



The Status of Dragonflies at Sandwich Bay



Scarce Chaser *Libellula fulva*, photographed along the Delf Stream in June 2015 by Ian Hodgson. The Sandwich Bay area is one of only two in Kent where this species occurs regularly.

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Introduction

To put the richness of Sandwich Bay for dragonflies into perspective, the authors of *Dragonflies of Kent* (Kent Field Club 2001) describe a selection of ten sites to visit in Kent, each of which has a list of between 15 and 20 species. Additions of species such as Small Red-eyed Damselfly, which has spread widely in the county since the book was published, would probably make a range of 17-22 species more realistic but even so, the Sandwich Bay list of 31 species is clearly very significant in county terms; 22 of these can reasonably be regarded as regular in occurrence. Recent outreach has suggested that Sandwich Bay may have more species of Odonata than any other site in the UK.

Nationally, the growth of interest in dragonflies is relatively new. The British Dragonfly Society was formed as recently as 1983 and attention to these remarkable insects at the Bird Observatory has been fragmentary; it is salutary to note that in the summary of flora and non-avian fauna in the Sandwich Bay section of *Bird Observatories in Britain and Ireland*, published in 1976, there was no mention of dragonflies. However, a dragonfly transect was established in 1984, ranging as far as Mary Bax and the Estate. This soon became impassable due to changes in land use and a new transect was devised in 1987, aimed at encouraging a more concentrated effort across a relatively small area containing fairly unpolluted dykes, rich in dragonflies and damselflies (SBBO Report 1987). It was carried out in 1987 and 1989 but not again until 1993 (SBBO Report 1993).

To a great extent this sketchy level of interest reflected the absence of a good, portable field guide, but this was rectified in 1997 by the publication of the excellent and beautifully illustrated *Field Guide to the Dragonflies and Damselflies of Great Britain and Ireland* (Brooks 1997). Subsequently, the Lydden Valley has received increasing levels of attention as the significance of its dragonflies has become apparent. As part of this process, the transect method of study was revisited in 2007, but poor weather made regular counts impossible for much of the season. This and other factors such as the necessity to 'lump' some similar but significant species (particularly Common Blue, Azure and Variable Damselflies) and the limited area occupied by the transect led to the decision that creation of distribution maps for each species that also gave an indication of their abundance would be a better approach.

The Gathering Pace of Change

One of the most significant developments since the 1980s has been the creation of new areas of fresh water, augmenting existing sites such as the North Stream, the nearby Delf Stream and drainage ditches of varying quality on the grazing marshes. These new sites range from artificial scrapes, aimed mainly at attracting migrant birds, pools used for shooting wildfowl in winter, farm and golf course reservoirs, and reed-fringed pools on New Downs Farm that were created by the removal of local material for sea defences. They each vary in factors such as water depth and the variety of vegetation within and surrounding each pool. Features such as dense marginal vegetation, floating plants such as water lilies, and emergent and decaying vegetation in the streams and ditches that thread the area all maximise the potential for a wide range of breeding dragonflies.

Dragonflies are highly temperature-sensitive and are adapted to colonise new habitats; behaviour that has been evident for more than a century. For example, the Emperor Dragonfly *Anax imperator*, now a widespread species, was absent from the county in 1908 (Kent Field Club 2001). However, since the 1990s several new species have colonised from mainland Europe and as others have expanded their ranges Britain's dragonfly fauna has altered significantly.

Ten species have been recorded in the SBBO recording area as immigrants from the continent since the mid-1990s, six of which have established breeding populations of at least a temporary nature. August 1995 brought a large influx of Yellow-winged Darters *Sympetrum flaveolum*, accompanied by Black Darters *Sympetrum danae*, both of which were known to be occasional immigrants to Kent from the continent. The appearance of genuinely new species began in 2003 with the discovery of Southern Emerald Damselfly *Lestes barbarus* breeding on marshes near the mouth of the Stour Estuary; only the second site in Great Britain at which it had occurred. Red-veined Darter *Sympetrum fonscolombii*, first recorded at Sandwich Bay in June 2004, has been recorded almost annually since and Small Red-eyed Damselfly *Erythromma viridulum*, first seen at Sandwich Bay in August the same year, has subsequently become numerous and widespread in the area and across south-east England. Lesser Emperor *Anax parthenope*, first recorded in Kent at Dungeness in August 1998, was seen for the first time at Sandwich Bay in July 2008 and Norfolk Hawker *Aeshna isosceles* was recorded for the first time in July 2011 and has been a permanent resident since 2017. Subsequently, an influx of Southern Migrant Hawker *Aeshna affinis* occurred in July 2018 and it is now resident in low numbers along damp channels and dykes, particularly in the north of the Recording Area. No one would have expected Dainty Damselfly *Coenagrion scitulum*, to appear on this list but in July 2019 a breeding colony was discovered at a private site. Recent counts have seen over 180 individuals on just one pool and hopefully this species, the rarest of all UK damselflies, will continue to prosper and expand. The most recent addition to the Sandwich Bay fauna is Vagrant Emperor *Anax ephippiger*, a female found moribund in The Elms in November 2019.

