Ode News - An Occasional Newsletter about Dragonflies and Damselflies on Cape Cod

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Welcome to the ninth issue of *Ode News*! We have reluctantly hung up our nets for another year - always a sad occasion - but the past field season was an active and rewarding one. With the burgeoning interest in dragonflies, our knowledge of the southern New England odonate fauna is growing by leaps and bounds.

Most of this issue is devoted to the many highlights of 1997. Other features include an article by David Ludlow on odonates observed from a tractor seat and another of our "For Those Just Emerging" series by Jackie Sones.

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1997 Ode Walk Highlights

Our 1997 walks were very successful. All four were conducted under fairly good to excellent weather conditions. Highlights from the first walk, in Concord on 18 May, were detailed in the last issue of Ode News.

Squannacook River and vicinity - 28 June 1997: Perfect weather conditions greeted nine eager odonatists and contributed to an amazing total of 61 species of odonates - in all probability the largest list of odes ever recorded in a single day in New England (but then, to our knowledge, no one has ever tried to run up a big list before!). Northwestern Middlesex County contains a rich variety of wetland habitats and a correspondingly diverse odonate fauna, as demonstrated by our results this day.

Highlights among the 36 species we recorded from two sites along the Squannacook River included several Emerald Spreadwings (*Lestes dryas*), at least three Twin-spotted Spiketails (*Cordulegaster maculata*), one Lilypad Clubtail (*Arigomphus furcifer*), several Moustached Clubtails (*Gomphus adelphus*), an Ashy Clubtail (*Gomphus lividus*), an immature male Dragonhunter (*Hagenius brevistylus*), several Brook Snaketails (*Ophiogomphus aspersus*), several Common Sanddragons (*Progomphus obscurus* - virtually the only MA site for this species away from the southeast coastal plain), an immature female Least Clubtail (*Stylogomphus albistylus*), several Cyrano Darners (*Nasiaeschna pentacantha*), at least three Illinois River Cruisers (*Macromia illinoiensis*), and a Uhler's Sundragon (*Helocordulia uhleri*).

At the Blood Brook Conservation Area in Pepperell, a shrubby, densely vegetated pond produced many Boreal Bluets (*Enallagma boreale*), two males of the stunning, bluer-than-blue Spatterdock Darner (*Aeshna mutata* - a new site for this state-listed species), and three Redwaisted Whitefaces (*Leucorrhinia proxima*). At Heald Pond in Pepperell, a larger, sparsely vegetated pond, we found two more Cyrano Darners (*N. pentacantha*) and at least two more Lilypad Clubtails (*A. furcifer*). The nearby Keyes Conservation Area produced another Cyrano Darner (*N. pentacantha*), a Unicorn Clubtail (*Arigomphus villosipes*), and a Dragonhunter (*H. brevistylus*). The Nashoba Conservation Trust land in Pepperell hosted another Spatterdock Darner (*A. mutata*), two more Cyrano Darners (*N. pentacantha*), a Twin-spotted Spiketail (*C. maculata*), and three Red-waisted Whitefaces (*L. proxima*). A late-day visit to the Long Swamp bog in Lunenburg, a picture-perfect sphagnum bog/pond, yielded several new species for the day, including two delightful male Elfin Skimmers (*Nannothemis bella*). Three of us concluded the long day with a stop at the Cambridge Reservoir in Waltham at dusk where we watched at least four Umber Shadowdragons (*Neurocordulia obsoleta*) - an elusive, crepuscular species, and #61 for the day!

Petersham - 19 July 1997: This was the second walk we have offered in conjunction with the Athol Bird and Nature Club and both were attended by over 20 enthusiastic participants! A chilly northwest wind and peek-a-boo sunshine made the bugs hard to find at our first stop, a small cemetery pond and stream, but Jackie Sones used the occasion to provide an introduction to the odonate families present in Massachusetts. The weather improved considerably by the time we reached our second stop, the East Branch of the Swift River in Petersham, and a nice variety of odes kept everyone busy. Among the 17 species here were many Superb Jewelwings (*Calopteryx*

amata), a couple of Black-tipped Darners (Aeshna tuberculifera), two Fawn Darners (Boyeria vinosa), a Black-shouldered Spinyleg (Dromogomphus spinosus), a Moustached Clubtail (G. adelphus), a late and very worn female Ashy Clubtail (G. lividus), several Dragonhunters (H. brevistylus), two Least Clubtails (S. albistylus), and a Red-waisted Whiteface (L. proxima). We were impressed with the variety of habitats and insects along this stretch of river, and look forward to further explorations of the area. After lunch, we headed for Tom's Swamp where the weather again turned cool and dreary. Nevertheless, a little persistence produced 26 species of odonates, including Canada Darner (Aeshna canadensis), Black-tipped Darner (A. tuberculifera), Shadow Darner (A. umbrosa), Petite Emerald (Dorocordulia lepida), Racket-tailed Emerald (D. libera), Ski-tailed Emerald (Somatochlora elongata), Brush-tipped Emerald (S. walshii), Crimson-ringed Whiteface (Leucorrhinia glacialis), and Red-waisted Whiteface (L. proxima).

