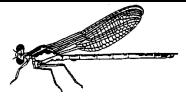
Ode News



An Occasional Newsletter about Dragonflies and Damselflies in Southern New England

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In the last issue of *Ode News*, we predicted an eventful field season in 2001 and that certainly proved to be true. The number of people out looking for odes continues to grow, with gratifying results. Many of the most interesting reports this year came from folks who are still quite new to this dragonfly watching business! The weather cooperated quite

nicely this season, with the exception of a soggy June.

A multi-session odonate workshop conducted by Dave Small and Gail Howe at Millers the River Environmental Center in Athol, MA, was a success great turned up two species Worcester new to County, both statelisted, bringing that odonate-rich large, counties' species total to 125. Dave McLain Fred Morrison and continued their efforts along the Connecticut

Arrowhead Spiketail (*Cordulegaster obliqua*) — male

This large, handsome dragon, an inhabitant of tiny, often semi-permanent, shaded streams, was found at several new sites in 2001.

River and elsewhere in the Connecticut River Valley, turning up a variety of noteworthy species. Dave submitted records of several species new for Hampden County as well as a few new ones from Hampshire and Franklin counties. Blair Nikula conducted surveys in Berkshire County searching, unsuccessfully, for the federally endangered Hine's Emerald (*Somatochlora hineana*), but finding several state-listed species as well as five new county records.

Fred SaintOurs continued his field work in the North River watershed in northern Plymouth County and turned up some good things in that area as well as in little-worked Suffolk County. Rick Heil monitored odonate movements on Plum Island, detecting the most surprising event of the season, and continued his observations of evening swarms in West Newbury, while Fred Goodwin monitored evening swarms in Topsfield for the sixth consecutive season. Jim MacDougall and Leah Gibbons searched for

Ringed Boghaunter (Williamsonia lintneri) early in the season, each discovering a new site for that imperiled species. Maria Aliberghti and Mark Chandler surveyed aquatic invertebrates on Nantucket and found several new species for that little known island. Whew! It's becoming increasingly difficult to keep tabs on all of the activities and new discoveries!

This issue is devoted almost entirely to the many highlights from the past field season in

southern New England, especially Massachusetts. Although we received no summary from Rhode Island, Mike Thomas provides a brief review of the season in Connecticut.

Inside this Issue:

2001 Massachusetts Highlights	2
News from the Ode West	9
Connecticut Highlights	10

2001 MASSACHUSETTS HIGHLIGHTS

The 2001 field season was very productive with numerous highlights. Although there were no new state records, at least 55 new county records were tallied in Massachusetts this past summer — a remarkable number — while another 15 county records were upgraded from historical to recent! In part, this resulted from field work in two poorly surveyed counties: Nantucket and heavily urbanized Suffolk.

The weather was generally favorable throughout the season, the only significant precipitation falling during June. Water levels were low throughout the region. April was warm and dry, and the season's first odonate was, as usual, a Common Green Darner (Anax junius), spotted by Noble Proctor on the 14th of the month in Connecticut. The warm, dry weather continued through May and produced a flurry of early sightings (see Ode News, Vol. VIII, No. 1, for some of the early highlights). Temperatures remained above normal into June, but finally there was significant rainfall, with much of the region receiving at least several inches of precipitation, recharging, though only temporarily, the flagging water levels at many wetlands. Dry weather returned in July, but temperatures averaged 2-4 degrees below normal. Fairly typical weather prevailed through the late summer into the fall, but exceptionally warm and dry conditions closed out the season. Consequently, a few Yellow-legged Meadowhawks (Sympetrum vicinum) were still on the wing into late November!

Observers: Maria Aliberghti, Stan Bolton, Bob Bowker, Brian Cassie, Fred Goodwin, Ken Harte, Rick Heil, Dick Hildreth, Gail Howe, Jennifer Loose, Jim MacDougall, Dave McLain, Mark Mello, Fred Morrison, Mike Nelson, Blair Nikula, Dennis Peacock, Fred SaintOurs, Dave Small, Jackie Sones, Mike Thomas, Jeremiah Trimble, Peter Trimble, Michael Veit, Dave Wagner. Letters in brackets following the species name indicate Massachusetts state-listing designations: [E] = Endangered; [T] = Threatened; [SC] = Special Concern.

Sparkling Jewelwing (*Calopteryx dimidiata*): Following a sight record last year, at least 10 individuals of this southern jewelwing were present along the Shawsheen River in Andover on 14 July (RH); a male was collected providing a first confirmed Essex County record.



Sparkling Jewelwing — male (Calopteryx dimidiata)

Ebony Jewelwing (*Calopteryx maculata*): Although a very common resident of streams and rivers throughout the state, a solitary male flying north through the dunes on Plum Island, Essex County on 19 June (RH) was far from suitable habitat and a surprising sight.