Other notable resident species include the Scarce Chaser *Libellula fulva*, which occurs regularly at only one other site in the county. Exceptional numbers were evident in 2008, when over 50 individuals were recorded, mainly on the North Stream and Delf Stream, and in 2010 at least 150 were recorded. Variable Damselfly *Coenagrion pulchellum*, known from only 16 tetrads (2km squares) in the county, is also well represented in the area, in well-vegetated ditches on the grazing marshes. Both of these species are listed as Near Threatened in the *Odonata* List of Great Britain (Taylor 2008). Four-spotted Chaser *Libellula quadrimaculata*, found in 57 tetrads in the most recent Kent Field Club survey, is probably the next most notable species in the area. It is a creature of slow-flowing, mainly acidic streams and canals and small numbers are present on the Worth marshes and around New Downs. The recent discovery of Scarce Emerald Damselfly *Lestes dryas* probably redresses the record of a species that was undoubtedly overlooked in the past. It is a rare and local species, recognised as vulnerable by the UK statutory conservation agencies.

Species Recorded at Sandwich Bay

For ease of use, English names and order of species in the accounts that follow correspond with those used by the British Dragonfly Society. Records are based on summaries of *Odonata* in annual Sandwich Bay Bird Observatory (SBBO) reports, which were sporadic until 1993, but annual from then until 2000 and again from 2007.

Banded Demoiselle

Calopteryx splendens

This lovely damselfly is found in slow-flowing ditches with lush emergent and marginal vegetation, although it can occur well away from water. Two in a ditch on Worth marshes on 17th July 1996 were the first to have been recorded in the area (SBBO Report 1996). Since then, it has become increasingly regular, with singles on Worth marshes on 26th June 2000 and on the Hundred Acre Field near the Point on 4th July 2002. More recently it has increased in numbers, with up to seven in 2003 and five in 2007, all in a ditch by the North Stream railway bridge, then up to nine in 2008, including six at the same ditch and three on the Delf Stream close to Roaring Gutter. Numbers in 2009 continued the trend, with up to 18 along the North Stream and the railway ditch, with at least 14 in 2010 and nine in 2011. The increase accelerated in 2014 when up to 40 were recorded, including five in a ditch at the south end of Prince's golf course, and in 2015 at least 57 (45 males and 12 females) were counted on the North Stream between the start of the farm track and the small concrete bridge on 5th June, with an astonishing 109 on 12th June. Records from elsewhere suggested a population of at least 130. A female was seen at Backsand Scrape on 1st June 2014.

Flight period: From 19th May (12th May in 2018) to 8th August.

Emerald Damselfly

Lestes sponsa

Until recently, this was regarded as a scarce species of less than annual occurrence. It is found in a variety of water bodies, generally with dense emergent and marginal vegetation, plenty of which exists in the Lydden Valley. Although records of more than two were unusual, there were five on Worth on 13th July 1984, ten along the North Stream on 11th August 1987, 12 on Worth on 19th July 1989 and seven on Worth on 18th August 1993. Most have been recorded on the North Stream and Worth Marshes in the last 20 years or so, with one or two occasionally at Mary Bax, Middle Field, Backsand Scrape, the Hundred Acre Field and even on the sea front adjacent to Royal St. George's Golf Club. In 2008, a thorough search of Worth marshes and the North and Delf streams in the second half of July revealed the presence of at least 52 individuals, mostly in marginal vegetation along the rivers, though significant numbers were also found in well-vegetated ditches and pools nearby. Although numbers were lower in 2009 at least 49 were evident in 2010 and 60 were found in early July 2011, mostly at a flight pond on Worth marshes. Exuviae have been recorded at Middle Field pond and Restharrow Scrape.