Connecticut River - 23 August 1997: Our trip to various spots along the Connecticut River in Sunderland and Hatfield was attended by six participants. Although the density of odonates inhabiting this large, silty river is rather low, a few of the species found here are extremely rare or absent elsewhere in the state. The focus of this trip were the clubtails in the genus *Stylurus*, elusive bugs that fly during the late summer. Riverine Clubtail (Stylurus amnicola), Zebra Clubtail (S. scudderi), and Arrow Clubtail (S. spiniceps), are known from the river or its tributaries and we had a chance of finding all three. However, partly cloudy, cool weather and very high water levels on the river conspired to reduce dragonfly activity and only after a great deal of searching were we able to find just one of our three "target species." Along the Connecticut River, we found a number of spectacular American Rubyspots (Hetaerina americana), several Blue-fronted Dancers (Argia apicalis), a couple dozen Big Bluets (Enallagma durum), two male Cobra Clubtails (Gomphus vastus), and a few Illinois River Cruisers (Macromia illinoiensis). While we ate lunch adjacent to a field at the Arcadia Wildlife Sanctuary in Easthampton, several Lance-tipped Darners (Aeshna constricta) appeared when the sun broke through the clouds. At the Mill River in Northampton, a tributary of the Connecticut, we finally found our first (and only) Stylurus, the striking Zebra Clubtail (Stylurus scudderi). This species seems to prefer smaller, sandy-bottomed rivers and is apparently the most widespread of its genus in Massachusetts.

1997 Massachusetts Odonate Highlights

This past field season was another very productive one, highlighted by the discovery of two species new to Massachusetts and the rediscovery of another species that had not been found in the state in over 20 years. The weather was generally very dry and favorable. Water levels remained exceptionally high throughout the season on Cape Cod but, in striking contrast, were quite low elsewhere in the state.

As usual, some species seemed especially numerous while others appeared scarcer than we have come to expect. Most notable among the former were Spatterdock Darner (*Aeshna mutata*) and Cyrano Darner (*Nasiaeschna pentacantha*), while the latter included Sweetflag Spreadwing (*Lestes forcipatus*), Eastern Forktail (*Ischnura verticalis*), Common Green Darner (*Anax junius*),

Halloween Pennant (*Celithemis eponina*), Wandering Glider (*Pantala flavescens*), and Spotwinged Glider (*P. hymenaea*).

Migratory-type movements, north or southbound, were apparently almost non-existent this year, or at least undetected. While it's certainly possible that a few significant movements were overlooked, the most common migratory species such as Common Green Darner and the gliders (*Pantala* spp.) were scarce throughout the season, suggesting that few if any incursions of these species took place.

Initialed observers: Fred Goodwin, Dave McLain, Fred Morrison, Blair Nikula, Fred SaintOurs, Dorothy Sgarzi, Jackie Sones, Fred Thurber, Jeremiah Trimble, Peter Trimble, and Michael Veit. Letters in brackets following the species name indicate state-listing: E = Endangered; T = Threatened; SC = Special Concern.

Sparkling Jewelwing (*Calopteryx dimidiata*): This lovely species was present again at Fort Pond Brook on the Acton/Concord town line, where eight were noted on 19 August (JS *et al.*).

American Rubyspot (*Hetaerina americana*): The stunning American Rubyspot was seen at three locations on the Connecticut River during our walk there on 23 August (FM *et al.*). This riverine species seems to be very local in distribution.

Emerald Spreadwing (*Lestes dryas*): This brilliant green damselfly has been found on few occasions in recent years. This year's reports came from Bennett Meadows W.M.A. in Northfield (JS *et al.*), the Squannacook River in W. Groton (JT *et al.*), and Mine Brook in Pepperell (MV *et al.*), all in late June. Although not generally considered a riverine species, all of these sightings were at or near such habitats.

Taiga Bluet (*Coenagrion resolutum*): A single male captured in Leyden on 20 June is, to our knowledge, only the second of this small, northern damselfly to be found in the state in recent years (JS *et al.*). The other was discovered on Cape Cod in 1996.

Boreal Bluet (*Enallagma boreale*): The only 1997 record for this northern species came from the Blood Brook Conservation Area in Pepperell where a couple of dozen were present on 28 June (JT *et al.*).

