
Machias Seal Island

Environmental Data Summary 1995 - 2025



UNB's research program on MSI is directed toward the overall objective of understanding seabird responses to long-term changes in their marine ecosystem. This requires annual monitoring of the demographics and feeding behaviour of each species, and several environmental variables that play an important role in the interpretation of our results

This document provides summary data related to our daily environmental data collection on MSI, including general conditions, wind speed and direction, visibility, temperature, and sea surface temperature.

Table of Contents

Temperature: _____ **3**
 Air Temperature: _____ 3
 Sea Surface Temperature: _____ 4

Precipitation _____ **5**
 Rainfall: _____ 5
 Fog Days: _____ 6

Wind _____ **7**
 Wind Speed: _____ 7

Temperature:

Air Temperature:

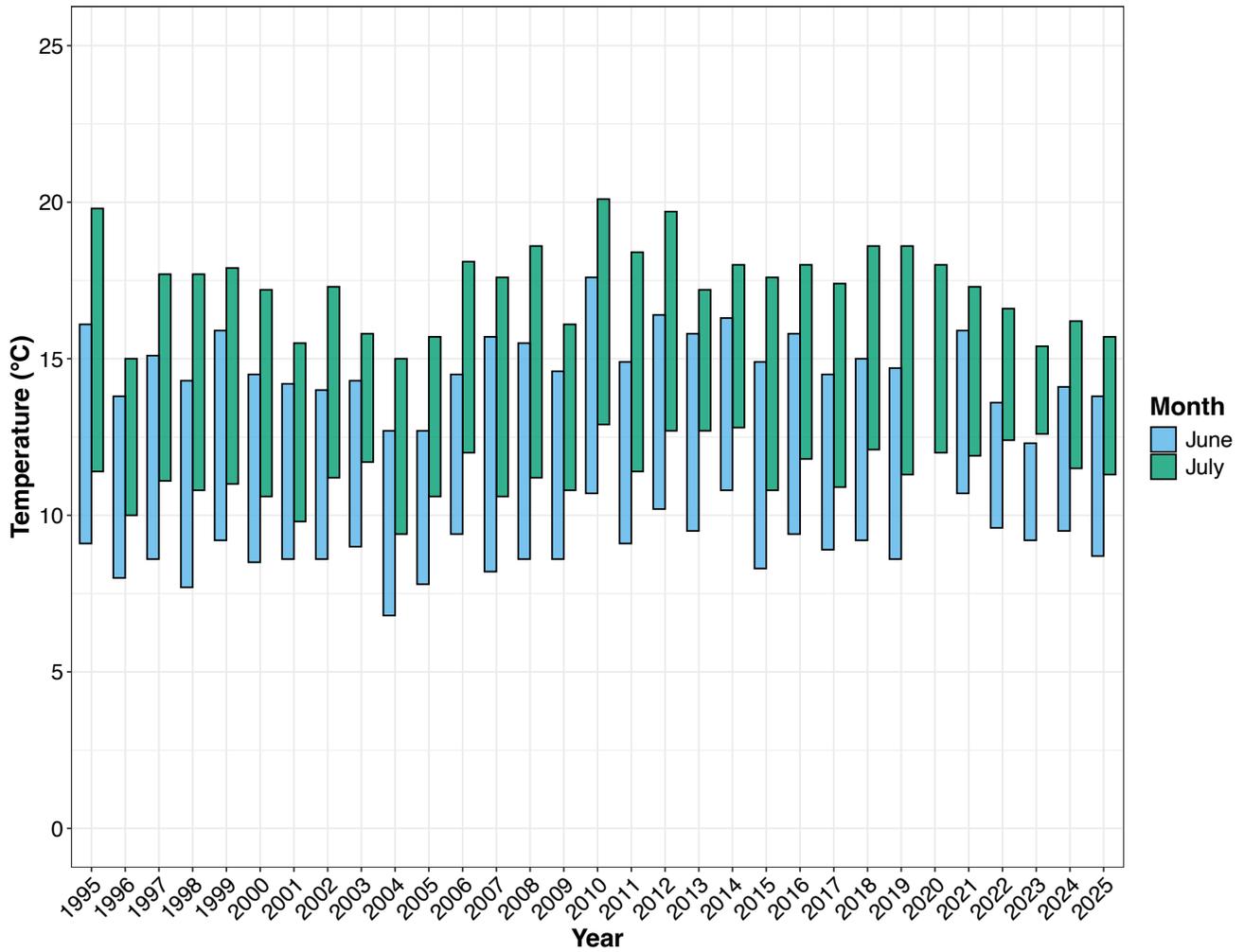


Figure 1. Mean minimum and maximum air temperature recorded at Machias Seal Island in June (blue) and July (green) between 1995 - 2025.