Flight period: Mainly between 26th June and 3rd September, with the exception of singles on the Hundred Acre Field near the Point on 16th June 1998, the Delf Stream on 17th June 2009, Jubilee Field on 11th June 2018 and, in 2015, on Worth on 13th September and at Middle Field Pond on 20th September.

Scarce Emerald Damselfly

Lestes dryas

Probably overlooked or misidentified in the past, at least three pairs were found on the Hundred Acre Field on 25th June 2015 and identification confirmed in the hand. At least 12 males and two females were found in a thorough search the next day. Previous photographs confirm that this species was present at the same locality in August 2012. Recorded up to August 16th in 2016.

Southern Emerald Damselfly

Lestes barbarus



Southern Emerald Damselfly *Lestes barbarus* July 2014 (Ian Hodgson)

Very rare in the UK, this species may be in the early stages of colonising in response to climate change. It is typical of ephemeral sites that dry out in summer, such as dune slacks, and was first recorded in 2003 at the Hundred Acre Field. In 2004, it was first noted on 16th July and numbers easily reached double figures, with ovipositing noted on several occasions during the month or more when the species was present (Parr 2005). Regrettably, the pools where it was found were inundated by high winter tides and it was not recorded again until its re-discovery in 2010, when up to three males and a female were present between 15th July and 1st September. Despite being unrecorded for the next three years at least seven were present in the same area on 18th July 2014, followed five days later by a count of 28. There were still 16 in on August 1st and it seems likely that full coverage of the breeding site would have revealed around 40 individuals.

Willow Emerald Damselfly

Chalcolestes viridis

One in the Haven on 7th August 2014 was the first for the Observatory. Although no definite records were forthcoming in 2015 eight or nine were recorded in 2016, including four on 12th August, with records persisting from 3rd August until 18th September. In 2017, one was in Little Gully on 5th July and by the end of the month it was clear that the

species had consolidated, with up to 22 on the Estate and two on Worth. Recorded between 3rd August and 2nd October.

Nearby, one was seen and photographed at Betteshanger Country Park on 4th September 2015 and small but significant numbers were recorded in a Sandwich garden with suitable breeding habitat nearby in 2016.

Azure Damselfly

Coenagrion puella

Azure Damselfly is widespread in Kent, occurring at a wide variety of water bodies. Although it has a similarly widespread distribution to the similar Common Blue Damselfly *Enallagma cyathigerum*, it tends to favour smaller pieces of water and the phrase 'persists at very low density at the Bay' was used to describe its status in 1994, when there were only two records. Until recently, the available records support this statement; nine on 29th May 2003 and 11 on 2nd June, all on New Downs, were the largest counts in the last couple of decades. However, in 2008 at least 60 were present around New Downs New Pool in June and July and at least 60 were present along the bund that separates the Sampher from the river on 10th May 2011. Although it occurs in much smaller numbers elsewhere in the area it tends to be more numerous than *E. cyathigerum* on the pond in Middle Field.

Flight period: Between 28th April and 25th August. Largest numbers tend to occur in May and the first half of June; earlier than the similar Common Blue Damselfly.

Variable Damselfly

Coenagrion pulchellum

[Listed as Near Threatened in the Odonata List of Great Britain 2008.](#)

In the most recent county survey, Variable Damselfly was found in 16 tetrads (2km squares) in scattered localities along the marshes and levels between Graveney and Sandwich, in keeping with its rather fragmented British distribution (Kent Field Club 2001). In the Lydden Valley, it was locally common in favoured sections of ditches on Worth marshes, but appeared to be scarce elsewhere. The dykes where it is most frequently found are generally still and well-vegetated but where some water is visible; choked sections appear to be unsuitable, as do areas that are too open. Until recently, notable numbers were noted exclusively in ditches surrounding the sheepfold near the North Stream, including 43 on the rather late date of 3rd August 1984, 63 on 31st May 1995 and 34-35 on 12th June 1994 and 13th July 1987, with at least 40 on May 23rd 2007. In 2008, it was also found in similar dykes nearby, providing a combined total of at least 55. It was even more widespread in 2009, when 70 were found along the Delf Stream on 24th May and small numbers spread to the Elms and along the Ancient Highway. Although it has been rare away from Worth marshes, one was found on New Downs on 10th June 2005 and four were found on New Downs New Pool on 23rd May 2009.