American Rubyspot (*Hetaerina americana*): The only report we received of this striking (and apparently declining) damselfly was from the Connecticut River on 19 August (DS).

Lyre-tipped Spreadwing (*Lestes unguiculatus*): The current status and distribution of this attractive spreadwing in southern New England is an enigma. The historical record suggests that the Lyre-tipped Spreadwing was once fairly common, but there have been very few reports over the past decade or more. All recent occurrences have been from south coastal areas, especially Cape Cod. Continuing that trend, at least two males and a female were found on 7 July at Fort Hill in Eastham (BN, JS), in a field adjacent to a large salt marsh — their origins a mystery.

Blue-fronted Dancer (*Argia apicalis*): This handsome dancer was found on 7 July at a couple of sites on the Neponset River in the Neponset River Reservation in Milton, on the border of Norfolk and Suffolk counties, providing a first for the latter county (FS). Blue-fronted Dancers are known from only a few riverine sites in Massachusetts.

Taiga Bluet (*Coenagrion resolutum*): A single male captured in a Groton swamp on 10 June (MV) was a first for Middlesex County. To our knowledge, this is only the third record of this northern damselfly in Massachusetts over the past decade.

Tule Bluet (Enallagma carunculatum) [SC]: This large bluet was found at two new sites in Berkshire County (BN), one in Adams and the other in Washington; the species seems to be fairly common and widespread in western portions of the state.

Attenuated Bluet (*Enallagma daeckii*) [**SC**]: The only report for this scarce southern bluet came from Canton where five males were found on 9–10 July (FS).

Big Bluet (*Enallagma durum*): This large southern bluet was collected at Dwelley's Creek in Norwell during early July (FS), providing the first confirmed record for the North River watershed in Plymouth County.

Scarlet Bluet (Enallagma pictum): A single individual at the Ashley Reservoir in Holyoke in June (DM) was a first for Hampden County and by far the furthest inland the species has yet been found. The Scarlet Bluet is a northeastern endemic with a very limited range extending from New Jersey to southern Maine. A large percentage of the population appears to be in southeastern Massachusetts. The species has been proposed for state-listing.

Pine Barrens Bluet (Enallagma recurvatum) [T]: We're aware of only one record of this species this year, a single male in Harwich on 7 June (BN). The paucity of reports presumably reflects a lack of coverage in appropriate sites early in the season.

Lilypad Forktail (*Ischnura kellicotti*): Three females at the Kampoosa Bog pond in Stockbridge on 18 August (BN) provided a first Berkshire County record.



Lilypad Forktail — female (Ischnura kellicotti)

Rambur's Forktail (*Ischnura ramburii*): This southern damsel was reported only from South Monomoy Island in Chatham where a single male was seen on 26 August (BN).

Lake Darner (*Aeshna eremita*): A single male of this northern darner was netted on 28 July at the summit of Mt. Everett in the town of Mount Washington in the extreme southwest corner of the state (BN), the southernmost record in New England. The only other recent records in Massachusetts are also from a mountaintop, Mt. Watatic in Ashburnham.

Variable Darner (*Aeshna interrupta*): A female at the summit of Mt. Watatic in Ashburnham on 28 June (FS) was rather early. The species was numerous on Mt. Greylock on 22 July (BN), as well as on Mt. Everett on 28 July (BN), the latter location new and the southernmost known in Massachusetts. Variable Darners seem to be rather scarce and locally distributed in western and north-central portions of the state, but, curiously, seem to be the predominant species among the darner swarms on mountaintops.

Spatterdock Darner (*Aeshna mutata*) [E]: In addition to a number of records from typical locations in eastern Massachusetts, a male captured in Sandisfield on 9 June (BN) provided a first Berkshire County record.

Subarctic Darner (Aeshna subarctica): This late season, northern darner was present again at a small fen in Ashburnham where 10 males were netted and an ovipositing was female seen on 9 September (BN). The first state record for the species came from this site in 1995 and the species was present in numbers the following two years. It was unrecorded here from 1998 through 2000, though coverage of the site was rather limited. The site has been heavily impacted by beavers and it was feared that it had been made unsuitable for the species, so it is encouraging that so many were present there this year. A single male was also captured at a second site in Ashburnham on 9 September (BN), a bog where the species was first found last year. This species, known in Massachusetts only from these two sites, is being proposed for state-listing.

Green-striped Darner (*Aeshna verticalis*): A single male captured at Kampoosa Bog in Stockbridge on 18 August (BN) was an overdue first for Berkshire County.

Comet Darner (Anax longipes) [SC]: Among the very few reports of this spectacular dragon was a recently emerged individual in Dennis on the late date of 30 July (JL). Most surprising was a report of 8+ individuals, with one of each sex netted, among a swarm of darners at World's End in Hingham on 13 August (DP). We're unaware of any previous reports of this species participating in feeding swarms.

