hudson: ORANGE (1); ULSTER (fh); WESTCHESTER (ks)

26 Apr - 6 July

A local species on rocky streams, where it perches on bare rocks.

[117] *NEUROCORDULIA OBSOLETA* (Say)

Northern: WARREN: Lk George (1)

Central: SULLIVAN: White Lk (1,17)

Hudson: PUTNAM: Benmar Lk nr Brewster (1); WESTCHESTER: Lk Osaleta (ks)

31 - 9 Aug

This southern species has been taken recently only at Lk Osaleta, where it is a common crepuscular species.

[118] *NEUROCORDULIA YAMASKANENSIS* (Provancher)

Northern: HAMILTON: Lake Lila, 6 July 1991, by Paul Novak (specimen collected by his dog)

Central: BROOME: Binghamton, sight records on Susquehanna R, 4-5 July 1987 (td)

The species has been taken on the Susquehanna R upstream of Binghamton, just inside Pennsylvania. It is crepuscular and very difficult to catch.

[119] *SOMATOCHLORA ALBICINCTA* (Burmeister)

Northern: ESSEX: Mt Marcy (1), Lk Tear (1)

July

A bog-loving northern species.

[120] *SOMATOCHLORA CINGULATA* (Selys)

Hudson: ULSTER: Slide Mt, 13 July 1966 (fh)

This species flies over lakes, preferring those with limited shoreline vegetation.

[121] *SOMATOCHLORA ELONGATA* (Scudder)

Northern: ESSEX: Newcomb (td), 5 mi N Olmstedville (td); FRANKLIN: vic Saranac Inn (17), Raquette R nr Tupper Lk (td), Piercefield (td), Saranac Inn (rc); HAMILTON: Browns Tract Br (hw), O'Neil Flow (hw), Rock R (hw), 10 mi N Long Lk (rg); ST LAWRENCE: Oswegatchie (4)

Central: TOMPKINS: Ithaca (1,6), McLean (cu)

Western: CATTARAUGUS: Allegany St Pk (db)

June - 15 Aug

A species found in highly vegetated ponds and streams.

[122] *SOMATOCHLORA FORCIPATA* (Scudder)

Northern: HAMILTON: 10 km E Indian Lk (ny)

23 June 1980 (T. McCabe)

An uncommon boreal bog species with a wide range in the northeastern United States and Canada.

[123] *SOMATOCHLORA KENNEDYI* Walker

*S. semicircularis* (1)

Hudson: ALBANY: Albany, "probably this species but segs. 4-10 missing and coloration darker and less hairy than usual" (6)

An uncommon species found in boreal wooded swamps.

[124] *SOMATOCHLORA LINEARIS* (Hagen)

Northern: OSWEGO (1)

Central: TOMPKINS: Varna(1), Ithaca (1)

Western: CATTARAUGUS: Allegany St Pk (bms); ERIE: Grand I (1)

Hudson: WESTCHESTER: Teatown Lk Res (ks)

Downstate: NEW YORK CITY: Staten I, Green Ridge (1)

July - 12 Sept

A southern species found around medium sized streams.

[125] *SOMATOCHLORA MINOR* Calvert

Northern: FRANKLIN: Harriestown (1,6), Derrick (rc); ST LAWRENCE: Oswegatchie (fscs)

19 June - 5 Aug

A boreal species found on small, slow streams.

[126] *SOMATOCHLORA TENEBROSA* (Say)

Northern: ESSEX: Newcomb (td); OSWEGO (1,6)

Central: BROOME: Binghamton (ab); CAYUGA: N Fair Haven (1,6), Port Byron (rc); CORTLAND: Virgil (kt); ONONDAGA: High Bridge (td) TOMPKINS: Ithaca (6), Freeville (cu)

Western: CATTARAUGUS: Randolph (db); ERIE: Clarence (1); GENESEE: Bergen Swamp (4,cu,rc)

Hudson: GREENE: East Jewett (1,6); ORANGE: West Point (1,6); ROCKLAND: Mt Joy, Ramapo Mts (1,6); ULSTER: Kripplebush (fh); WESTCHESTER: Pound Ridge Res (ks), Teatown Lk (ks)

Downstate: SUFFOLK: Hauppauge (1,6), Wyandanch (1)

31 May - 1 Sept

Found around streams and open lakes. It is frequently taken away from water, especially in the evening.

[127] *SOMATOCHLORA WALSHII* (Scudder)

Northern: ESSEX: Keene Valley (1), Chilson Lk (? this county) (1); HAMILTON: Kenwells (hw); OSWEGO: Minetto (td, from WTM Forbes); ST LAWRENCE: Oswegatchie (4)

Central: TOMPKINS: Ellis Hollow, Ithaca (1,6)

Western: CATTARAUGUS: Allegany St Pk (db); GENESEE: Bergen Swamp (4); WYOMING: Castile (1,cu)

17 July - 25 Aug

A boreal species found over open bogs.

[128] *SOMATOCHLORA WILLIAMSONI* Walker

Northern: ESSEX: Heart Lk (= Clear Lk) (4); FRANKLIN: Bone Pd, Saranac Inn (1,6,cu), Raquette R nr Tupper Lk (td); HAMILTON: Seventh Lk (hw), Rock R (hw), Speculator (fscs); ST LAWRENCE: Cranberry Lk (4)

Central: CAYUGA: Fair Haven (1,6); TOMPKINS: Ithaca (cu)

Western: MONROE: Rochester (4); WAYNE: Sodus Bay (4)

Hudson: WESTCHESTER: Lk Osaleta (ks)

29 June - 11 Sept

A boreal species associated with lakes and slow rivers.

