

New record of the Keeled Skimmer (*Orthetrum coeruleescens*) in Denmark

Thomas Larsen

Larsen, T.: New record of the Keeled Skimmer (*Orthetrum coeruleescens*) in Denmark.

Ent. Meddr 76: 165-168. Copenhagen, Denmark 2008. ISSN 0013-8851.

Abstract

Three populations of Keeled Skimmer (*Orthetrum coeruleescens*) were registered July 2006 at Søby Brunkulslejer, Sepstrup Sande and Nørre Vium. These are the first documented records in Denmark since 1936.

Dansk sammendrag

Der blev i juli 2006 registreret tre populationer af Lille Blåpil (*Orthetrum coeruleescens*) i henholdsvis Søby Brunkulslejer, Sepstrup Sande and Nørre Vium. Disse er de første dokumenterede registreringer i Danmark siden 1936.

Thomas Larsen, Department of Terrestrial Ecology, National Environmental Research Institute, Vejlsvøvej 25, 8600 Silkeborg, Denmark.

E-mail: natursyn@gmail.com

Introduction

During a visit to Søby Brunkulslejer (56.040N, 9.049E) 1st of July 2006, I registered a population of Keeled Skimmer (*Orthetrum coeruleescens*) with more than 100 imagos. Two additional records of Keeled Skimmer were made during July 2006. Ole Fogh Nielsen registered a population of 15 imagos at Sepstrup Sande (56.090N, 9.371E) 20th of July and I registered a population of 15 imagos at Nørre Vium (56.027N, 8.689E) 27th of July. These were the first *documented* records of Keeled Skimmer in 70 years. Five registrations were made between 1906 and 1936 at Grimstrup Krat near Esbjerg and one registration was made in 1899 at Mausing Skov near Silkeborg (Homen, 2002).

Flight period and description

In 2006, I observed imagos of Keeled Skimmer between 1st and 27th of July. The length of the body is approximately 4 cm and the wingspan is approximately 6 cm. Females (Fig. 1) and young males (Fig. 2) are pale brown or yellow and have a pair of yellow stripes on the thorax. Females have a narrow black line running down the centre of the abdomen and a pair of similar lines edging the sides of the abdomen (Fig. 1). Mature males are a dark brown with upper surface of the abdomen a bright powder blue (Fig. 3). The yellow stripes on the thorax turn blue as the males get older and develop full pruinescence (Fig. 4). Pterostigma are yellow and the wings are lightly tinted amber but more intense towards their bases.



Fig. 1-4: Habita of *Orthetrum coerulescens* – 1 female; 2 very young immature male lacking pruinescence; 3 young male with developing pruinescence; 4 old male with fully developed pruinescence.

Habitat

At all three locations, I observed sexual active males guarding their breeding territories at slow-flowing streams that were open to semi-open (Fig. 5). Larvae of Keeled Skimmer live in acidic and oligotrophic waters. In Søby, pH of the breeding habitat water was 4.1, total phosphorus (TP) 0.016 and total nitrogen (TN) 0.70 mg l⁻¹. In Septrup Sande, TP was 0.025 and TN was 1.05 mg l⁻¹.

Søby Brunkulslejer is an area of 1,650 ha where brown coal was won 5 to 30 m below ground in the years 1940 to 1970 leaving a landscape of lakes and sand dunes that now mostly are covered with pine, black cherry, birch, common aspen and oak. The water environment is acidified because of leaching of iron sulphides.

Behaviour

Sexual active males are spaced 2-3 m apart and fly up and settle frequently in the low vegetation next to open water. Females are less active than the males and typically sit in the vegetation a few meters away from open water. Females release eggs by dipping the tips of their abdomens into the water while hovering above the water surface. Mating couples are mostly located in the low vegetation or on the ground. Young imagos frequently shelter in sunny, wind-sheltered areas on the ground or at low levels in the vegetation. Imagos of Keeled Skimmer were observed to forage on horseflies and damselflies.



Fig. 5: Breeding habitat of *Orthetrum coerulescens* in Nørre Vium.

Additional observations

Damsel- and dragonflies registered by Ole Fogh Nielsen and Thomas Larsen 11th of July 2006 at Søby Brunkulslejer.

Aeschna grandis
Aeshna juncea
Anax imperator
Calopteryx splendens
Calopteryx virgo
Coenagrion hastulatum
Cordulegaster boltoni
Enallagma cyathigerum
Ischnura elegans
Lestes dryas
Lestes sponsa
Leucorrhinia dubia
Libellula quadrimaculata
Orthetrum cancellatum
Orthetrum coerulescens
Pyrrhosoma nymphula
Somatochlora metallica
Sympetrum danae

Acknowledgements

I am grateful to Lissa Skov Hansen from Freshwater Ecology for measuring the nutrients and Elin Jørgensen from Terrestrial Ecology for measuring pH, both from National Environmental Research Laboratory in Silkeborg.

References

Holmen, M., 2002: Bidrag om fund og status for de i Danmark rødlistede arter af og vandnymfer, March 4, 2002.