Swamp Darner (*Epiaeschna heros*): The few records for this huge southern darner included one in Ayer on 10 June (MV *et al.*), a recently emerged adult on Nantucket in mid-June (MA), a female netted in Holliston on 4 July (BN *et al.*), and a female ovipositing in rotting wood in a tiny stream in Hanson on 23 July (FS).

Taper-tailed Darner (*Gomphaeschna antilope*): One of the most amazing events this season was an incursion of this southeastern species into Massachusetts. On 19 June, a sunny, hot day with brisk southwest winds, Rick Heil noted a movement of dragonflies heading north through the dunes of Plum Island in Newburyport (Essex County). Among these were about 40 small darners, four of which Rick caught and determined were Gomphaeschnas, initially assuming them to be Harlequin Darners (G. furcillata), a fairly common widespread species in southern New England, but a species not known to undergo migratory-type movements. He kept two as specimens and was surprised upon further examination that evening to realize that they were actually Taper-tailed Darners, a species recorded only twice previously in New England (once in Massachusetts)! Subsequently, one male was captured among the evening swarms in West Newbury on 23 June (RH), one in Topsfield on the same date (JM), and another in Holliston (site of the only previous state record) on 27 June (BN). Rick also saw another 4–5 darners which appeared to be this species on Plum Island on 2-3 July. The Essex County records are the northernmost yet known for the species, which until recently was unknown north of New Jersey. There are no previous reports of this species, or genus, in situations that suggest migration or movements of any sort.

Cyrano Darner (*Nasiaeschna pentacantha*): The only reports of this husky, early season darner were four individuals in Haverhill on 14 June (RH), one netted in Orange on 16 June (DS *et al.*), and one seen in Uxbridge on 4 July (MV).

Spine-crowned Clubtail (*Gomphus abbreviatus*)[**E**]: Adults of this small clubtail were found, most unexpectedly, from two sites in southeastern Massachusetts. One apparently incapacitated male was picked up on a dirt road in Mashpee on an unrecorded date in mid-June (PT), the only Cape Cod record since the type specimen was purportedly collected in Provincetown over a century ago! Suitable riverine habitat is virtually lacking on Cape Cod, so these individuals presumably wandered out from the mainland. The first records for Plymouth County came from the Indian Head River in Hanover where a male was captured on 6 June and a female on 26 June (FS). Additionally, exuviae were found on the Connecticut River in Gill, the Mill River in Northampton, the Mill River in Hatfield (a different Mill River!), and the Westfield River in Huntington (DM).



Beaverpond Clubtail — male (Gomphus borealis)

Beaverpond Clubtail (*Gomphus borealis*) [SC]: Surveys in Berkshire County turned up this species at six sites during the period 9–24 June (BN), with as many as 15 individuals estimated at one site in Savoy on 24 June. The species was also found in northern Worcester County and several individuals were found on three dates during the period 26 May–14 June at a beaver dam in Pepperell, the first modern record for Middlesex County (and the historical record apparently is questionable).

Harpoon Clubtail (*Gomphus descriptus*) [**E**]: The only record of this scarce clubtail was a single male found on the West Branch Farmington River in Sandisfield on 9 June (BN).

Midland Clubtail (Gomphus fraternus) [E]: Four exuviae of this rare clubtail were found along the

Connecticut River in Gill on 14 June (DM, FM). Adult Midland Clubtails have not been recorded in the state since 1971, although a couple were found further down the river in Connecticut this year (see page 10).

Cobra Clubtail (*Gomphus vastus*) [SC]: This species was found at two sites on the Connecticut River, one in Gill where both adults and exuviae were numerous from mid-June into mid-July, and in Holyoke where exuviae were found in June (DM). Exuviae were also found on the Mill River in Northampton (a tributary of the Connecticut) during June (DM).

Skillet Clubtail (*Gomphus ventricosus*) [**SC**]: Exuviae of this handsome clubtail were found along the Connecticut River in Hadley during June (DM), on the Mill River in Northampton on 17 June (DM), and the Mill River in Hatfield (DM). As many as 15 adults were in a field near the Connecticut River in Holyoke on 24 June (DW *et al.*).

Southern Pygmy Clubtail (*Lanthus vernalis*): A new site for this tiny clubtail, the third for Plymouth County and the North River watershed, was discovered in Marshfield (FS); all three sites are small, groundwater-fed trout streams. This species was also found at Heald Pond in Pepperell on 18 May (FG).

Brook Snaketail (*Ophiogomphus aspersus*) [**SC**]: Sixteen exuviae were found along the Squannacook River in Groton on 1 June (MV) and a worn female was caught in a field near the river on 7 July (MV).