[129] *TETRAGONEURIA CANIS* McLachlan

*T. spinosa* (17)

Northern: ESSEX (cu); FRANKLIN (1,17,rc); HAMILTON (ny); HERKIMER (hw); ST LAWRENCE (hw,fscs,rc)

Central: BROOME (td); CHENANGO (td); CORTLAND (td); MADISON (td); OTSEGO (7); SENECA (rc); TIOGA (td); TOMPKINS (fscs,usnm,td)

Western: CATTARAUGUS (rc); SCHUYLER (rc); STÉUBEN (rc)

PUTNAM (ks); ULSTER (fh)

29 Apr (emer) 9 May - 1 July

A common pond species, and often one of the earliest odonates to appear in the year.

[130] **TETRAGONEURIA CYNOSURA** (Say)

*T. cynosura* var. *simulans* (1)

Northern: ESSEX (1); FRANKLIN (1,fsca,rc); FULTON (cu); HAMILTON (usnm,dp,ny); HERKIMER (1); ST LAWRENCE (rc); WARREN (1,bms)

Central: BROOME (td); CHENANGO (td); CORTLAND (td); DELAWARE (td); SULLIVAN (td); ONONDAGA (1); OTSEGO (7); SENECA (fsca,cu,rc); TIOGA (fsca,td); TOMPKINS (1,fsca,cu,usnm,td)

Western: CATTARAUGUS (db,bms); ERIE (1,bms); LIVINGSTON ((bms); MONROE (1); NIAGARA (1,cu); ONTARIO (1,17); SCHUYLER (fsca,rc); STEUBEN (fsca,rc); WAYNE (fsca); YATES (rc)

Hudson: ALBANY (cu,ny); ORANGE (1,td); PUTNAM (1,ks); ROCKLAND (1,ks); ULSTER (1,fsca,fh); WASHINGTON (cu); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1), Staten I (1); SUFFOLK (ob)

23 Apr (emer) 30 May - 11 Aug

A very common pond species, appearing somewhat later than the previous species. The common form with prominent dark markings at the base of the hind wings has been called var. *simulans* (1).

[131] **TETRAGONEURIA SEMIAQUEA** (Burmeister)

Downstate: SUFFOLK: Yaphank (1), North Sea (rl), Greenport (rl)

24 - 27 May

A southern coastal plain species. The Yaphank specimen was originally determined by Davis (1913) as *semiaquea* but was omitted from the N.Y. list (1), for which Davis was a listed collaborator. Davis also listed a specimen from Ramapo, Rockland Co., but the only species in (1) from this locality is *cynosura*, and the record is doubtful. Records from Tompkins and Onondaga Cos. in (13) and from Erie Co. in (14) are probably erroneous.

[132] **TETRAGONEURIA SPINIGERA** Selys

Northern: CLINTON (cu); ESSEX (cu); FRANKLIN (1,17,rc); HAMILTON (dp,ny); OSWEGO (1,cu)

Central: DELAWARE (td); TOMPKINS (1,usnm,td)

Western: ERIE (1); SCHUYLER (cu); STEUBEN (cu); WYOMING (1)

Hudson: ALBANY (1)

2 May (emer) May - Sept

A northern lake species.

[133] **WILLIAMSONIA FLETCHERI** Williamson

Central: BROOME: Chenango Valley St Pk, 1 June 1947, J. Gillespie (5)

A rare species ranging from New England west to Michigan.

[134] **WILLIAMSONIA LINTNERI** (Hagen)

*Somatochlora lintneri* (13)

Hudson: ALBANY: Kerner (1)

21 May - 27 May

This rare, early season coastal plain species occurs in New England relatively close to the ocean. The type and only New York locality is Kerner; this remains the most inland occurrence.

**LIBELLULIDAE**

[135] **CELITHEMIS ELISA** (Hagen)

Northern: FRANKLIN (1); HAMILTON (hw)

Central: BROOME (td); CHENANGO (td); ONONDAGA (usnm); OTSEGO (7); SENECA (rc); SULLIVAN (1); TIOGA (td); TOMPKINS (1)

Western: ALLEGANY (rc); ONTARIO (rc); SCHUYLER (rc); YATES (rc)

Hudson: ORANGE (1,td,ks); PUTNAM (ks); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Manhattan (10), Queens (1), Staten I (1); SUFFOLK (1,td,ob)

May - 18 Aug

A widespread but somewhat local pond species.

[136] **CELITHEMIS EPONINA** (Drury)

Central: OTSEGO (7); SENECA (rc); SULLIVAN (ks); TOMPKINS (td)

Western: ONTARIO (rc); SCHUYLER (rc); WAYNE (1)

Hudson: PUTNAM (fsca,ks); ROCKLAND (bms); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1), Manhattan (10), Queens (1), Staten I (1); SUFFOLK (1,rl,usnm,td,ob)

May - 20 Sept

A common coastal plain pond species that is found sporadically in upstate New York.