Tule Bluet (*Enallagma carunculatum*)[SC]: This state-listed species was present again on the Connecticut River at Bartons Cove in Turners Falls where a single male was found on 18 July (JT *et al.*).

Big Bluet (*Enallagma durum*): Big Bluets were present again on the Connecticut River where they were found at four sites in the period 18 July-23 August. On 12 July two females were captured at the Wellfleet Bay Wildlife Sanctuary in South Wellfleet (JT *et al.*) - a new location for the species.

New England Bluet (*Enallagma laterale*)[SC]: A new site for this state-listed species was the Sawyer Ponds in Northfield where at least three individuals were present on 22 June (BN *et al.*). Several were also at Wallace Pond in Ashburnham on 4 July (BN).

Little Bluet (*Enallagma minusculum*): An observation of several individuals on Upper Naukeag Lake in Ashburnham on 19 August (JT *et al.*) was notable both for the late date and the location - well north and west of the coastal plain ponds this species typically inhabits.

Pine Barrens Bluet (*Enallagma recurvatum*)[T]: Two new sites, both on the Massachusetts Military Reservation in Bourne, were documented for this state-listed damselfly (BN, PT).

Lilypad Forktail (*Ischnura kellicotti*): Several on the Sawyer Ponds in Northfield on 22 June provided a first Franklin County record (BN *et al.*).

Rambur's Forktail (*Ischnura ramburii*): This southern, brackish-water inhabitant reaches the northern limits of its range in southeastern Massachusetts. It was found again on Cuttyhunk Island [several on 30 August (JT *et al.*)] and at two new Cape Cod sites: South Monomoy Island in Chatham where a single male was captured on 26 August (JT *et al.*); and the Wellfleet Bay Wildlife Sanctuary in South Wellfleet where several were detected on 12 July (JT *et al.*).

Lake Darner (*Aeshna eremita*): Individuals caught on Mt. Watatic in Ashburnham on 18 July, 9 August, and 6 September (JT *et al.*) provided the first Massachusetts records of this large, northern darner in recent years. There are historical records from Essex and Bristol counties and more recent records from Mt. Greylock in Berkshire County. Lake Darners inhabit large, sparsely vegetated lakes.

Variable Darner (*Aeshna interrupta*): Large numbers of this distinctively marked darner were found swarming on Mt. Watatic in Ashburnham in late July (MV *et al.*), and a tandem pair was seen in a small bog at the base of the mountain in August (JS *et al.*), the easternmost known breeding site in the state.

Spatterdock Darner (*Aeshna mutata*)[E]: It's hard to believe that less than five years ago there were only three known Massachusetts sites for this state-listed species. It has now been recorded at a dozen or more sites from Cape Cod to the Connecticut River Valley. Spatterdock Darners seemed exceptionally numerous this year, with records from at least seven new sites: three on the Massachusetts Military Reservation in Bourne (BN, PT), one in Millis (JT), three in Pepperell (JT *et al.*), and one in West Groton (JS *et al.*). Whether this stunning darner has actually increased or was simply much overlooked in the past is difficult to know. Some odonate populations apparently are quite cyclical, and 1997 may have represented a peak in *A. mutata'*s cycle. Whatever the explanation, it seems that Spatterdock Darners are not as rare as was previously thought.

Subarctic Darner (*Aeshna subarctica*): This northern species was present again at a small bog in Ashburnham: 11 were captured there on 19 August (JT *et al.*) and 13 on 6 September (BN). Although there appears to be a healthy breeding population here, it remains the only site for the species in Massachusetts (or southern New England).

Common Green Darner (*Anax junius*): Usually one of the most widespread and conspicuous dragonflies in this area, Common Green Darners seemed strikingly scarce in 1997, particularly early and late in the season. Whereas swarms of 20-100+ individuals have been common sights during the late summer in recent years, reports exceeding a dozen individuals were rare this year. One in Provincetown on 21 November (DS, JS) was apparently the last Massachusetts ode of 1997.

Comet Darner (*Anax longipes*)[SC]: Comet Darners were seen at several of their traditional sites on Cape Cod and in Plymouth, and at one new site in Eastham (BN *et al.*).

Swamp Darner (*Epiaeschna heros*): Very few of this large, southern darner were seen this year. Four in Holliston on 1 July comprised the largest concentration (JS *et al.*). An ovipositing female was seen in South Wellfleet in late July (FS), and a very late individual was in New London, Connecticut on 7 October (JT).

Taper-tailed Darner (*Gomphaeschna antilope*): Four males captured in Holliston on 1 July (JT *et al.*) represent a first state record for Massachusetts. Taper-tailed Darners are southern dragonflies, very similar in appearance and habitat preference to the fairly common and widespread Harlequin Darner (*G. furcillata*). Ginger Carpenter collected New England's first Taper-tailed Darner in Rhode Island last year. The presence of four individuals in Holliston is intriguing and may indicate an established population rather than an isolated case of vagrancy. We're anxious to see if they reappear next year.