Rusty Snaketail (*Ophiogomphus rupinsulensis*): Exuviae of this scarce (and declining?) clubtail were found along the Connecticut River in both Holyoke and Gill, and along the Mill River in Northampton (DM, FM).

Riverine Clubtail (*Stylurus amnicola*) [**E**]: A few exuviae of this elusive clubtail were found at three sites along the Connecticut River in the towns of Gill, Hadley, and Holyoke, all during late June and July (DM, FM).

Zebra Clubtail (*Stylurus scudderi*) [**E**]: A teneral captured in the Birch Hill W.M.A. in Winchendon on 15 July (DS *et al.*) represents a first Worcester County record for this striking clubtail. Eight males



Riverine Clubtail — male (Stylurus amnicola)

over the Nashua River in Harvard (MV) on 30 August were at a previously unknown site. Exuviae were found at the Fort River in Hadley, the Manhan River in Southampton, and the Mill River in Northampton, while both exuviae and adults were on the Mill River in Hatfield and Whatley (DM, FM).

Arrow Clubtail (*Stylurus spiniceps*) [T]: Six exuviae found on the Nashua River in Harvard on 30 August (MV) were not far from the stretch of river where this late season clubtail was first discovered in 2000. Exuviae were also found at four sites along the Connecticut River in July, in the towns of Holyoke, Hadley, Northampton, and Gill; tenerals were also observed at the latter site (DM, FM).

Arrowhead Spiketail (Cordulegaster obliqua): This large handsome species has averaged only one or two reports per year recently. This year, however, individuals were found at several sites, many of them new. As seems typical, most were within the socalled Route 495 corridor in eastern portions of the state. The first was found at a small, disturbed stream in Sherborn on 14 June (BB); four individuals (one collected, others photographed) were in this area the following day (DH). On 27 June, an ovipositing female was seen at an inlet stream on Bent Pond in Gardner (DH). As many as two individuals were seen and photographed in Acton on several dates from late June-7 July (SB). One in Foxboro on 30 June (GH) was the first modern record for Norfolk County. Additionally, in Plymouth County one was near the Drinkwater River in Hanover on 27 June and others were found at six sites in the North River watershed (FS et al.).

Uhler's Sundragon (*Helocordulia uhleri*): A pair in the wheel at Ashley Lake in Washington on 10 June (BN) provided an overdue first for Berkshire County.

Umber Shadowdragon (*Neurocordulia obsoleta*) [SC]: This elusive species was found again at the Indian Head River in Hanover, where over 50 exuviae were counted on 6 June and adults were observed on several nights in mid-June, appearing punctually at 8:15 pm and disappearing by 8:45 pm (FS). Exuviae were found along the Connecticut River in Northampton, Holyoke, and Gill, and on the Mill River in Northampton (DM, FM).

Stygian Shadowdragon (*Neurocordulia yamaskanensis*): Exuviae of this crepuscular dragonfly were found along the Connecticut River in Gill, Sunderland, and Holyoke (DM, DW). This species, known in Massachusetts only from the Connecticut River, has been proposed for state-listing.

Forcipate Emerald

(Somatochlora forcipata): This northern emerald was found again at a bog in Ashburnham where it was first discovered last year; three males were captured here on 3 July (MV). Even more notable was a male netted in Groton on the early date of 7 June (MV), both the easternmost and earliest record in the state. Forcipate Emeralds have now been recorded at six sites in the state; the species is being proposed for state-listing.

Copperv Emerald

(Somatochlora georgiana)
[E]: Although eluding capture, individuals of what were almost certainly this species were seen again in West Newbury, a single on 27 June and at least three on 9 July (RH et al.).

Kennedy's Emerald (*Somatochlora kennedyi*) [**E**]: A single female captured among an evening swarm in West Newbury on 25 June (RH) is the first of this rare, early season emerald in Massachusetts since 1989.

Mocha Emerald (Somatochlora linearis) [SC]: A teneral male captured along Phillip's Brook in Duxbury on 30 June (FS et al.) was a first for Plymouth County, while an exuvia at the same site confirmed breeding there; additionally, two females were netted in Norwell on 10 July (FS). Two individuals captured and photographed in Uxbridge on 14 July (DS et al.) provided a first Worcester County record. Additionally, as has been typical in recent years, this southern emerald was fairly numerous among evening swarms at sites in Essex and Middlesex counties (RH, JM, BN et al.).

Ebony Boghaunter (Williamsonia fletcheri) [E]: Records of Ebony Boghaunters came from two sites: the traditional Petersham site, where an early individual was caught on 14 May (MN) and a male was photographed on 1 June (SB); and from the recently discovered site in Ashburnham where eight individuals included two pairs in the wheel and an ovipositing female on 19 May (MV).