[137] **CELITHEMIS FASCIATA** Kirby

*C. monomelaena* (1,12)

Western: CHAUTAUQUA: Cassadaga (fsca)

Hudson: ORANGE: Island Pd (ob), South Fields (cu); WESTCHESTER: Teatown Lk (ks), Cranberry Lk (ks)

Downstate: SUFFOLK: Wading R (1), Riverhead (rl,1), Manorville (td)

2 June - Aug

A predominantly southern pond species. The northern, more lightly spotted version, which is the New York variety, has been known under the name *C. monomelaena* Williamson.

[138] **CELITHEMIS MARTHA** Williamson

*C. ornata* (12)

Downstate: SUFFOLK (1,rl,usnm,td,ob)

15 June - 11 Sept

A southern, coastal plain species which is widespread on Long Island.

[139] **ERYTHEMIS SIMPLICICOLLIS** (Say)

*Mesothemis simplicicollis* (13,14)

Northern: FRANKLIN (1); ONEIDA (rc)

Central: BROOME (td); ONONDAGA (dp); OTSEGO (7); SENECA (rc); SULLIVAN (ks); TIOGA (td); TOMPKINS (1,17,fsca,td)

Western: ALLEGANY (rc); CATTARAUGUS (db); ERIE (1,bms); MONROE (rc); NIAGARA (1); ONTARIO (rc); SCHUYLER (rc,kt); STEUBEN (rc); WAYNE (usnm); YATES (rc)

Hudson: DUTCHESS (ks); ORANGE (1,td); PUTNAM (ks); ROCKLAND (ks,bms); ULSTER (fsca,fh); WESTCHESTER (ks)

Downstate: NEW YORK CITY (1), Manhattan (10), Queens (1), Staten I (1); SUFFOLK (1,rl,usnm,ob)

18 May - 11 Sept

A dominantly southern species that is locally common in upstate New York.

## [140] ERYTHRODIPLAX BERENICE (Drury)

*Microthyria berenice* (13)

Northern: JEFFERSON: Thousand Islands (1)

Hudson: WESTCHESTER (ks)

Downstate: NEW YORK CITY (1), Bronx (1), Brooklyn (1), Queens (1), Staten I (1); SUFFOLK (1,usnm,ob)

May - Aug

A southern species which is mainly found in slightly saline coastal marshes.

## [141] LADONA DEPLANATA (Rambur)

Hudson: ORANGE: Lk Stahahe (ks), Echo Lk (ks)

Downstate: SUFFOLK (1,rl,td,rc,obOB)

1 May - 17 June

A southern, coastal plain species, which may occur with the following species.

## [142] LADONA EXUSTA (Say)

*Libellula exusta* (13)

Hudson: ORANGE: Echo Lk (ks), West Point (1), Little Cedar Pd nr Lakeville (td); ROCKLAND: Ramapo (1); WESTCHESTER: Croton-on-Hudson (1)

Downstate: SUFFOLK (fsca,usnm,td,rc,ob)

1 May - July

A northern coastal plain species with local inland occurrences.

## [143] LADONA JULIA (Uhler)

Northern: ESSEX (fsca); FRANKLIN (1,17,rc); HAMILTON (hw,fsca,ny); HERKIMER (hw); ONEIDA (usnm,rc); ST LAWRENCE (hw,fsca,rc)

Central: BROOME (fsca,iori,td); CHENANGO (td); CORTLAND (td,rc); DELAWARE (td); OTSEGO (7); SENECA (rc); TIOGA (td); TOMPKINS (td,kt)

Western: MONROE (rc); SCHUYLER (1,td,rc); STEUBEN (1,td,rc)

Hudson: DUTCHESS (ks); ORANGE (td,ks); PUTNAM (ks); ROCKLAND 24; ULSTER (fh); WESTCHESTER (ks)

20 May - 3 Aug

A very common upstate pond and lake species.

## [144] LEUCORRHINIA FRIGIDA Hagen

Northern: ESSEX (1,td); FRANKLIN (rc); HAMILTON (hw); HERKIMER (1); ONEIDA (rc); OSWEGO (td)

Central: BROOME (td); CHENANGO (td,kt); CORTLAND (td); OTSEGO (7); SULLIVAN (1); TIOGA (td)

Hudson: GREENE (fsca); ORANGE (td); ROCKLAND (ks); ULSTER (fh)

Downstate: NEW YORK CITY: Staten I (1); SUFFOLK (1,ob)

May - 2 Sept

A northern species found in small, highly vegetated ponds.

## [145] LEUCORRHINIA GLACIALIS Hagen

Northern: ESSEX (ny); FRANKLIN (1,17,rc); HAMILTON (hw,ny); HERKIMER (1); ONEIDA (rc)

Central: CHENANGO (fsca,usnm,td); CORTLAND (td)

Western: CATTARAUGUS (db)

Hudson: ULSTER (fh)

2 June - early Aug

A northern species which favors bogs in its more southerly occurrences.

## [146] LEUCORRHINIA HUDSONICA (Selys)

Northern: ESSEX (1,ny); FRANKLIN (rc); HAMILTON (hw,fsca,ny); HERKIMER (1,hw); ONEIDA (usnm,rc); ST LAWRENCE (hw)

Central: BROOME (fsca,usnm,td); CHENANGO (fsca,td); SENECA (rc); TOMPKINS (usnm,td)

Hudson: ALBANY (ny)

Downstate: SUFFOLK (rc)

1 May - 5 Aug

A northern bog species.