As part of a national survey in 2017, nearly 1,400 were counted on Worth between 14th and 28th May. The main concentrations were 592 at The Drove, 220 on dykes bordering the sheepfold, 129 in the dyke around the Triangle Pond and 107-108 along the North Stream near the oxbow and east of the railway.

Flight period: It has been recorded between 6th May and 3rd August.

Red-eyed Damselfly

Erythromma najas

This species is distributed mainly from The Wash to the Welsh borders and is widely scattered in Kent, mainly in the south and west of the county (Kent Field Club 2001). It is a noticeably more robust insect than Small Red-eyed Damselfly *Erythromma viridulum*, though they can occur in close proximity to each other. Both favour surface plants such as lily pads away from the edges of water bodies; those on the North Stream tend to use floating mats of vegetation snagged on reed stems on the middle of the river. Recently, it has been colonising new areas and was first recorded locally on the North Stream on 23rd June 2002. Subsequent records were few, but in 2007 there were up to 13 on the North Stream between 23rd May and 1st June and singles on the pond in Middle Field between 13th and 30th July. It has since been recorded on the Delf Stream, where there were up to 22 in 2009, New Downs New Pool, where small numbers have been regular since 2008 and on a flight pond on Worth, where there were up to 21 in 2010. Expansion continued in 2011 when 41 were recorded on Worth, mainly on the North and Delf Streams.

Exuviae have been recorded at Middle Field pond.

Flight period: 11th May to 9th September and, in 2009, on 25th September.

Small Red-eyed Damselfly

Erythromma viridulum

This delightful damselfly has become a very recent resident in England, only being discovered in Essex in 1999. The first for the Bay was recorded along the Ancient Highway on 16th August 2004 and its subsequent spread has been rapid. By late July 2006 there were up to 21 on New Downs New Pool and over 100 on Restharrow Scrape. Up to 60 have since been recorded on the flight pond by the railway line on Worth marshes, with up to 25 on Middle Field pond, up to 23 along the North Stream and at least eight on a broad, open ditch on Worth marshes in 2008. Small Red-eyes emerge in July, about a month later than the previous species, and can be observed flying weakly on eutrophic waters, lakes and gravel pits, particularly where there is floating vegetation such as Hornwort *Ceratophyllum* and Water Milfoil *Myriophyllum*.

Exuviae have been recorded at Middle Field pond and Restharrow Scrape.

Flight period: Between 1st July and 9th September and on 16th June in an exceptionally early 2017.

Large Red Damselfly

Pyrrhosoma nymphula

This species is present throughout Kent and although its distribution within the county is predominantly in the south and west, it is scattered along the Stour valley from the Graveney marshes eastwards (Kent Field Club 2001). It frequents a variety of habitats, including ponds and ditches, but can wander far from water and this feature is characteristic of several records from Sandwich Bay. It is by no means annual in occurrence and it may be that the majority originate from Ham Fen, where it is present in small numbers. In 1985, singles were seen on the North Stream on 31st May and the Delf Stream on 2nd June and in 1987 there were singles on St. George's Golf Course on 25th and 31st May. Singles were seen on the sheepfold on Worth marshes on 23rd June 1993 and in the Big Gully on 11th May 1994 and in 1995 two were found in a ditch adjacent to New Downs New Pool on 25th May. In 2003, four were found on 29th May and singles were seen on 31st May and 7th July, all on Worth marshes. Most recently, one was photographed in the Little Elms on 16th May 2005, another was seen on the North Stream

on 21st July 2008 and singles were seen in the Elms on 23rd April 2011 and in Middle Field on 9th May 2012, with three in Middle Field on 22nd May 2012.

Flight period: From 23rd April to 21st July and, exceptionally, from 13th April in 2014.

Common Blue Damselfly

Enallagma cyathigerum

This species and Blue-tailed Damselfly *Ischnura elegans* are comfortably the most widespread and abundant of the damselflies of Sandwich Bay. Common Blue Damselfly is found throughout the area in ponds, ditches and streams and largest recorded numbers include 592 on the Worth transect on 18th August 1989, 469 on the transect on 3rd August 1994, over 400 on the North Stream/Delf Stream on 23rd June 2002 and at least 200 around Prince's reservoir on 8th August 2007. Exuviae have been recorded at Middle Field pond and Restharrow Scrape.