Notes:

- No June data collection in 2020, July data collection began on July 4.
- No temperature data collected during July 11 – July 31, 2023.

Sea Surface Temperature:

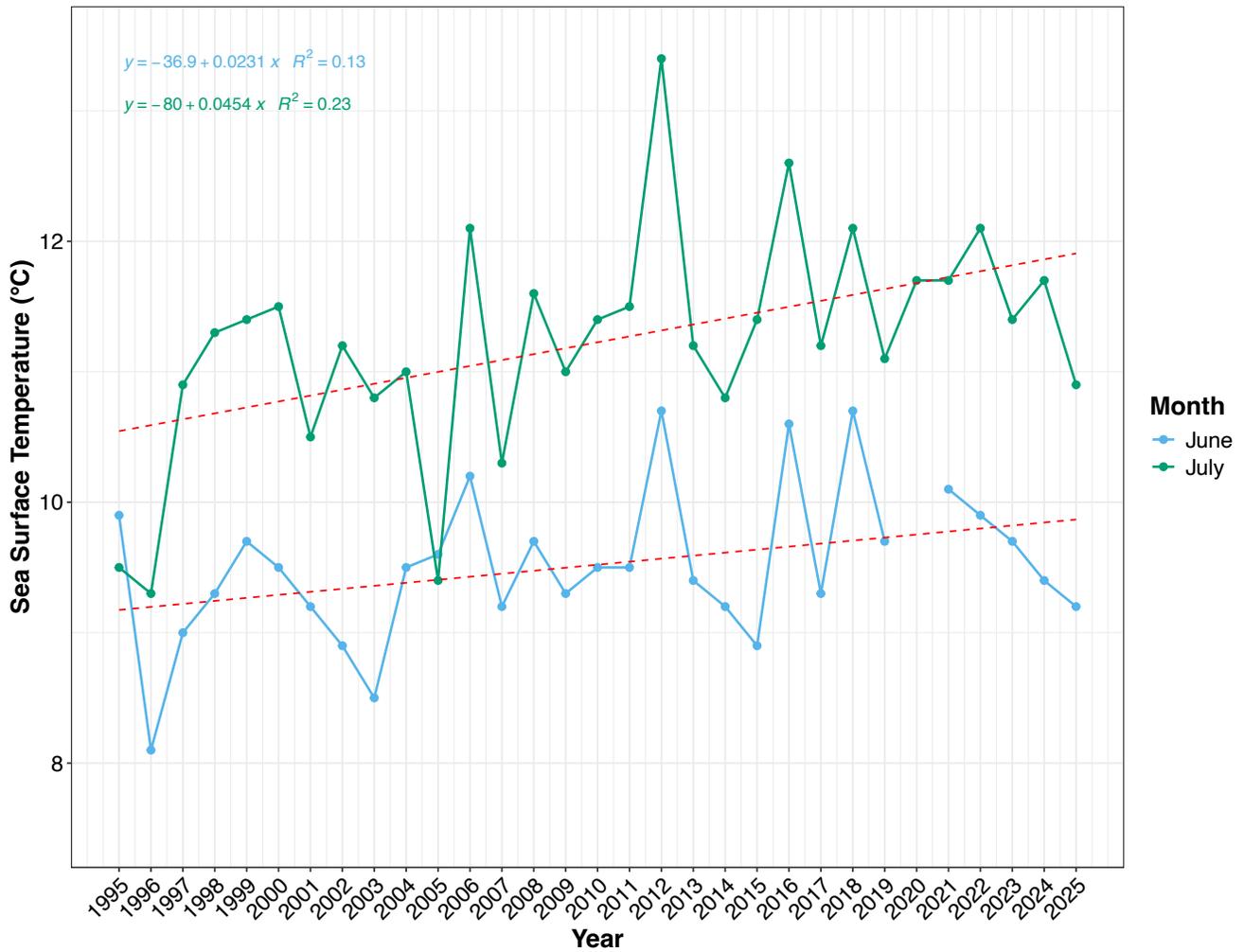


Figure 2. Mean sea surface temperature recorded off the ramp at Machias Seal Island in June (blue) and July (green) between 1995 - 2025. Lines of best fit are shown to indicate change over time.