## [147] LEUCORRHINIA INTACTA (Hagen)

Northern: ESSEX (1,ny); ONEIDA (rc); ST LAWRENCE (1)

Central: BROOME (td); CORTLAND (usnm,td); MADISON (td); OTSEGO (7); SENECA (rc); SULLIVAN (1,ks); TIOGA (td); TOMPKINS (1,17,fsca,usnm,td)

Western: CATTARAUGUS (rc,db,bms); ERIE (1,bms); MONROE (1,rc,bms); NIAGARA (1,fsca); ORLEANS (fsca,usnm); SCHUYLER (1,td,rc); STEUBEN (1,td,rc); LIVINGSTON (1); YATES (rc)

Hudson: ALBANY (1); DUTCHESS (ks); GREENE (fsca); ORANGE (ks); PUTNAM (1,ks); ROCKLAND (ks); ULSTER (fsca,fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1), Queens (1), Staten I (1); SUFFOLK (1,ob)

26 Apr (emer) 26 May - 1 Aug

A very common pond species. This species sometimes squats on rocks in rivers, where it resembles a gomphid.

## [148] LEUCORRHINIA PROXIMA Calvert

Northern: ESSEX: Mt Marcy (fsca); FRANKLIN: Saranac Inn (rc); HAMILTON: Browns Tract Br (hw), Lk Durant (hw)

Central: BROOME: Marsh Pd, Town of Sanford (td), SUNY Binghamton (td); CHENANGO: Jam Pd, Town of German (td); CORTLAND: Gracie (rc)

Western: ERIE: E. Aurora (bms)

11 June - 8 Aug

An uncommon pond species which perches inconspicuously in vegetation somewhat away from open water.

## [149] LIBELLULA AURIPENNIS Burmeister

Western: CATTARAUGUS: a female "without data; the specimen is very teneral" (db).

At the time of Borror's record (1937, unpublished list) of this species, the more common sibling species *L. needhami* had not yet been described. Even though the New York specimen is of a teneral female, it could hardly be *needhami*, which is a coastal species. There are some midwest records of *auripennis*, and the New York record is provisional.The coastal plain records of *auripennis* in (1) are probably all *needhami*, but *auripennis* should be sought on small, spring-fed ponds on Long Island.

## [150] LIBELLULA AXILENA Westwood

Hudson: WESTCHESTER: Butler Sanctuary, Mt Kisco (23 June 1983, D.H. O'Connor)

Downstate: NEW YORK CITY: Staten I, Buck's Hollow (12,1)

May - 23 June

This southern species is rare in New York.

## [151] LIBELLULA CYANEA Fabricius

Central: SULLIVAN: Pond Eddy (ks)



Hudson: ORANGE (td,ks); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Bronx (1), Queens (1), Staten I (1); SUFFOLK (1,cu,usnm,td,ob)

25 May - 24 Aug

A southern species which inhabits small ponds. The Sullivan Co record represents its furthest inland occurrence in the northern part of its range.

[152] *LIBELLULA FLAVIDA* Rambur

*L. plumbea* (13)

Hudson: WESTCHESTER (13)

Downstate: SUFFOLK: Wading R (1), Riverhead (1), Long Pd (1)

June - July

A southern coastal plain species.

[153] *LIBELLULA INCESTA* Hagen

Central: BROOME (td); CHENANGO (td); OTSEGO (7); SULLIVAN (1,ks); TIOGA (td)

Western: CHAUTAUQUA (bms)

Hudson: ROCKLAND (1,ks); ORANGE (td,ks,ob) (ab); PUTNAM (ks); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Manhattan (10); SUFFOLK (1,usnm,td,ob)

24 May - 11 Sept

A locally common pond species.

[154] *LIBELLULA LUCTUOSA* Burmeister

*L. basalis* (13,14)

Northern: FRANKLIN (1); HERKIMER (1)

Central: BROOME (td); CHENANGO (td); CORTLAND (iori,td,rc); DELAWARE (td); OTSEGO (7); SENECA (rc); SULLIVAN (td); TIOGA (td); TOMPKINS (1,17,usnm,td,rc)

Western: CATTARAUGUS (td,db); ERIE (1,bms); MONROE (rc); NIAGARA (1); ONTARIO (rc); ORLEANS (usnm); SCHUYLER (rc,kt); WAYNE (rc); YATES (rc)

Hudson: ALBANY (1,usnm); ORANGE (td,ks); PUTNAM (fscs,ks); ROCKLAND (ks); ULSTER (fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Manhattan (10), Bronx (1), Queens (1), Staten I (1); SUFFOLK (1,ob)

25 May - 20 Sept

A very common and conspicuous pond and lake species.