Flight period: From 21st April (in 2011) to 25th September, with largest numbers at any time from late June to mid August.

Blue-tailed Damselfly

Ischnura elegans

This species and Common Blue Damselfly *Enallagma cyathigerum* share the distinction of being the most widespread and abundant of the damselflies found in our recording area and Blue-tailed Damselfly can be found at almost any type of water body. Indeed, it is a pioneering species that will quickly colonise new habitats and it is no surprise that this species was the first dragonfly to be recorded on the new scrape at Backsand in 1994. Although it seems usually to be less abundant than Common Blue, with comparable counts (on the same day in the same area) suggesting a ratio of approximately 2:1 in favour of Common Blue, there were over 1,000 Blue-tailed Damselflies on the North Stream/Delf Stream on June 23rd 2002, compared with nearly 600 of the other species. Specimens of the female colour variations f. *violacea* (violet) and f. *rufescens* (red) seem to be relatively frequent although, tentatively, the green form f. *infurcam* seems to be most usual.

Exuviae have been recorded at Middle Field pond and Restharrow Scrape.

Flight period: From 28th April to 3rd October.

Southern Hawker

Aeshna cyanea

This bulky dragonfly is widespread in Kent and is frequently seen patrolling woodland rides and hedgerows; typical behaviour for many that are seen at Sandwich Bay. It was recorded in nine years from 1986 to 2007, generally involving ones and twos, which may mean that it is sometimes overlooked and actually occurs annually in small numbers. Most recently, three singles were recorded in 2007, with similar numbers in 2010 and 2011, though seven-nine were recorded in 2008 and 2009, so the situation in 1999 when there were 'many records' from the Estate, Worth and New Downs from late July to mid September was most unusual.

Flight period: From the end of June to 27th September.

Brown Hawker

Aeshna grandis

This distinctive, robust species with its brown wings and abdomen is one of our largest dragonflies, though very often the first sign of its presence is when it flushes from its resting place in lush vegetation. Until recently, numbers have been small, usually involving no more than four a day, but up to nine were recorded in the last week of July 2007, at least 13 individuals were seen in late July 2008 and 15-20 were recorded in 2010, with over 30 in 2011. It occurs with greatest regularity on the Estate, Worth and the North Stream and has also been found on the Green Wall and Restharrow Scrape, though its appearance on New Downs seems to be noteworthy; one on 7th August 2002 is the only such occurrence since 1986. Females were noted ovipositing on the pond in Middle Field in 2007 and in the dyke bordering the railway line on Worth marshes in 2008.

Flight period: It has been recorded between 10th June and 17th September and is most frequent in July and August.

Norfolk (Green-eyed) Hawker

Aeshna isosceles

In Britain, this species is restricted to the fens and grazing marshes that are relatively isolated from polluted water in the Broadlands of Norfolk and Northeast Suffolk. On the near continent it is fairly common in the Netherlands. 2011 was a notable year for this species in Kent, with singles in the Stour valley in June and one in a ditch near The Drove on 4th July; weather conditions at the time suggest that these were migrants from the continent. It has since become established as a breeding species in the Stour valley, but the appearance of a second individual for the area along the Delf Stream on 22nd June 2017 may well have been associated with some moth immigration that was evident at the time. Two or three were confirmed the next day, raising hopes of colonisation. A series of records on the Delf Stream in 2018 raised hopes further, with one-two on several dates from 15th June to 16th July.

Migrant Hawker

Aeshna mixta

This medium-sized, slender hawker can be abundant, occurring in groups that hug the edges of woodlands and bushes, making short forays to feed and hanging at rest when they can be quite approachable. It is likely to be found throughout the area in places where trees and bushes afford shelter and feeding opportunities and large numbers, of 25 or more, have been noted on the Estate, Worth and New Downs. The highest counts on record include at least 100 on several days in September 1994 and in early August 2008 and up to 47 on Worth in the second half of September 2003, though numbers actually present in the area in years of greatest abundance undoubtedly amount to many more.

Exuviae have been recorded at Restharrow Scrape and at the pond in Middle Field.

Flight period: Although it usually appears in late July, singles were seen on 12th June 1996 and 13th June 2018 and there were records from early July in 1998 and from 13th July in 2008. Lingering individuals have been noted as late as 4th November in 1993, 2009 and 2013 and on 10th November 2013.