Forcipate Emerald — male (*Somatochlora forcipata*)

Ringed Boghaunter

(Williamsonia lintneri) [E]: Two new sites were found for this rare dragon, one in Ipswich where a small population was found on 7 May (JM), and the other in Rehoboth where a single adult was found on 29 April (LG). The species was also present at a traditional site in Canton on 7 May (SB) and 14 May (JL), and others were found in Concord on 6 May (K. Harte), Dracut on 21 May (M. Burne), and Rockport on 29 May (D. Pierson).

Bar-winged Skimmer

(Libellula axilena): A male captured at a small, swampy pond on the Massachusetts Military Reservation in Bourne on 21 July (PT) is

only the second record for the state (the previous in 1996) and the fourth for New England.

Painted Skimmer (*Libellula semifasciata*): This striking southern skimmer occurs annually in southern New England, but in highly variable

numbers. It's not clear whether populations in the region are self-sustaining, or whether they are dependent upon annual augmentation by immigrants from the south. Good numbers were noted this year, especially in the northeast corner of the state, *e.g.*, 22 were in Rockport on 26 June (FG). Among other records was one at the Neponset River Reservation on 15 July, another first for Suffolk County (FS).



Painted Skimmer — male (*Libellula semifasciata*)

Elfin Skimmer (*Nannothemis bella*): Of the several reports of this species, outstanding and curious was a concentration numbering several hundred adults adjacent to the capped landfill in Foxboro, from mid-June into mid-July (BC *et al.*). Difficult to categorize, the site is a rather barren seepage area, sparsely vegetated and lacking sphagnum.

Black Saddlebags (*Tramea lacerata*): Several individuals at two sites in Great Barrington on 16 June (BN) were the first recorded in Berkshire County.

New County Records: The increasing number of naturalists looking for odonates lead to no less than 55(!) new county records from Massachusetts during the 2001 field season, with an additional 15 county records upgraded from historical to current. Many of these new records resulted from the efforts of Fred SaintOurs in Suffolk County and Maria Aliberghti and Mark Chandler on Nantucket.

Suffolk County is very small, comprising essentially downtown Boston, with precious little natural habitat

and just a few small, highly disturbed wetlands located mostly in parks on the outskirts of the city. Thus, the paucity of records from the county (just 22 species known prior to 2001) reflects not only a near absence of field work, but a shortage of suitable habitat. During a couple of visits to the Fowl Meadow Reservation on the Neponset River, in the extreme southwest corner of Suffolk County, Fred turned up 15 new records for the county with an additional 4 upgrades from historical status. Most are common and widespread species, but a few such as Blue-fronted Dancer (Argia apicalis), Illinois River Cruiser (Macromia illinoiensis), and Clamp-tipped Emerald (Somatochlora tenebrosa) are somewhat surprising. The Suffolk County list now stands at 39 species and further dedicated efforts by diehards like Fred will undoubtedly add to this total.

In 1918, the "Godfather" of Massachusetts odonatology, R. Heber Howe, published a paper on the odonates of Nantucket (*The Dragon and Damselflies (Odonata) of Nantucket, Massachusetts*, Annual Report of the Maria Mitchell Association), documenting the occurrence of 21 species on this isolated island. However, the island has received little attention from odonatists since. Maria Aliberghti and Mark Chandler spent a few days surveying the freshwater invertebrates of the island's wetlands this summer, recording a number of odonates, at least 11 species of which were either new or unreported since Howe's early work.

MIGRATORY MOVEMENTS

Very few migratory movements, either northbound or southbound, were seen this year and the few reports involved relatively modest numbers. The only reports of northbound dragonflies in any numbers came from Plum Island, where Rick Heil made almost daily observations from May through October. The first significant movement was on 19 June when 100+ Common Green Darners (Anax junius), two Taper-tailed Darners (Gomphaeschna antilope) (plus another 40 darners that were probably this species; see page 4), three Twelve-spotted Skimmers (Libellula pulchella), 25+ Spot-winged Gliders (Pantala hymenaea), and four Black Saddlebags (*Tramea lacerata*) appeared. During 2–3 July, strong northwest then southwest winds pushed more dragonflies out to the island, though no obvious directional movement was detected. Among these

were 400+ Common Green Darners (3 July), 4–5 probable Taper-tailed Darners, three Twelve-spotted Skimmers, 30+ Blue Dashers (*Pachydiplax longipennis*), one Wandering Glider (*Pantala flavescens*), 25+ Spot-winged Gliders, and seven Black Saddlebags. Finally, on 25 July, Rick recorded 45 Common Green Darners, 40+ Blue Dashers, 40 Wandering Gliders (the first day this species was seen in numbers), nine Spot-winged Gliders, and one Black Saddlebags, though again no directional movement was apparent.