[155] *LIBELLULA LYDIA* (Drury)

*Plathemis lydia* auct.; *P. trimaculata* (13,14)

Northern: ESSEX (1); HAMILTON (hw); HERKIMER (1,hw); ONEIDA (rc); ST LAWRENCE (fscs, rc)

Central: BROOME (fscs,td); CAYUGA (rc); CHENANGO (td); CORTLAND (td,rc,kt); DELAWARE (td); MADISON (td); ONONDAGA (1,td); OTSEGO (7); SCHOHARIE (1); SENECA (usnm,rc); SULLIVAN (1); TIOGA (td); TOMPKINS (1,fscs,usnm,td,rc)

Western: ALLEGANY (rc); CATTARAUGUS (td,rc,db,bms); ERIE (1,bms); MONROE (rc,bms); NIAGARA (1,bms); ONTARIO (rc); ORLEANS (usnm); SCHUYLER (rc); STEUBEN (rc); LIVINGSTON (1); WYOMING (bms); YATES (rc)

Hudson: ALBANY (1,ny); COLUMBIA (1,fscs); GREENE (1,ny); ORANGE (td,ks,ob); PUTNAM (ks); ROCKLAND (ks); ULSTER (fscs,fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Bronx (1), Manhattan (10), Queens (1), Staten I (1); SUFFOLK (1,r,usnm,ob)

5 May - 7 Sept

Perhaps the most widely distributed of all pond dragonflies in the eastern and central United States. This distinctively marked species is one of the most tolerant of minor pollution.

[156] *LIBELLULA NEEDHAMI* Westfall

*Libellula auripennis* (1)

Hudson: ROCKLAND: Doodletown, Iona I (ks); WESTCHESTER: Cliffdale Pd (ks), Teatown Lk (ks)

Downstate: NEW YORK CITY: Brooklyn, Coney I (1), Staten I (1,bms); SUFFOLK: Wading R (1), Long Pd (1), Shelter I (1), Greenport (1)

May - Aug

Westfall (1943) showed that most, but not all, coastal plain populations were not *auripennis* but his new species *needhami*, and I have interpreted the New York and Long Island records of *auripennis* in (1) as belonging to this species. I have been able to confirm one of Davis' specimens from Staten Island as this species, but I have not seen the Long Island specimens. *L. needhami* is tolerant of mildly brackish water.

[157] *LIBELLULA PULCHELLA* Drury

Northern: ESSEX (1); FRANKLIN (1,17); HAMILTON (hw,ny); HERKIMER (1); ONEIDA (rc); ST LAWRENCE (fscs,rc)

Central: BROOME (td); CHENANGO (td); CORTLAND (td,rc); DELAWARE (1,td); OTSEGO (7); SCHOHARIE (1); SENECA (rc); SULLIVAN (18,td); TIOGA (td); TOMPKINS (1,fscs,usnm,td,rc)

Western: CATTARAUGUS (rc,db,bms); ERIE (1,bms); MONROE (rc); NIAGARA (1,fscs); ONTARIO (rc); ORLEANS (usnm); SCHUYLER (rc); STEUBEN (rc); LIVINGSTON (1); YATES (rc)

Hudson: GREENE (1); ORANGE (td,ks); PUTNAM (ks); ROCKLAND (ks); ULSTER (1,fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1), Brooklyn (1), Manhattan (10), Staten I (1,usnm); SUFFOLK (1,ob)

24 May - 15 Sept

One of the most common and conspicuous pond dragonflies in the eastern and central United States.

[158] *LIBELLULA QUADRIMACULATA* Linnaeus

Northern: ESSEX (1); FRANKLIN (1); HAMILTON (hw,ny); HERKIMER (1); ONEIDA (usnm,rc); ST LAWRENCE (fscs)

Central: BROOME (fscs,iori,td); CHENANGO (td); OTSEGO (7); SCHOHARIE (1); SENECA (rc); SULLIVAN (ks); TIOGA (td); TOMPKINS (1,fscs)

Western: ERIE (1,bms); GENESEE (rc); MONROE (rc); NIAGARA (1); SCHUYLER (rc); STEUBEN (rc); LIVINGSTON (1)

Hudson: ALBANY (1); ORANGE (ks); ROCKLAND (ks); ULSTER (1,17,fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Staten I (1)

25 May - Aug

A locally common northern species which prefers heavily vegetated ponds.

[159] *LIBELLULA SEMIFASCIATA* Burmeister

Central: BROOME (td)

Western: ERIE (1); MONROE (1)

Hudson: ORANGE (ks,ab); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Manhattan (10), Queens (1), Staten I (1); SUFFOLK (1,r,td,ob)

April - Sept

A southern pond species which occurs sporadically in the upstate. In Broome Co. it was common in 1970 and 1983 but absent in other years during the period 1967 - 1990.

[160] *LIBELLULA VIBRANS* Fabricius

*L. axilena* var. *vibrans* (13)

Hudson: ORANGE: Harriman St Pk (ab); ULSTER (fh); WESTCHESTER: Pound Ridge Res (ks), Lk Oscaleta (ks), Manursing I (ks)

Downstate: NEW YORK CITY: Manhattan, Central Park (10), Staten I (1)

16 June - Aug

A southern species found around ponds with wooded swampy borders.

[161] *NANNOTHEMIS BELLA* (Uhler)

Northern: ESSEX: Mt Marcy 4500' (1); HAMILTON: 8 mi NW Long Lk (td); ONEIDA: 5 mi N Otter Lk (usnm)

Central: BROOME: Marsh Pd, town of Sanford (L. Hornuff,td); SENECA: Junius (fsca,cu)

Western: GENESEE: Bergen Swamp (4,rc)

Hudson: ULSTER: "probably vic. Mirmewaska Lk" (fh); WESTCHESTER (13)

Downstate: NEW YORK CITY (1), Staten I, Four Corners (1); SUFFOLK: Yaphank (1,bms), Wyandanch (1), Belmont Lk St Pk (fsca), Riverhead (rl,usnm), Sag Harbor (rl), Cranberry Bog Co Pk (ob)

28 May - 2 Sept

A local species generally confined to sphagnum bogs.