Cyrano Darner (*Nasiaeschna pentacantha*): Cyrano Darners are robust, southern darners, near the northern edge of their range here in southern New England. They seemed quite numerous this year and were recorded at several new sites in Massachusetts. An ovipositing female was in Northfield, just south of the New Hampshire border, on 22 June (JT *et al.*).

Unicorn Clubtail (*Arigomphus villosipes*): In June, Fred Thurber photographed this inhabitant of small, often stagnant ponds at two sites in Westport, the first records of the species in Bristol County.

Beaverpond Clubtail (*Gomphus borealis*)[SC]: Single Beaverpond Clubtails were found in Leyden on 20 June and in Savoy on 5 July (BN *et al.*).

Cobra Clubtail (*Gomphus vastus*)[SC]: This handsome species was recorded again on the Connecticut River, where it seems to be one of the most common clubtails. Several individuals were found at five or more sites on the Connecticut during the period 22 June - 23 August.

Southern Pygmy Clubtail (*Lanthus vernalis*): Two new sites were discovered for this diminutive clubtail. Several were present at Gulf Brook in Pepperell on 29 June and 5 July (MV *et al.*). At a small stream in Norwell over 60 exuviae were collected in late May, and an adult was seen there on 26 June (FS), the first records for Plymouth County.

Brook Snaketail (*Ophiogomphus aspersus*)[SC]: This brilliant green and yellow clubtail was present again on the Squannacook River: a female was captured in W. Townsend on 14 June; six

males were captured in W. Groton on 28 June (JT et al.); and a single male was caught in Townsend on 6 July (BN).

Zebra Clubtail (*Stylurus scudderi*)[E]: Zebra Clubtails were found again on the Squannacook River in W. Groton where several were present on 12 August (JT *et al.*). Two were detected on the Mill River in Northampton on 23 August (DM *et al.*).

Arrowhead Spiketail (*Cordulegaster obliqua*): Arrowhead Spiketails are large, handsome dragons that seem to be very local and elusive (at least for some of us!). The only record this year came from the Ipswich River Wildlife Sanctuary in Topsfield where single males were seen and photographed on 12 and 14 June (FG).

Uhler's Sundragon (*Helocordulia uhleri*): This early flying corduliid was found at sites in South Royalston, Petersham, and West Groton. The last sighting came from Sterling on 5 July (JS, JT).

Umber Shadowdragon (*Neurocordulia obsoleta*)[SC]: This crepuscular species was present again on the Cambridge Reservoir in Waltham where at least four were found on 28 June (JT *et al.*). Shadowdragons, which eluded capture and thus could not be identified to species, were seen on the Connecticut River at Bartons Cove in Turners Falls on 4 and 18 July (BN *et al.*).

Ski-tailed Emerald (*Somatochlora elongata*)[SC]: Ski-tailed Emeralds were captured in Ashburnham, the easternmost Massachusetts location known for the species, on 18 July (JT *et al.*) and 19 August (JS *et al.*), and at Tom's Swamp in Petersham on 19 July (JT *et al.*).

Coppery Emerald (Somatochlora georgiana) [E]: One of the major highlights of the season was the rediscovery of Coppery Emeralds in Massachusetts. In 1972 Chris Leahy recorded the state's first, and the first north of North Carolina (!), when he found a dead female on Rantoul Pond in Ipswich. The following year he caught six individuals among an evening swarm of emeralds and darners in the Willowdale State Forest in Ipswich. However, the species then went unrecorded for almost 25 years. This past season at least eight were found among an evening swarm of emeralds and darners in Holliston on 12 August (BN, JT, JS); at least 20 were estimated to be present at the same site on 16 August (JT et al.); and a possible ovipositing female was seen there on 31 August (BN).

The Coppery Emerald is a little-known southeastern Somatochlora, and is apparently one of the rarest of its genus in North America. It is a small $(2\pm")$, drab emerald, atypical in that the eyes are chestnut colored, rather than brilliant green as in other adult Somatochloras. It also lacks the iridescent green markings on the thorax characteristic of other emeralds. Other than a single specimen from New Jersey, the Massachusetts records remain the only north of Virginia. Much remains to be learned about the habits and distribution of this mysterious species.

Incurvate Emerald (*Somatochlora incurvata*): Previously, the Incurvate Emerald was known in Massachusetts only from Tom's Swamp in Petersham, where the state's first were discovered in 1995. Thus, an ovipositing female and a freshly dead male in a spider web (!) in Ashburnham on 19 August (JT *et al.*) were at a new site.