Brian Cassie, Dick Hildreth and others again monitored autumn butterfly migration along the south coast of Massachusetts in Westport and in the process kept track of migrant dragonflies they observed. On most days, very few dragonflies were seen. The one flight of any significance was on 2 September when Brian recorded 617 Common Green Darners, 212 Black Saddlebags, and four Wandering Gliders.

Along the Connecticut coast, where southbound movements in the late summer and early fall seem to be of greater frequency and magnitude than elsewhere in New England, significant movements were reported on only a couple of days. The following accounts are extracted from e-mail messages sent to the NEodes listserve:

On 22 August, with light northwest winds, Bob Muller noted a large movement of dragonflies through his yard in Milford. Based upon several one minute counts over an hour-long period, he estimated they were passing at a rate of over 2300/hour. The species composition consisted of, in decreasing order of abundance, Common Green Darner, Black Saddlebags, Spot-winged Glider, Wandering Glider, Swamp Darner (*Epiaeschna heros*), and Twelvespotted Skimmer.

On 5 September, Bill Yule visited Hammonasset Beach State Park in Madison, arriving at 9:30 am to find large swarms of Black Saddlebags, Common Green Darners, and Wandering Gliders hawking insects in sheltered clearings. By about 11:00 am, he noticed that a distinct westward movement along the shore, more or less into a brisk northwest wind, had developed. The rate of movement increased steadily until 2:00 pm when Bill had to leave. Based upon sample counts, Bill estimated that over the three-hour period Black Saddlebags increased from a rate of

about 1000/hour to 1400/hour and Common Green Darners from 200/hour to 450/hour. Wandering Gliders numbers were sporadic but averaged about 50/hour with a scattering of Spot-winged Gliders mixed in. Bill also noted that he saw no mature male Common Green Darners, which seems quite typical during these fall movements.

On the same day, Noble Proctor noted approximately 1000 Black Saddlebags, 500 Wandering Gliders, and 200 Spot-winged Gliders during an hour at Branford Point. A week later, on 12 September, Noble estimated 3000 Black Saddlebags and 1000 Wandering Gliders at Milford Point.

MEADOWHAWK MOVEMENTS

Once again, migratory-like movements of Yellow-legged Meadowhawks (*Sympetrum vicinum*) were observed in the region. The first such observation came from Clinton, Maine on 7 September when Dick Hildreth saw 33 tandem pairs flying past the summit of Peaked Mountain during two hours; all were on a westerly heading. The following day, he saw 14 pairs during an hour at Joy Cove in Steuben, Maine, all again on a west-southwest heading. Later in the season in Massachusetts, Dick saw 18 tandem pairs at Plum Island on 4 October, all flying on a west-southwest heading, then counted 39 tandem pairs flying west-southwest across a power line in Milford during a four-hour period on 10 October.

In Connecticut, Greg Hanisek saw approximately 500 meadowhawks flying past Lighthouse Point in New Haven on 22 October, primarily between 11:00 am and 1:00 pm. The winds were light northwest to northeast, becoming southwest in the early afternoon when the flight tapered off. The several individuals that he caught were all Yellow-legged Meadowhawks. The insects were passing at a variety of elevations, some so high as to be undetectable with the naked eye. In contrast to most other such observations in recent years, only a small percentage (<10%) of these meadowhawks were pairs in tandem.

NEWS FROM THE ODE WEST: SEARCHING FOR EXUVIAE ON THE CONNECTICUT RIVER

Fred Morrison

During the last 30 years some sections of the Connecticut River have experienced significant bank erosion. This year a series of bank stabilization projects were proposed in Gill and Northfield, Massachusetts, a stretch of river known to support the state-listed Cobra Clubtail (*Gomphus vastus* – Special Concern). As part of the wetlands permitting process, David McLain and I were hired to survey a 1200-foot stretch of river in Gill for emerging dragonflies. In Massachusetts, activities proposed in

wetland areas must prove that the project will have "no short or long-term adverse impacts" on protected species.

During June and July 2001 we visited the site seven times (total search time: 32.5 hours) and collected and identified every shed dragonfly skin (exuvia) we encountered. Our search area extended from the water's edge to several feet up the bank. We recorded 13 dragonfly species (526 exuviae), six of which are state-listed: Cobra Clubtail (*Gomphus vastus* – Special Concern); Spine-Crowned Clubtail (*Gomphus abbreviatus* – Endangered); Midland Clubtail (*Gomphus fraternus* – Endangered); Riverine Clubtail (*Stylurus amnicola* – Endangered); Arrow Clubtail (*Stylurus spiniceps* – Threatened);