[162] *PACHYDIPLAX LONGIPENNIS* (Burmeister)

Northern: ONEIDA (rc)

Central: BROOME (td); SENECA (rc); SULLIVAN (ks); TIOGA (td); TOMPKINS (1,td,rc)

Western: CATTARAUGUS (db); ERIE (1); GENESEE (bms); MONROE (1); NIAGARA (1); SCHUYLER (rc); WYOMING (bms); YATES (rc)

Hudson: ORANGE (td,ks); PUTNAM (1,ks); ROCKLAND (ks); ULSTER (fsca,fh); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (10), Bronx (1), Brooklyn (1), Queens (1); NASSAU (ob); SUFFOLK (rl,usnm,ob)

May - 20 Sept

A widespread pond species which is somewhat local in upstate New York.

[163] *PANTALA FLAVESCENS* (Fabricius)

Northern: CLINTON (td); ESSEX (seen,td)

Central: BROOME (td); CORTLAND: Virgil (seen,kt); SENECA: Montezuma NWR (usnm), Junius Pds (rc)

Western: CATTARAUGUS (db); MONROE: Rochester (1)

Hudson: ROCKLAND: Iona I (ks); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Manhattan (10), Staten I (1)

18 June - 4 Oct

A worldwide tropical species which is scarce in the northeastern U.S. The species was abundant along the shores of Lake Champlain near Plattsburgh in late August, 1991, and many pairs were seen ovipositing. The occurrence was, however, a week after a hurricane swept through coastal New England, and these insects could have been carried northward by the storm. After this same storm, Ken Soltesz found this species in huge swarms in Westchester Co. However, the species was recorded for the first time in Broome County several weeks

before this storm. Probably the very hot weather of this summer was responsible for its appearance in the north.

According to Walker (1975), larvae are not viable in southern Canada; he believes all Canadian specimens are migrants from more southern localities.

[164] *PANTALA HYMENAEA* (Say)

Central: CHENANGO: Smithville Flats, seen 15 July 1984 (td); SENECA: Canoga (rc)

Western: ONTARIO: Geneva, seen 4 July 1987 (rc)

Hudson: WESTCHESTER: Cliffdale Pd (ks), (ks), Manursing I (ks), Rt 6 overlook, Hudson R, seen 26 Aug 1988 (hw); Pound Ridge Res (ks)

Downstate: NEW YORK CITY: Manhattan, Central Park (10)

24 June - 26 Aug

A southern species which is sighted sporadically in New York. There appear to have been many northern records during the exceptionally warm summer of 1988.

[165] *PERITHEMIS TENERA* (Say)

*P. domitia tenera* (12), *P. domitia* (13)

Central: BROOME (td); CHENANGO (td); OTSEGO (7); SENECA (rc); SULLIVAN (ks); TIOGA (td)

Western: ERIE (bms); ONTARIO (rc)

Hudson: DUTCHESS (ks); ORANGE (ks); PUTNAM (1,fsca,ks); ROCKLAND (ks); ULSTER (fsca,fh); WESTCHESTER (1,usnm,ks)

Downstate: NEW YORK CITY (1), Bronx (1), Brooklyn (1), Manhattan (10), Queens (1), Staten I (1); SUFFOLK (1,ob)

1 June - 11 Sept

A distinctive, small orange-winged species found on ponds and small lakes.

[166] *SYMPETRUM CORRUPTUM* (Hagen)

*Diplax corrupta* (14)

Central: TOMPKINS: Ithaca (4,td)

Western: ERIE: Buffalo (1); MONROE: Rochester (1)

Downstate: NEW YORK CITY: Staten I, shore at Ellingville (1), New Dorp (1), Dongan Hills (1)

May - Sept

This is an abundant pond dragonfly in the central and western United States but is sporadic in the east.

[167] *SYMPETRUM COSTIFERUM* (Hagen)

*Diplax costifera* (14)

Northern: FRANKLIN (1,17,fsca,td); HAMILTON (fsca,td,rc)

Central: BROOME (td); CORTLAND (kt,td); DELAWARE (td); OTSEGO (7); TOMPKINS (4,usnm, td)

Western: ERIE (1)

Hudson: GREENE (ny)

Downstate: SUFFOLK (1)

July - 22 Sept

This is an Adirondack and Catskill pond and lake species that spreads south and west sporadically. In Ithaca it was "abundant in 1926" (4). I found it common at SUNY Binghamton in 1971.

[168] *SYMPETRUM DANAE* (Sulzer)

Northern: ESSEX: Newcomb (td)

Western: GENESEE: Bergen Swamp (4)

17 - 25 Aug

This is a boreal pond species that should be sought in the Adirondacks.