Southern Migrant Hawker

Aeshna affinis

The first record for the Bay was a male on the Hundred Acre Field on 17th July 2018.

Emperor Dragonfly

Anax imperator

This imposing species is frequent throughout the area, though its familiarity and wide-ranging habits are probably the main factors in ensuring that it is under-recorded. Although it never attains the profusion reached by species such as Migrant Hawker *Aeshna mixta* or Common Darter *Sympetrum striolatum* it can sometimes be found in substantial loose gatherings; counts of up to 14 on Worth in June 1993 and July 1995 and 14 in the dunes between Prince's and the Point in July 2008 are probably a reasonable reflection of its abundance. Females have been observed ovipositing on a wide range of water bodies, including the dipping pond at the Observatory, the pond in Middle Field, Restharrow Scrape and ditches on Worth marshes and New Downs.

Flight period: It has been recorded from 17th May to 22nd September and is most numerous in the second half of July and early August.

Lesser Emperor

Anax parthenope



Male Lesser Emperor *Anax parthenope* Waldershare Gully July 2008 (Gill Brook)

A male that was seen and photographed in Waldershare Gully on July 12th 2008 was the first to have been recorded in the area, while a second was seen at the flight pond on

Worth marshes on June 16th 2009 and another male was seen and photographed at Restharrow Scrape on June 11th 2014. The first Kent record was at Dungeness in August 1998 and it has been recorded there annually, with strong suspicions that it has bred on the peninsula.

Hairy Dragonfly

Brachytron pratense

This is the first hawker dragonfly to emerge in spring and locally, in May at least, is unlikely to be confused with any other similar species. County records seem to indicate that it is becoming more common (Kent Field Club 2001) and it seems to have increased locally since the first Observatory records in the Haven on 8th July 1984, near Mary Bax on 31st May 1985 and an ovipositing female in a sheepfold dyke on Worth on 2nd July 1987. Since then, it has been recorded annually since at least 1993, when up to five were present on Worth marshes in June. Subsequently, although it has been most regular on Worth marshes and the North Stream, it has been seen at several other localities across the recording area, including the Hundred Acre Field, New Downs New Pool, Backsand Scrape and the adjacent riverbank, the Green Wall, St. George's bushes, the Elms and the pond at the Observatory. Although numbers are generally small, ten were present on Worth marshes on 31st May 1995, nine were recorded on the North and Delf Streams on 20th May 2008 and 16 were found along the Delf Stream on 24th May 2009, with similar numbers in 2011.

Flight period: It has been seen on the wing between 18th April (in 2014) and 2nd July, though it is usually most numerous from mid May to mid June. In the delayed summer of 2013, however, it was recorded as late as July 19th.

Broad-bodied Chaser

Libellula depressa

The most widespread of the *Libellula* species in the county, this medium sized, heavy bodied dragonfly favours still bodies of water, such as small ponds and ditches and it wanders widely in search of new areas to colonise. Locally, although it currently appears to be fairly regular, only three individuals were recorded between 1986 and 1989 and singles in the Whitehouse and Middle Field on 29th May 1993 appear to be the only other sightings prior to 1996. Since then, however, it has been recorded more or less annually, with small but possibly increasing numbers on New Downs New Pool, the Green Wall, New Downs and Backsand Scrape and at several localities around the Estate. However, reports of more than two are notable and they include four on the 100 acre field on 16th June 1998, 'several' over the Observatory pond in June 1999, seven on Worth marshes on 7th July 2003, five in Middle Field in June 2009 and an exceptional 16 along the riverbank bund around the Sampher on 25th May 2011.

Flight period: It has been recorded from 29th April to 6th August, with one on 7th September 2012.

