

# Dragonfly Watch

The NParks Dragonfly Watch is a biannual survey on dragonfly and damselfly diversity in waterbodies around Singapore. Volunteers are trained to recognise 19 dragonfly and 4 damselfly species which are commonly seen. They are then assigned to various parks and nature areas to conduct the survey during a specified period. The results of the inaugural NParks Dragonfly Watch conducted from 22 to 30 July 2017 are summarised below.



## TOP 5 SITES FOR DRAGONFLY SPECIES DIVERSITY

For simplicity, we are using the broad term of 'dragonfly' here to refer to both dragonflies and damselflies.



## FACTS AND FIGURES

**35** sites with a total of **3091** dragonflies and damselflies from **33** species recorded by **146** citizen scientists

### What is species diversity?

Species diversity refers to how species are distributed in a given community by taking into account how many species there are as well as how many individuals occur per species.

One commonly used measure for calculating species diversity is the Shannon Index, where the higher the index value, the higher the species diversity.



## PREDICTING DIVERSITY WITH THE WILDNESS SCORE

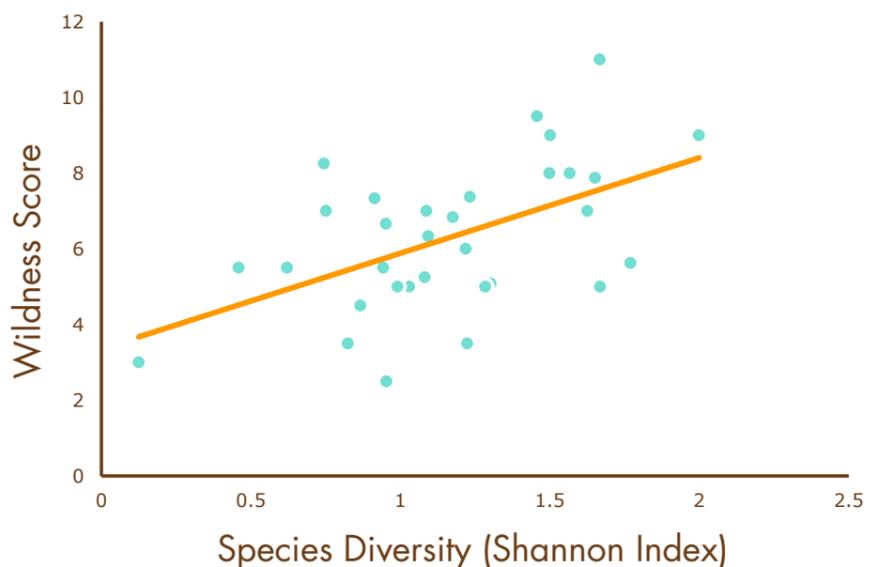
The Wildness Score is a rapid assessment of a waterbody, to determine how 'wild' it is based on 12 environmental variables:

1. Presence of submerged macrophytes\*
2. Submerged macrophytes >50% of pond
3. Presence of floating macrophytes\*
4. Floating macrophytes >50% of pond
5. Presence of emergent macrophytes\*
6. Emergent macrophytes >50% of pond
7. Presence of trees around pond
8. Presence of wooded or forested areas within 100 m of pond
9. Presence of long grass/shrubs within 100 m of pond
10. Presence of vegetated island in pond
11. Pond margin >50% natural earth embankment
12. Absence of buildings within 100 m of pond

### What is the Wildness Score?

\*Macrophytes are aquatic plants that grow in or near water. There are three main types of macrophytes: submerged, floating and emergent.

Using correlation analysis, the Wildness Score was shown to be a good predictor for species diversity in general. Each point represents data from a unique site.



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## Species Spotted

### TOP 10 MOST ABUNDANT SPECIES

1



**Blue Sprite**  
(*Pseudagrion microcephalum*)  
32.7%

2



**Common Scarlet**  
(*Crocothemis servilia*)  
16.3%

3



**Common Parasol**  
(*Neurothemis fluctuans*)  
11.6%

4



**Blue Dasher**  
(*Brachydiplax chalybea*)  
6.87%

5



**Variegated Green Skimmer**  
(*Orthetrum sabina*)  
4.52%

6



**Yellow-barred Flutterer**  
(*Rhyothemis phyllis*)  
3.53%

7



**Common Redbolt**  
(*Rhodothemis rufa*)  
2.47%

8



**Common Amberwing**  
(*Brachythemis contaminata*)  
2.39%

9



**Crimson Dropwing**  
(*Trithemis aurora*)  
2.27%

10



**Common Bluetail**  
(*Ischnura senegalensis*)  
2.20%

Photo credit: Robin Ngiam

### NOTABLE RARER SPECIES



**Variable Featherlegs**  
(*Copera vittata*)



**Sapphire Flutterer**  
(*Rhyothemis triangularis*)



**Scarlet Adjutant**  
(*Aethriamanta brevipennis*)



**Crescent Threadtail**  
(*Prodasineura notostigma*)



**Violet Sprite**  
(*Archibasis viola*)



**Pond Adjutant**  
(*Aethriamanta gracilis*)

Photo credit: Henrietta Woo, Robin Ngiam (for Sapphire Flutterer)

For more information, visit [www.nparks.gov.sg/dragonflywatch](http://www.nparks.gov.sg/dragonflywatch)