Mocha Emerald (*Somatochlora linearis*)[SC]: This southern emerald was found again in Holliston on three dates between 19 July - 16 August (JT *et al.*). The previously reported females collected in Monson and Williamsburg in 1996 (*Ode News*, Vol.IV, #1) appear, on further examination, to be Clamp-tipped Emeralds (*Somatochlora tenebrosa*).

Ebony Boghaunter (*Williamsonia fletcheri*)[E]: This small, dark corduliid was present again at Tom's Swamp in Petersham, one of only two known sites in Massachusetts. Three or four males and a pair were seen there on 14 June (JT, JS).

Ringed Boghaunter (*Williamsonia lintneri*)[E]: This candidate for Federal listing was found at three sites, two of them new, in Massachusetts during May. See the previous issue of *Ode News* (Vol. IV, #1) for details of records from Concord and Ponkapoag Bog. The third record involved a male photographed by Fred Goodwin on 4 May at the Ipswich River Wildlife Sanctuary in Topsfield. Although there are a variety of wetland habitats in the area, there are none of the "soupy" sphagnum bogs Ringed Boghaunters typically inhabit, so it is not clear if this individual was a resident or simply a wandering vagrant.

Golden-winged Skimmer (*Libellula auripennis*): A single male eluded capture, but was well seen in Holliston on 16 August (JT *et al.*), the first Middlesex County record for this coastal plain species.

Great Blue Skimmer (*Libellula vibrans*): The only Massachusetts report of this large, southern immigrant came from Morris Island in Chatham where a single male was seen on the extremely late date of 27 September (BN). The latest published date for New Jersey is 7 September, so it's a puzzle where this individual came from or what it was doing up here so late in the year.

Wandering Glider (*Pantala flavescens*): The comings and goings of the two species of "rainpool" gliders (genus *Pantala*) are a continuing source of interest and puzzlement for us. Both species seemed relatively scarce this year, with little evidence of any pronounced movements. Most sightings of Wandering Gliders came from coastal locations during the latter half of the season, particularly late August. Highest counts were 40+ on North Monomoy Island in Chatham on 18 August (JS), 40 on South Monomoy Island on 26 August (BN *et al.*), and an estimated 60 on Cuttyhunk Island in Buzzards Bay on 30 August (JS *et al.*).

Spot-winged Glider (*Pantala hymenaea*): Spot-winged Gliders were notably scarce this summer, with most sightings during the first half of July. The highest total came from Fort Hill in Eastham on 12 July when 70+ were estimated, most moving steadily by in a northwest direction (JS *et al.*).

Striped Saddlebags (*Tramea calverti*): Not previously recorded from anywhere in New England, an individual of this tropical glider was discovered at Fort Hill in Eastham during a butterfly census on 12 July (JT, JS, BN). Unfortunately, it lead three of us on a merry chase for about half an hour before disappearing across the saltmarsh to the northeast. Although we were unsuccessful in either capturing or photographing the bug to document the occurrence, it is a rather distinctive species, with a narrow "saddle" in the wings and pale stripes on the thorax. We

saw it very well, both sitting and in flight, and have previous experience with the species in the south. We were also able to compare it directly with a Carolina Saddlebags (*Tramea carolina*).

Although Striped Saddlebags are primarily tropical in distribution, occurring north regularly only to south Texas and southern Florida, like many *Trameas* they are prone to wandering. In 1992 there was a major northward incursion of the species with numerous reports from New Jersey and the New York City area. We were hopeful that the Eastham sighting would prove to be the precursor of another influx into the Northeast, but to our knowledge there were no other reports of Striped Gliders anywhere north of their normal range.

Additional Cape Cod Highlights: Although *Ode News* initially focused almost exclusively on Cape Cod, our expanding interest has led us to spend more and more time farther afield, with the result that our coverage of Cape Cod has become increasingly limited. However, we have not entirely neglected our backyard and managed to turn up a few things of local note this year. Eastern Red Damsels (*Amphiagrion saucium*) were found at two new sites, the Herring River in Harwich and the Punkhorn Parklands Conservation Area in Brewster. The Harlequin Darner (*Gomphaeschna furcillata*), though widespread throughout most of Massachusetts, is scarce on Cape Cod. The only site known in recent years is the Punkhorn Parklands in Brewster. We failed to find the species there last year, but they reappeared again this year (though were seen on one day only). Another species that is common elsewhere but scarce on the Cape is the Frosted Whiteface (*Leucorrhinia frigida*). We have found it at only two sites in recent years, one in Bourne and the other in Eastham. Following a sighting at the latter site in 1994, we failed to relocate the species there in either 1995 or 1996, despite frequent coverage of the area. However, several Frosted Whitefaces appeared at a nearby pool in 1997 and were seen again at the Bourne site.