Scarce Chaser

Libellula fulva

[Listed as Near Threatened in the Odonata List of Great Britain 2008.](#)

This species is found along well-vegetated, slow flowing rivers and lakes, typical of the Westbere area of the Stour valley and the North Stream at Sandwich; currently the only areas in the county where it can be reliably expected. Prior to 2008 its existence in the

Sandwich area seemed to be ephemeral and it was sometimes apparently absent for several consecutive years. It was re-discovered along the North Stream in 1985, when up to seven were recorded (SBBO Report 1987), and in 1986 two males were seen in the same area on 2nd July. In 1987, one or two were recorded between 29th June and 13th July, initially on the North Stream, then a pair was seen in tandem on the Delf Stream on 13th July. In 1989, three were recorded on Worth marshes on 19th June and 19th July and in 1993 two males were seen on the North Stream on 17th June, with one on 2nd July. Subsequently, a male was seen on the North Stream near the railway bridge on 26th June 1998. Its status changed dramatically in 2008 when over 50 individuals were recorded, mainly on the North and Delf Streams, and in 2010 at least 120 were recorded, mainly along the North and Delf Streams, augmented by up to 12 along the North Stream between St. George's and Black Sluice, ten along dykes on Worth and smaller numbers elsewhere. However, following subsequent dredging of the Delf and North Streams only small numbers were evident in 2011, suggesting that it remains vulnerable to such activity on the rivers and streams where it occurs.

Flight period: From 6th June to 28th July, with a particularly early individual on 30th May 2017.



Female Scarce Chaser *Libellula fulva* Delf Stream June 2009 (Ian Hodgson)

Four-spotted Chaser

Libellula quadrimaculata

This species occurs in a wide variety of water bodies, from lakes and ponds to ditches and streams and has a widespread but thin distribution in the county. Until recently it was fairly scarce locally and far from annual in occurrence; in the 12 years from 1984 to 2006 for which records are available, it was recorded in only seven. It also appeared to be unpredictable in terms of where it might be found, the only sites where it was recorded more than once up to 2006 were the Middle Field (where an exuvia was found on 19th May 1993) and the Hundred Acre Field. Other records came from Slazenger's, Mary Bax, the Whitehouse, the Green Wall, New Downs New Pool (where four on 13th June 1997 was the only record of more than two), the North Stream railway bridge and Restharrow

Scrape. In 2008, however, one was seen near Old Downs farmhouse in late May and four were seen along a broad ditch between the Delf Stream and the railway on 22nd July. 2009 brought a further expansion, with up to nine along the Delf Stream, two on New Downs New Pool and regular sightings in Middle Field. A major increase took place in 2010 when at least 48 were recorded, including 19 along a dyke on Willow Farm, Worth, 17 on a flooded section of Lydden Valley and the adjacent Delf Stream and four on New Downs New Pool. The increase was consolidated in 2011 when at least 70 were present in early June, including 40 on and around New Downs New Pool and at least 30 on Worth.

Flight period: It has been noted from 6th May to 6th August, with most records from the second half of May through June.

Black-tailed Skimmer

Orthetrum cancellatum

The Black-tailed Skimmer, only found in East Kent in the 1940s (Kent Field Club 2001), has benefited from the recent increase in gravel pits and fishing lakes and is now widespread in the county. Although it is now regular at Sandwich Bay, a female on Worth on 22nd June 1993 was only the 5th Observatory record (SBBO Report). The following year ten were recorded between 19th June and 9th July, including three males in the Middle Field, two males on the North Stream and females on the sea wall and Princes and in 1996 there were 18 individuals, including five on Backsand Scrape on 26th July and three on New Downs New Pool on 22nd August. It underwent a period of scarcity until 2002 when a male was seen along the North Stream on 23rd June, up to eight were present on New Downs in July and seven males were present on the North/Delf Streams on 14th July. Although its numbers seem to have fluctuated considerably, it seems to be steadily increasing in response to the expansion of areas of fresh water within the recording area and in 2008 there were up to 40 on Restharrow Scrape in mid July and approximately 80 individuals in 2010, including 30 on Restharrow Scrape on 29th June, 25 on part of the Lydden Valley RSPB reserve adjacent to the Delf Stream that flooded in late June and 17 on the flight pond on Worth on 27th June.

Exuviae have been recorded at Middle Field pond.

Flight period: It has been recorded between 21st May and 14th September, though it is most numerous in June and July.

Black Darter

Sympetrum danae

This species is a rare migrant to Kent from the continent, the most recent records of which appear to have accompanied a large influx of Yellow-winged Darters *Sympetrum flaveolum* in 1995 (Kent Field Club 2001). This appears to have given rise to the only records of this species at Sandwich Bay; a male in the Green Barn area of Prince's Golf Club on 21st September 1996 and two at the Middle Field pond on 8th August 1997, which were trapped and photographed.