Dragonfly Exuviae Collected on the Connecticut River in Gill, Massachusetts

SPECIES	June 14	June 19	June 28	July 7	July 16	July 18	July 25	TOTALS	Relative Abundance (%)
Black-shouldered Spinyleg (Dromogomphus spinosus)	0	3	20	7	4	0	0	34	6.5
Spine-crowned Clubtail (E) (Gomphus abbreviatus)	4	0	1	0	0	0	0	5	1.0
Midland Clubtail (E) (Gomphus fraternus)	4	0	0	0	0	0	0	4	0.8
Dusky Clubtail (Gomphus spicatus)	1	0	0	0	0	0	0	1	0.2
Cobra Clubtail (SC) (Gomphus vastus)	180	89	71	12	4	1	0	357	67.9
Dragonhunter (Hagenius brevistylus)	0	0	2	0	0	0	0	2	0.4
Rusty Snaketail (Ophiogomphus rupinsulensis)	2	1	2	1	0	0	0	6	1.1
Riverine Clubtail (E) (Stylurus amnicola)	0	0	2	0	2	1	0	5	1.0
Arrow Clubtail (T) (Stylurus spiniceps)	0	0	0	8	13	15	8	44	8.4
Illinois River Cruiser (Macromia illinoiensis)	0	0	19	11	2	0	0	32	6.1
Prince Baskettail (Epitheca princeps)	0	0	0	1	0	0	0	1	0.2
Umber Shadowdragon (SC) (Neurocordulia obsoleta)	20	5	8	1	0	0	0	34	6.5
Stygian Shadowdragon (Neurocordulia yamaskanensis)	0	0	0	1	0	0	0	1	0.2
TOTALS	211	98	125	42	25	17	8	526	

and Umber Shadowdragon (*Neurocordulia* obsoleta – Special Concern). A seventh species, Stygian Shadowdragon (*Neurocordulia* yamaskanensis), has been proposed for state listing.

Of the species recorded, Cobra Clubtail was by far the most abundant. This included a peak on 14 June of 180 shed skins, the condition of which suggested that this species had been emerging for at least a week. The number of Cobra Clubtail skins found steadily declined over the study period, and none were observed after 18 July.

No portions of the 1200-foot long shoreline had particularly large concentrations of shed skins, but many of the exuviae occurred at elevation levels consistent with the typical emergence behavior of each species. For instance, the typical behavior of Cobra Clubtail, Midland Clubtail, and Spinecrowned Clubtail nymphs is to crawl across the sand and gravel at the river's edge and then climb a short distance (3 feet or less) up into the vegetated part of the bank. Usually the nymph stops at the base of grasses, sedges, roots and other vegetation and hooks its tarsi (claws) into the substrate. Umber Shadowdragons routinely climb up the banks and beyond, clambering up tree trunks and branches and even crawling into knotholes, before eclosing. Arrow Clubtails and Riverine Clubtails typically crawl up the sandy shoreline and eclose when they encounter any small obstruction (a piece of wood, single cobble or low sand ridge caused by wave erosion) or, if there are no obstructions, they eclose at the base of the bank. If the sandy shoreline is broad and flat, they sometimes simply stop after crawling a few meters and eclose right on the open beach. The emergence behavior of the latter two species makes them particularly vulnerable to damage from the waves caused by motorboats.

Although several state-listed species not previously known from this stretch of the river were found during this survey, we do not believe that the survey site is unique. We have found these same species, sometimes in fairly high numbers, in other sections of the Connecticut River in the past. The important point is that all of the state-listed dragonflies found during this survey require large, sand-bottomed, clean rivers or lakes to survive. The rarity of these insects in Massachusetts is due in large part to the fact that this type of habitat is rare within the Commonwealth.

CONNECTICUT 2001 HIGHLIGHTS

Mike Thomas passes along the following highlights from Connecticut, where the season was considered to be rather uneventful.

American Rubyspot (*Hetaerina americana*): Several adults were observed perching on vegetation along the Naugatuck River in Harwinton (Litchfield County) on 3 September (Mike Thomas). The only other Litchfield County record dates back to 1904.



American Rubyspot — female (*Hetaerina americana*)

Great Spreadwing (*Archilestes grandis*): A freshly emerged male taken by Andy Brand on his property in Hamden (New Haven County) on 22 September suggests this southern species may be resident. The first Connecticut record for this huge damselfly occurred just last year.

Spatterdock Darner (*Aeshna mutata*): Dave Wagner found this species to be fairly common at Mansfield Hollow Reservoir (Windham County), with at least six individuals seen on 13 June.

Comet Darner (Anax longipes): This species was again found at a small fishless pond in Madison (New Haven County) by several observers (Noble Proctor, Bill Yule, Bob Muller) between 16 July – early September Greg Hanisek provided a report from Mountain Reservoir in Waterbury on 23 June; a new site and our most inland occurrence to date.

Cobra Clubtail (*Gomphus vastus*): On 16 June, Mike Thomas and Alan Barlow were successful in locating several eclosing adults along the banks of the Connecticut River in the vicinity of Kings Island (Hartford County).