Connecticut Update

Bob Muller had another productive field season in southwestern Connecticut, finding two new species for the state and making many other interesting captures. His first addition to the state list was a female Furtive Forktail (*Ischnura prognata*) on 28 May. The only other New England occurrence for this southern forktail was on Cape Cod in early June of 1996 (see *Ode News*, Vol.III, #1). Bob's second state record involved a Bar-winged Skimmer (*Libellula axilena*) he caught on 1 August. This represents only the third New England record, the others being singles captured in Rhode Island in 1995 and on Cape Cod in 1996. Other notable finds by Bob included Little Bluet (*Enallagma minusculum*), Spatterdock Darner (*Aeshna mutata*), Arrowhead Spiketail (*Cordulegaster obliqua*), Martha's Pennant (*Celithemis martha*), and Blue Corporal (*Libellula deplanata*).

Several northern species for which there are few Connecticut records were found at new sites in 1997. Dave Wagner reports new sites for Harpoon Clubtail (*Gomphus descriptus*), Crimsonringed Whiteface (*Leucorrhinia glacialis*), and Red-waisted Whiteface (*L. proxima*). Jeremiah Trimble captured a White-faced Meadowhawk (*Sympetrum obtrusum*) in New London in

September, a species for which there was previously only an historical record from New Haven County. Curiously, both Connecticut records for this northern species are from coastal locations.

Sparkling Jewelwing in New Hampshire

This past summer, Michael Veit discovered a population of Sparkling Jewelwings (*Calopteryx dimidiata*) on the Nissitissit River in Hollis, NH. To our knowledge, this is new for New Hampshire and the northernmost occurrence for this southern species.

1997 DSA Vermont Meeting

Over the weekend of 20-22 June, Blair Nikula, Jackie Sones, and Jeremiah Trimble traveled north from Cape Cod to attend the Dragonfly Society of the Americas annual Northeast regional meeting in Castleton, Vermont. Close to two dozen people attended, with experience levels ranging from beginner to worldwide authority. One of the focuses of the weekend was to sample the Poultney River, a moderately-sized, sluggish, muddy-bottomed river that harbors some rare plants and mussels. We've not heard a final accounting of all that was found over the weekend, but among the most interesting finds from the river itself were several Rainbow Bluets (*Enallagma antennatum*) and a number of Rapids Clubtails (*Gomphus quadricolor*). The former is a beautiful, small damselfly that has been spreading westward and now apparently has reached western New England. Rapids Clubtails, as their name implies, generally inhabit areas of rapids along swift flowing rivers, a habitat distinctly absent from the Poultney. This is a species that has been recorded only sporadically in New England.

We hope to have details of the 1998 Northeast regional meeting in the next issue of *Ode News*.

1998 DSA National Meeting

The 1998 Dragonfly Society of the Americas annual meeting will be in Valentine, Nebraska, 17-19 July, with post-meeting activities through 23 July. More information is available online at:

http://www.afn.org/~iori/oinevent.html#DSA1998.

Odes From the Tractor Seat

David Ludlow

One of the many jobs I have working for the Massachusetts Audubon Society is to cut and bale hay at the different sanctuaries in Marshfield. On 26 June 1997, I was cutting the fields at Tilden Farm Wildlife Sanctuary. Before long there was a swarm of dragonflies over the tractor. As the mower cut the hay it would put up small flying insects. The dragonflies seemed to be aware of this as they would cruise above, around, and behind the mower. I'm sure this has happened whenever I have mowed in the past. However, now that my interest in odes has increased and I've learned to identify a few of them, it's interesting how many more I see.

The majority (30-40) of the dragonflies were Common Green Darners (*Anax junius*). There were 5-6 each of Calico Pennant (*Celithemis elisa*) and Twelve-spotted Skimmer (*Libellula pulchella*), a Widow Skimmer (*Libellula luctuosa*), and a Black Saddlebags (*Tramea lacerata*).

The highlight of the day came while I was stopped to drink some Gatorade. This large "bug" came flying in, circled twice, then landed on a piece of Orchard Grass. Not having my net, binoculars, or camera, I used the only thing I had. My co-worker Pete didn't know what to think as he watched me take off my baseball hat and do a leaping belly flop in the grass. It wasn't pretty, but it worked. The "bug" turned out to be a Delta-spotted Spiketail (*Cordulegaster diastatops*). It turned out that there was only an historical record for this species in Plymouth County.

This field is about a half mile from the nearest pond or stream, yet there was a lot of activity. Odes are everywhere - take the time to see them.