Yellow-winged Darter

Sympetrum flaveolum

Mention of previous records of this rare migrant from the continent in the 1995 SBBO Report is a mystery, since they do not appear in the report for 1989 when they are supposed to have occurred. However, there was an exceptional influx in 1995, during

which no fewer than 31 were recorded between 2nd-14th August, with further singles on 25th August and 9th September. Most were found in rough grassy areas around St.George's bushes, the Middle Field and the Elms extension, but three-four were discovered on successive transects of the 100 acre field. Subsequently, singles were seen on Restharrow Dunes on 29th July 1998 and in the Middle Field on 25th August 1999.

Red-veined Darter

Sympetrum fonscolombii

This species is common in tropical regions of Asia and Africa and in Europe is common in the Mediterranean region. It frequently migrates into northern Europe and has become an increasingly regular migrant to Britain, occurring in most recent years in southern England. Breeding has been sustained over a few years in Cornwall and Kent (Corbet & Brooks 2008) and it has been recorded annually at Sandwich Bay since 2004, when one was seen on Worth on 17th June. A significant increase followed, with 15 over Restharrow Scrape on 16th June 2005 and at least 20 at the same site on 29th June 2006, including four pairs in tandem with ovipositing females. Singles were also recorded in the same year at Backsand Scrape on 10th July and in one of the dykes on New Downs on 14th July. In 2007 it was recorded between 9th June and 27th July, almost exclusively on Restharrow Scrape, where numbers peaked at 22 on 28th June, including two ovipositing females, and one was found on the Hundred Acre Field on 27th July. Numbers were lower in 2008, with up to six over Restharrow Scrape in late June, including at least two ovipositing females, but in June 2009 up to 11 were seen over Restharrow Scrape, with up to five at the flight pond on Worth and one in Middle Field. Despite desiccation of Restharrow Scrape in summer 2009 at least 35 were present there in June 2010 and although none was recorded in 2011 up to seven were present on the scrape in late May 2012. Subsequently there were 25 at Restharrow Scrape in June 2013 and six in June 2014 and three at the recently excavated dragonfly pond on 10th July 2013. To the north there were 14 to the south of Prince's reservoir on 3rd July 2015, with two reports of one-two on New Downs in 2013 and 2015 and one at New Downs New Pool on 6th June 2016.

Flight period: From 24th May to 11th September (exceptionally 11th May in 2018).

Ruddy Darter

Sympetrum sanguineum

Although Ruddy Darter is fairly regular in the area, its numbers seem to be very variable, as would be expected of a species that undertakes frequent migrations from the continent (Kent Field Club 2001). For example, 51 were recorded on Worth on 13th September 1984, with 'numbers along the upper beach, probably immigrants' and, more recently, nine were recorded on New Downs on 16th August 2003 and up to 16 were present between 27th July and 19th August 2006, also on New Downs. However, in 1993 it was described as 'generally scarce', with only two individuals that year, and in most years since 1994 only moderate numbers have been evident, usually involving peak counts of between five and seven in late July or August. However, distribution mapping during 2008 showed that it is more numerous than daily counts suggest and that it appears to be more widespread in the southern part of our recording area, particularly on Worth marshes, where it seems to be more numerous in the dykes and ditches than Common Darter *S.striolatum*.

Exuviae have been recorded at Middle Field pond and Restharrow Scrape.

Flight period: It has been recorded from 26th June (12th June in the warm spring of 2014) until 13th October, with most records between mid July and mid September.

Common Darter

Sympetrum striolatum

This species, one of the most widespread species in the county, occurs at almost any type of water body and along the edges of hedgerows and woodland, often well away from water (Kent Field Club 2001). Locally, at least, it is a good deal more numerous and widespread than Ruddy Darter *Sympetrum sanguineum*. Notable concentrations include at least 50 around Prince's plantation on 9th August 1986, 100 on the Estate on 30th October 1989, up to 100 along a poplar hedge on New Downs and 146 on the dragonfly transect in September 1994, 63 on Worth marshes on 17th September 2003 and more than 250 on the Estate on 19th September 2004.

Exuviae have been recorded at Middle Field pond and Restharrow Scrape.

Flight period: Usually from mid June (13th June in the warm spring of 2007, 12th June in 2014 and, exceptionally, 31st May in 2017), with large numbers possible from early August onwards. Lingering individuals occur well into November and the latest was recorded on 29th November 1997.

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