

[Nannothemis Brauer, 1868](#)

***Nannothemis bella* ([Uhler, 1857](#)) - Elfin Skimmer**



Fig. 1: *Nannothemis bella* larva (3x, dorsal view), from a roadside ditch at Juniper Creek, Calhoun Co., Florida, collected on 18 March 1974 by M. J. Westfall, Jr. Specimen loan courtesy of B. Mauffrey, IORI

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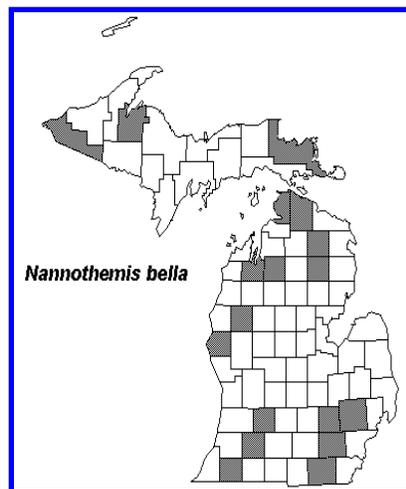
Notes on *Nannothemis bella* in Michigan

Our smallest Anisopteran, mature larvae do not exceed 11 mm in length. (Maturity is recognized when the wing sheaths reach abdominal segment 6).

Larval habitat appears to be small pools and puddles away from the water's edge in the sphagnum of fens and bogs. [Walker and Corbet \(1975\)](#) report this species being common in floating sphagnum bogs, where females oviposit in warm temporary water 2-5 cm deep. Although numerous adults specimens from Michigan are in various institutional collections ([Kielb 1997](#)), few larval specimens exist undoubtedly due to poor collecting effort and difficulty of finding this species' evidently specific microhabitat. Recently (04 April 1999), I (EB) have collected in Washtenaw County, southeastern Michigan, nearly mature larval specimens in a habitat resembling that described by Walker and Corbet. A floating mat composed of *Carex* sp. and *Sphagnum* sp., with leatherleaf around the edges, resides in the middle of an large pond in an interlobate morainal regions. The pond is fairly shallow, with *Nuphar* sp. and reeds

growing throughout much of the area, and cattails and red-osier around the pond edges. This seepage pond appears to have a thick bottom layer of organic material - the water appears to have high gilven, the pH was 6.8, the conductivity about 50 uS cm⁻¹, and little alkalinity (23 mg/l CaCO₃, phenophthalein-acid titration). On the sphagnum mat, however, water-filled depressions had a pH of 5.1, conductivity of 30 uS cm⁻¹, and an alkalinity of only about 1-2 mg/l CaCO₃. These "holes" are indeed tiny, and one such depression about 25 cm wide, 1 m long and 30 cm deep yielded 8 larvae, both mature and one considerably less-developed specimen (two-year life cycle, or two different populations?). *N. bella* appear common in these holes, but are very difficult to find. Apart from their very small size, distrubed larvae "freeze," which makes them difficult to find among the sphagnum debris, even when submerged in water. Some live larvae put in a container filled with sphagnum slowly burrowed into the debris, their bodies, being densely covered with attached particulate matter, soon became rather cryptic.

Emergence is probably from early to late-June, earlier in southern Michigan, later further north. (However, 1998 has been a very early year, and I (EB) collected an adult in the third week of May in Lenawee County). This species is widely dispersed in our state (Map 1, below).



Map 1: County distribution of *Nannothemis bella* in Michigan
Click on map for a larger image

Other links with information on the biology or ecology of larval *Nannothemis*:
none found as of 20 June 1998

References

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- Kielb, M. A. 1997. *Nannothemis bella* (Uhler) in Michigan (Libellulidae). *Williamsonia* 1(2):4.

Uhler, P. R. 1857. Contributions to the Neuropterology of the United States. *Proceedings of the Academy of Natural Sciences of Philadelphia* 1857:87-88.

Walker, E. M. and J. S. Corbet. 1975. The Odonata of Canada and Alaska, Vol. 3. University of Toronto Press: Toronto. xvi + 308.