[169] *SYMPETRUM INTERNUM* Montgomery

*S. decisum* (1); *S. rubicundulum* (in part, 1), ?*S. assimilatum* (17)

Northern: ESSEX (1); FRANKLIN (17); HAMILTON (hw,fscs,ny); LEWIS (fscs); ONEIDA (usnm); OSWEGO (td); ST LAWRENCE (1); WARREN (1)

Central: BROOME (fscs,td); CAYUGA (usnm); CHENANGO (td,kt); CORTLAND (fscs,td,rc); DELAWARE (td); MONTGOMERY (td); ONONDAGA (td); OTSEGO (7); TIOGA (td); TOMPKINS (fscs,td,rc,kt)

Western: CATTARAUGUS (db); ERIE (bms); GENESEE (rc,bms); MONROE (bms); ONTARIO (rc); SCHUYLER (fscs,td,rc); STEUBEN (fscs,rc); YATES (rc)

Hudson: ALBANY (usnm,ny); GREENE (1,ny,bms); ORANGE (ob); ROCKLAND (fscs); ULSTER (fscs,fn); WESTCHESTER (ks)

Downstate: NEW YORK CITY: Manhattan (10); NASSAU (ob)

14 June - 13 Oct

Recorded in (1) as *S. rubicundulum*. I believe these records, except from the western part of the state, are mainly *internum*. Counties from which I have not seen specimens for confirmation are shown in italics and should be regarded as only provisional records for *internum*.

This is an abundant, widely distributed, late-season dragonfly found around small ponds, especially those with thick surrounding vegetation. The very similar species *S. rubicundulum* (q.v.), has a limited occurrence in New York.

[170] *SYMPETRUM OBTRUSUM* (Hagen)

*Diplax corrupta* (14)

Northern: ESSEX (1,usnm,td); FRANKLIN (1,usnm,td); HAMILTON (1,hw,fscs,usnm,td,ny,rc); LEWIS (fscs); OSWEGO (1); ST LAWRENCE (1,td,rc)

Central: BROOME (td); CAYUGA (1); CORTLAND (td); SENECA (rc); TOMPKINS (fscs,usnm,kt)

Western: CATTARAUGUS (db); ERIE (1,bms); GENESEE (rc); SCHUYLER (usnm,rc)

Hudson: ALBANY (1)

Downstate: NEW YORK CITY: Manhattan (10), Staten I (1); SUFFOLK (usnm)

June - 28 Sept

A northern pond species which occurs sporadically south and west of the Adirondacks.

*SYMPETRUM OBTRUSUM X INTERNUM*

An apparent hybrid male was taken in September, 1968, by T. Donnelly on the campus of the State University of New York at Binghamton. It is morphologically intermediate between the two species, with a dull brownish face color.

[171] *SYMPETRUM RUBICUNDULUM* (Say)

*Diplax rubicundula* (14)

Central: CORTLAND: Gracie (rc), TOMPKINS: Ithaca (usnm)

Western: CATTARAUGUS: East Randolph, Allegany St Pk (db); ERIE (bms); MONROE (bms); NIAGARA (1,bms); ONTARIO: Geneva (rc); ORLEANS: Medina (fscs,usnm); WYOMING (1, bms); YATES: Himrod (rc)

Downstate: SUFFOLK: Greenport (usnm)

16 June - 28 Sept

This is a southern species with local, well-established occurrences in the northeastern U.S., mainly close to the ocean. There are several records from the region between Buffalo and Rochester, and this species might prove to be more abundant than *internum* in this part of the state.

The above records are either confirmed by me or otherwise considered by me to be reliable. I have not confirmed the records listed under this name in (1); they probably refer mainly to *S. internum*. I have placed the records from Niagara and Wyoming Cos. here because I have confirmed some specimens of this species from this county, and none of *internum*. The Cattaraugus Co. records are probably reliable; Borror determined these only a few years after the publication of Williamson's (1933) very clear paper on this species.

[172] *SYMPETRUM SEMICINCTUM* (Say)

*Diplax semicincta* (13)

Northern: ESSEX (1,td); FRANKLIN (td); HAMILTON (hw,rc); ST LAWRENCE (1,td); WARREN (1)

Central: BROOME (td); CORTLAND (kt); ONONDAGA (td); OTSEGO (7); TOMPKINS (1,17,fscs)

Western: CATTARAUGUS (db); ERIE (bms); GENESEE (rc); NIAGARA (1); ORLEANS (fscs); WYOMING (1,bms); YATES (rc)

Hudson: GREENE (1); ORANGE (ks); ULSTER (fscs,fn); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY: Bronx (1), Staten I (1); SUFFOLK (1,ob)

1 July - 10 Oct.

A widespread but rarely abundant species of vegetated ponds and swamps.

[173] *SYMPETRUM VICINUM* (Hagen)

*Diplax vicina* (14)

Northern: ESSEX (1); FRANKLIN (1,17,usnm,td); HAMILTON (1,hw,fscs,ny,rc); LEWIS (fscs); OSWEGO (td)

Central: BROOME (td); CHENANGO (td,kt); CORTLAND (td,kt); MONTGOMERY (td); ONONDAGA (td); OTSEGO (7); SCHOHARIE (1); SULLIVAN (1); TIOGA (td); TOMPKINS (1,fscs,usnm,td,kt)

Western: CATTARAUGUS (db); CHAUTAUQUA (db); ERIE (bms); GENESEE (rc,bms); NIAGARA (1); ONTARIO (rc); SCHUYLER (fscs,usnm,rc,kt); STEUBEN (fscs,rc); WAYNE (rc)

Hudson: GREENE (1); ORANGE (1,ks,bms); PUTNAM (ks); SARATOGA (1); ULSTER (1,fscs,fn); WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1), Manhattan (10), New York City (1), Staten I (1); SUFFOLK (1,ob)

29 June - 23 Nov

An abundant, late season species found especially in grassy marshes.