Hilltopping Dragons

Butterflies exhibit a behavior known as "hilltopping" wherein individuals concentrate at the highest points of land within an area. It is thought that this behavior serves to facilitate mate finding, though many questions remain. There is some indication that such elevational aggregations may occur in other groups of insects as well, though the phenomenon is poorly known. We have not found any literature specifically describing hilltopping behavior in dragonflies, but there are some old accounts of collecting dragonflies in situations which are suggestive of hilltopping. Thus, the behavior does seem to occur in odonates, though to what extent remains to be documented.

Observations made on Mt. Watatic this summer, initially by Michael Veit, suggest that hilltopping dragonflies may be a fairly common feature at this site. Michael first noted concentrations of dragonflies, primarily blue darners (*Aeshna* spp.) and emeralds (*Somatochlora* spp.) near and at the top of the 1,832 ft. mountain on 13 July. Several subsequent trips to the mountain top through early September consistently produced *Aeshnas* and *Somatochloras*, the

former occasionally in impressive abundance. Although a few pairs were seen, mating did not seem to be a primary activity. Hal White, who has conducted periodic surveys of the odonates in the Mt. Desert area of Maine for many years, tells us that he routinely catches *Aeshnas* and *Somatochloras* on the hilltops in that area. Thus, hilltopping may a regular behavior, at least within certain genera. We look forward to learning more about this interesting behavior, and are eager to hear about similar observations from others.

For Those Just Emerging - Some Useful Odonate Terms

Jackie Sones

abdomen - the third, or last, section of an insect's body. The size, shape, and color of each of the ten abdominal segments may aid in identification.

dorsal - the upper surface. To identify some species, it is important to describe the dorsal markings of the abdomen and thorax.

emergence - when a nymph leaves its larval habitat and completes metamorphosis, *i.e.*, emerges from its exoskeleton as a teneral odonate.

exuviae - the exoskeleton of a nymph that is left behind after a molt, including metamorphosis. Exuviae are often found clinging to shoreline vegetation. Species identification of exuviae is possible. Exuviae are indicators of breeding success, *i.e.*, an adult laid an egg that later hatched into a nymph which developed and metamorphosed successfully. Ginger Carpenter found that exuviae may stay intact and in place for months! Sometimes called a "skin."

flavescence - amber coloration in an odonate's wings. Flavescence may appear uniform throughout the wing or as patches in the wing. In some species the strength of flavescence seems to vary with age, sex, or geography.

lateral - the side. Lateral thoracic stripes are very important for identification of clubtails and darners.

ode - if you've wondered about the title of this newsletter and haven't yet heard the explanation, "ode" is our nickname for odonates. It developed shortly after spending some time in the field. At first we would shout, "*Dragonfly* over here!" Then, "A *dragon* just flew by!" Because time is often important when observing these aerial insects, we started using *ode* because it covered both dragonflies and damselflies and because it was short!

odonate - a member of the insect order Odonata which includes dragonflies and damselflies. Examples of other orders within the class Insecta include Lepidoptera (butterflies and moths) and Orthoptera (grasshoppers and crickets).

oviposition - the process of laying eggs by adult females; may be endophytic (inside plants) or exophytic (in the water or on land).

polymorphism - "many forms"; when more than one color form exists. For example, female Lilypad Forktails may be orange or blue.

pruinosity - a white or blueish-white substance secreted by some odonates as they mature. A species' appearance may change dramatically as it becomes pruinose. For example, the abdomen of a young male Eastern Pondhawk is green and brown, but that of an adult male is blue! Pruinosity may be present on the insect's body (especially the abdomen) and/or its wings (*e.g.*, Twelve-spotted Skimmer).

"in tandem" - when a male holds onto a female with his abdominal appendages. This position is usually assumed before or after mating and may be held while the pair is perched or flying.

teneral - the stage of an odonate just after metamorphosis when it looks like a flying adult, but its body and wings are soft and yellowish-green throughout.

terminal abdominal appendages - small extensions at the end of the abdomen. May also be referred to as abdominal appendages, appendages, or "apps". In males they are used to clasp the female during copulation. Between species they vary in size and shape. In female dragonflies and damselflies there are two appendages; in male dragonflies there are three (2 superior and 1 inferior) and in male damselflies there are four (2 superior and 2 inferior). The superior appendages are located above the inferiors. They are very helpful (and sometimes necessary) for species identifications.

thorax - the second, or middle, section of an insect's body. Wings and legs are attached to the thorax. Adjective = thoracic.

"the wheel" - the circular or heart-shaped mating position of odonates. When the male holds onto the female's head (in dragonflies) or neck (in damselflies) with his abdominal appendages and the female curls the end of her abdomen up to the second segment of the male's abdomen.