Midland Clubtail (*Gomphus fraternus*): Two adults were observed perching on a sandy beach along the Connecticut River in Middlesex County on 16 June (M. Thomas & A. Barlow).

Stygian Shadowdragon (Neurocordulia yamaskanensis) and Umber Shadowdragon (Neurocordulia obsoleta): Both species of this crepuscular genus made typical appearances on the Connecticut River in Cromwell (Middlesex County) on 15 & 16 June between 8:30 pm and 9:00 pm (M. Thomas & A. Barlow).

Tiger Spiketail (*Cordulegaster erronea*): A teneral male discovered by Les Mehrhoff during the University of Connecticut Bioblitz at Tarrywille Park, Danbury (Fairfield County) on 8 June provided an unexpected record for this regionally rare species.

Mocha Emerald (*Somatochlora linearis*): Two females captured by Bill Yule in a feeding swarm of Clamp-tipped Emeralds (*S. tenebrosa*) at Chatfield Hollow on 21 August was a first for Middlesex County.

Williamson's Emerald (Somatochlora williamsoni): A male taken at Durham Meadows on 12 September (M. Thomas) was another first for Middlesex County.

Elfin Skimmer (Nannothemis bella): Noble Proctor reported a large population of this tiny skimmer at a seep in a sand pit in Old Saybrook (Middlesex County), estimating that 200 individuals were present during his visit. [Editor's note: This site sounds remarkably similar to the Foxboro, Massachusetts site discovered this year (see page 7). Both bear little resemblance to the pristine sphagnum bog habitat we typically associate with this species.]

IPSWICH RIVER SWARMS

For the sixth consecutive year, Fred Goodwin monitored evening swarming behavior of darners and other dragonflies at the Ipswich River Wildlife Sanctuary in Topsfield, Massachusetts. Fred, with occasional assistance of others, including seven-year-old Sarah Speare, recorded swarms on 12 dates, beginning on 6 August and ending on 10 September. On most evenings, the number of dragonflies ranged between 75 and 150 individuals, but on 22 August 600+ were estimated.

As in the past, these swarms seemed to form in response to the mating flights of flying ants, which occur following precipitation. Species composition and abundance was similar to previous years and included, in decreasing order of abundance: Lancetipped Darner (*Aeshna constricta*), Common Green Darner (*Anax junius*), Green-striped Darner (*Aeshna verticalis*), Shadow Darner (*A. umbrosa*), Mottled Darner (*A. clepsydra*), Black-tipped Darner (*A. tuberculifera*), Canada Darner (*A. canadensis*), Wandering Glider (*Pantala flavescens*), and Williamson's Emerald (*Somatochlora williamsoni*).

Fred notes that each year numbers have dropped abruptly in late summer. However, one difference this year was that only one swarm was noted in September (on the 10th) and that involved only about eight individuals. In past years, swarms of 50+ have occurred into September, as late as the 15th. Fred attributes this to the very dry weather in September this year which apparently reduced the number of flying ant emergences.

2001 DSA TEXAS MEETING

The 2001 DSA meeting in Texas was a sizzling — in more ways than one — success! About 50 participants turned up over 70 species of dragonflies and damselflies, including a species (*Erythemis peruviana*) new to the United States! The meeting was based in the Edwards Plateau, the so-called "Hill Country," an area of rolling hills with numerous streams. A post-meeting extension visited The Nature Conservancy's Dolan Falls Ranch, not far from the Mexican border in southwest Texas, where a number of additional species were found. Jeremiah Trimble and Blair Nikula, the only attendees from New England, found the several consecutive days of 100+ degree heat a bit stifling! However, the many clear, cool streams with their diverse and exciting odonates provided welcome respite. As is typical at these meetings, there was great camaraderie, with a congenial intermingling of both expert and novice alike. We look forward to next year's gathering in West Virginia (see page 12).

2002 ANNUAL DSA MEETINGS

The 2002 annual meeting of the Dragonfly Society of the Americas will be based in Lewisburg, West Virginia from 21–23 June. Lewisburg is located in the mountains along the banks of the Greenbrier River which, along with its tributaries, should offer a rich assortment of riverine species. Other sites of interest in the region include Cranberry Glades (a high elevation bog), the Meadow River wetlands, Stephens Lake, and the Plum Orchard Lake Wildlife Management Area. Post-meeting trips will visit a couple of high elevation bogs near Elkins from 23–26 June, and the Ohio River from 26–28 June.

West Virginia has a combination of northern, southern, coastal, and Midwestern species, so these expeditions should produce a rich and interesting diversity of odonates. For more information, contact the meeting coordinator, Jennifer Wykle (jwykle@mail.dnr.state.wv.us).

The Northeast regional meeting may be in upstate New York in July. More on that in the next issue.

Ode News

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