[174] *TRAMEA CAROLINA* (Linnaeus)

Central: SCHOHARIE: Schoharie (1,14)

Hudson: WESTCHESTER (1,ks)

Downstate: NEW YORK CITY (1), Manhattan (10), Staten I (1); SUFFOLK (1,td,ob)

Apr - Oct

A southern pond species which is widespread in coastal counties. There is one old upstate record (14).

[175] *TRAMEA LACERATA* Hagen

Central: BROOME (td); SENECA (rc); TIOGA (td); TOMPKINS (1,usmm,td)

Western: ERIE (1,bms); MONROE (1); ONTARIO (rc); SCHUYLER (td,rc); WYOMING (bms)

Hudson: ORANGE (1); ULSTER (fh); WESTCHESTER (ks)

Downstate: NEW YORK CITY: Manhattan (10), Staten I (1); NASSAU (ob); SUFFOLK (ob)

1 June - Oct

A common pond species.

CORTLAND: Gracie (rc), TOMPKINS: Ithaca (usnm)

CATTARAUGUS: East Randolph, Allegany St Pk (db); ERIE (bms); MONROE (bms); NIAGARA (1,bms); ONTARIO: Geneva (rc); ORLEANS: Medina (fscs,usnm); WYOMING (1,bms); YATES: Himrod (rc)

SUFFOLK: Greenport (usnm)

16 June - 28 Sept

This is a southern species with local, well-established occurrences in the northeastern U.S., mainly close to the ocean. There are several records from the region between Buffalo and Rochester, and this species might prove to be more abundant than *internum* in this part of the state.

The above records are either confirmed by me or otherwise considered by me to be reliable. I have not confirmed the records listed under this name in (1); they probably refer mainly to *S. internum*. I have placed the records from Niagara and Wyoming Cos. here because I have confirmed some specimens of this species from this county, and none of *internum*. The Cattaraugus Co. records are probably reliable; Borror determined these only a few years after the publication of Williamson's (1933) very clear paper on this species.

#### [172] SYMPETRUM SEMICINCTUM (Say)

*Diplax semicincta* (13)

ESSEX (1,td); FRANKLIN (td); HAMILTON (hw,rc); ST LAWRENCE (1,td); WARREN (1)

BROOME (td); CORTLAND (kt); ONONDAGA (td); OTSEGO (7); TOMPKINS (1,17,fscs)

CATTARAUGUS (db); ERIE (bms); GENESEE (rc); NIAGARA (1); ORLEANS (fscs); WYOMING (1,bms); YATES (rc)

GREENE (1); ORANGE (ks); ULSTER (fscs,fh); WESTCHESTER (1,ks)

NEW YORK CITY: Bronx (1), Staten I (1); SUFFOLK (1,ob)

1 July - 10 Oct.

A widespread but rarely abundant species of vegetated ponds and swamps.

#### [173] SYMPETRUM VICINUM (Hagen)

*Diplax vicina* (14)

ESSEX (1); FRANKLIN (1,17,usnm,td); HAMILTON (1,hw,fscs,ny,rc); LEWIS (fscs); OSWEGO (td)

BROOME (td); CHENANGO (td,kt); CORTLAND (td,kt); MONTGOMERY (td); ONONDAGA (td); OTSEGO (7); SCHOHARIE (1); SULLIVAN (1); TIOGA (td); TOMPKINS (1,fscs,usnm,td,kt)

CATTARAUGUS (db); CHAUTAUQUA (db); ERIE (bms); GENESEE (rc,bms); NIAGARA (1); ONTARIO (rc); SCHUYLER (fscs,usnm,rc,kt); STEUBEN (fscs,rc); WAYNE (rc)

GREENE (1); ORANGE (1,ks,bms); PUTNAM (ks); SARATOGA (1); ULSTER (1,fscs,fh); WESTCHESTER (1,ks)

NEW YORK CITY (1), Manhattan (10), New York City (1), Staten I (1); SUFFOLK (1,ob)

29 June - 23 Nov

An abundant, late season species found especially in grassy marshes.

#### [174] TRAMEA CAROLINA (Linnaeus)

SCHOHARIE: Schoharie (1,14)

WESTCHESTER (1,ks)

NEW YORK CITY (1), Manhattan (10), Staten I (1); SUFFOLK (1,td,ob)

Apr - Oct

A southern pond species which is widespread in coastal counties. There is one old upstate record (14).

#### [175] TRAMEA LACERATA Hagen

BROOME (td); SENECA (rc); TIOGA (td); TOMPKINS (1,usnm,td)

ERIE (1,bms); MONROE (1); ONTARIO (rc); SCHUYLER (td,rc); WYOMING (bms)

ORANGE (1); ULSTER (fh); WESTCHESTER (ks)

NEW YORK CITY: Manhattan (10), Staten I (1); NASSAU (ob); SUFFOLK (ob)

1 June - Oct

A common pond species.

#### DISCREDITED SPECIES

*Gomphus cornutus* Tough

Misidentified (1); see under *Arigomphus furcifer*.

*Somatochlora semicircularis* (Selys)

This name, listed in (1), now refers to a species confined to the western United States and Canada. In Walker (1925) eastern specimens which had been given this name are referred to *S. kennedyi*. The appearance of this name in (1) is mysterious, because Walker, who was a collaborating author of (1), had published his monograph on the genus only three years earlier.

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