Odd Couples

Although dragonflies generally seem to do a pretty good job of recognizing others of their own species, occasionally an observer comes upon two individuals whose eyesight, despite their 30,000 facets, seems suspect! Two such instances were noted this past season. The first involved a male Dusky Clubtail (*Gomphus spicatus*) in tandem with a male (!) Lancet Clubtail (*G. exilis*) at Wallace Pond in Ashburnham. The other, also in Ashburnham, involved a male Cherry-faced Meadowhawk (*Sympetrum internum*) in tandem with a female Yellow-legged Meadowhawk (*S. vicinum*). As in these two cases, such mis-pairings usually involve different species within the same genus, though intergeneric mismatches have been recorded as well. However, hybrid

odonates seem to be quite rare (or at least rarely detected), so it seems that such pairings seldom result in offspring.

Falcons and Dragons

The fall 1997 issue of the Eastern Massachusetts Hawk Watch newsletter contains a brief note of interest to odonatists. Concentrations of migrating dragonflies are often found in the same areas as migrating hawks (*e.g.*, Cape May Point in New Jersey, the south shore of Long Island, and Lighthouse Point in Connecticut), and it seems that some of the smaller raptors, particularly the small falcons (American Kestrel and Merlin) feed extensively on dragonflies during the fall migration. Frank Nicoletti, perhaps the country's premier hawkwatcher, counted hawks at the Duluth, Minnesota hawkwatch site this fall and presented his observations of interactions between kestrels and dragonflies at a recent conference. Frank counted 10,330 Common Green Darners and 1,106 American Kestrels and noted kestrels capturing dragonflies in flight.

Cape Cod Book Reprinted

Ginger Carpenter's *Dragonflies and Damselflies of Cape Cod* has been reprinted and is now finally available. There have been a few revisions, most notably changes in the common names to conform to the official DSA list. The price is \$10.95. It is available from: Patricia Ledlie Bookseller, P.O. Box 90, Buckfield, ME 04220 (ph. 207-336-2778); the Cape May Bird Observatory, P.O. Box 3, Cape May Point, NJ 08212-0003 (ph. 609-884-2736); or the Cape Cod Museum of Natural History, P.O. Box 1710, Brewster, MA 02631 (ph. 508-896-3867).

Northeastern Naturalist

Readers may be interested in a "new" journal, the *Northeastern Naturalist*. Formerly known as the *Maine Naturalist*, the journal has broadened its geographical coverage to include the entire northeastern U.S. and eastern Canada. It publishes "original scientific research papers, research summaries, general interest articles, field notes, and other special features." A recent issue (Vol. 4, #3) has an extensive article by Paul-Michael Brunelle on the odonata of the Canadian Maritimes. Subscriptions are \$30 (\$20 for students). Write to: The Northeastern Naturalist, Humboldt Field Research Institute, P.O. Box 9, Steuben, ME 04680-0009.

Ode News Web Site

Webmaster Jackie Sones continues to update the *Ode News* Web site. In addition to back issues of *Ode News*, surfers will find links to over 200 odonate-related sites worldwide and 205 photos of New England odonates. Jackie has also added a photographic reference guide which provides links to odonate photographs from throughout the U.S. and Canada. We are eager to expand the site even further, adding more photos and county distribution maps for Massachusetts, but have run out of Web space! We are trying to locate additional space. If anyone knows where we can get 15-20 megabytes of Web space at little or no cost, please get in touch!

Thank You!

We'd like to extend our heartfelt thanks to all who made donations to *Ode News* this past year. Your support is greatly appreciated!

Dragonfly Video

Readers are reminded that an excellent new video, "Common Dragonflies of the Northeast" by Dick Walton and Richard Forster is now available. The 30-minute video, which covers identification, behavior, and habitats for 44 species of northeastern dragonflies, has received some very favorable reviews. It sells for \$24.95 plus \$5.00 S&H, and can be ordered from: NHS, 7 Concord Greene #8, Concord, MA 01742. Make checks payable to: NHS.

Last Call!!

If you did not return the subscription form in the last *Ode News* (or have not otherwise contacted us), this could be your last issue. If there is a red "X" on your mailing label, your name is about to be removed from our mailing list. To avoid this traumatic, heartbreaking event, contact us soon!

Omitted Credit: In the last issue of *Ode News* we neglected to note that the illustration of the Common Whitetail was copied from a drawing by Lars Jonsson.

Ode News

Editorial Staff & Production...Blair Nikula and Jackie Sones

Illustrations...Fahy Bygate, Jackie Sones, and Jeremiah Trimble

Ode News is available at no charge (for now!) to anyone interested.

If you have any questions, comments, or contributions, or wish to be placed on the mailing list, write to: *Ode News*, 2 Gilbert Lane, Harwich Port, MA 02646, or send e-mail to: odenews@odenews.org.