Notes:

- No June data collection in 2020, July data collection began on July 4.

Precipitation

Rainfall:

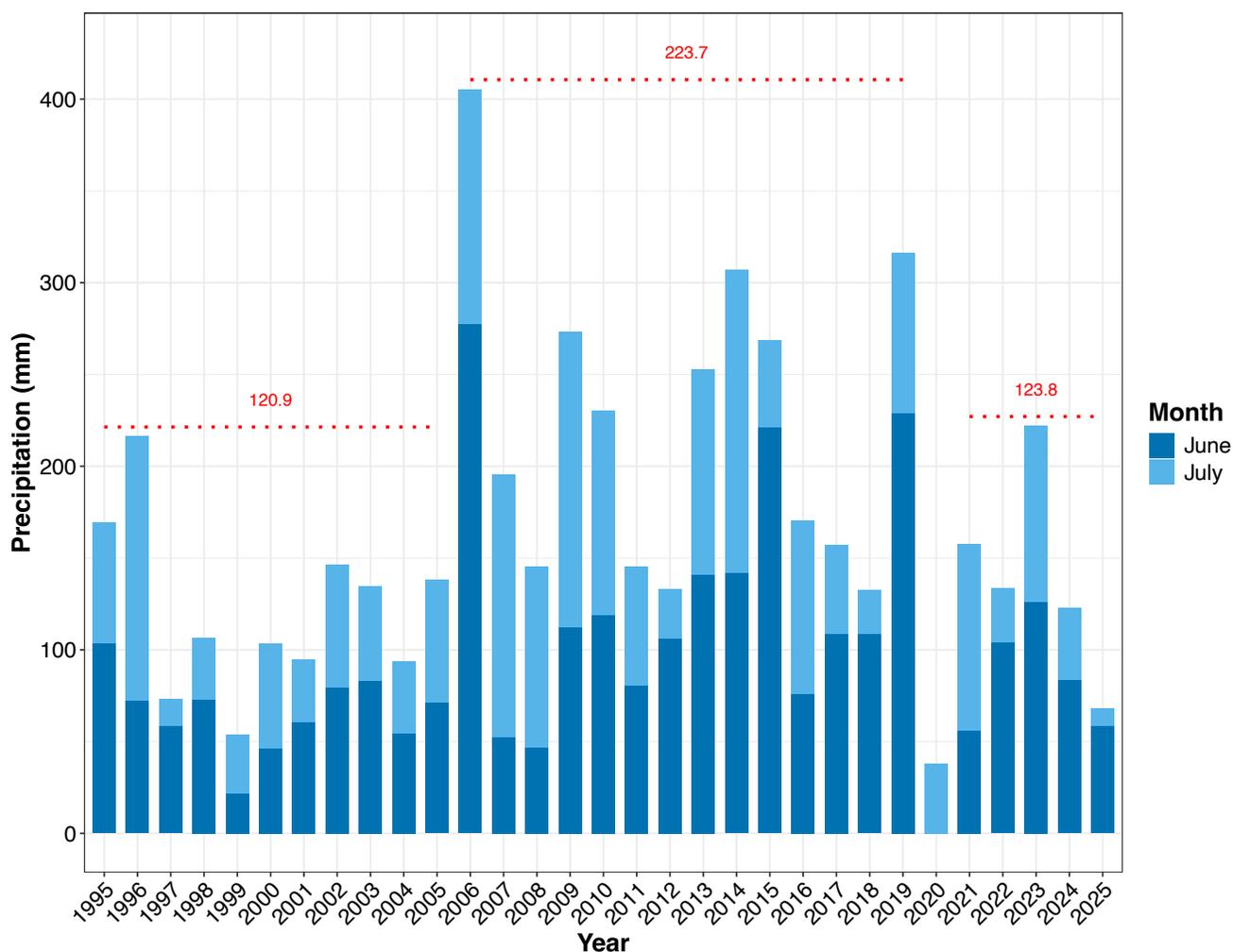


Figure 3. Total precipitation (mm) in June (dark blue) and July (light blue) at Machias Seal Island between 1995 - 2025 with three term averages, demonstrating the increased precipitation since 2006 and possible decrease after 2020.

Notes:

- No June data collection in 2020, July data collection began on July 4.

Fog Days:

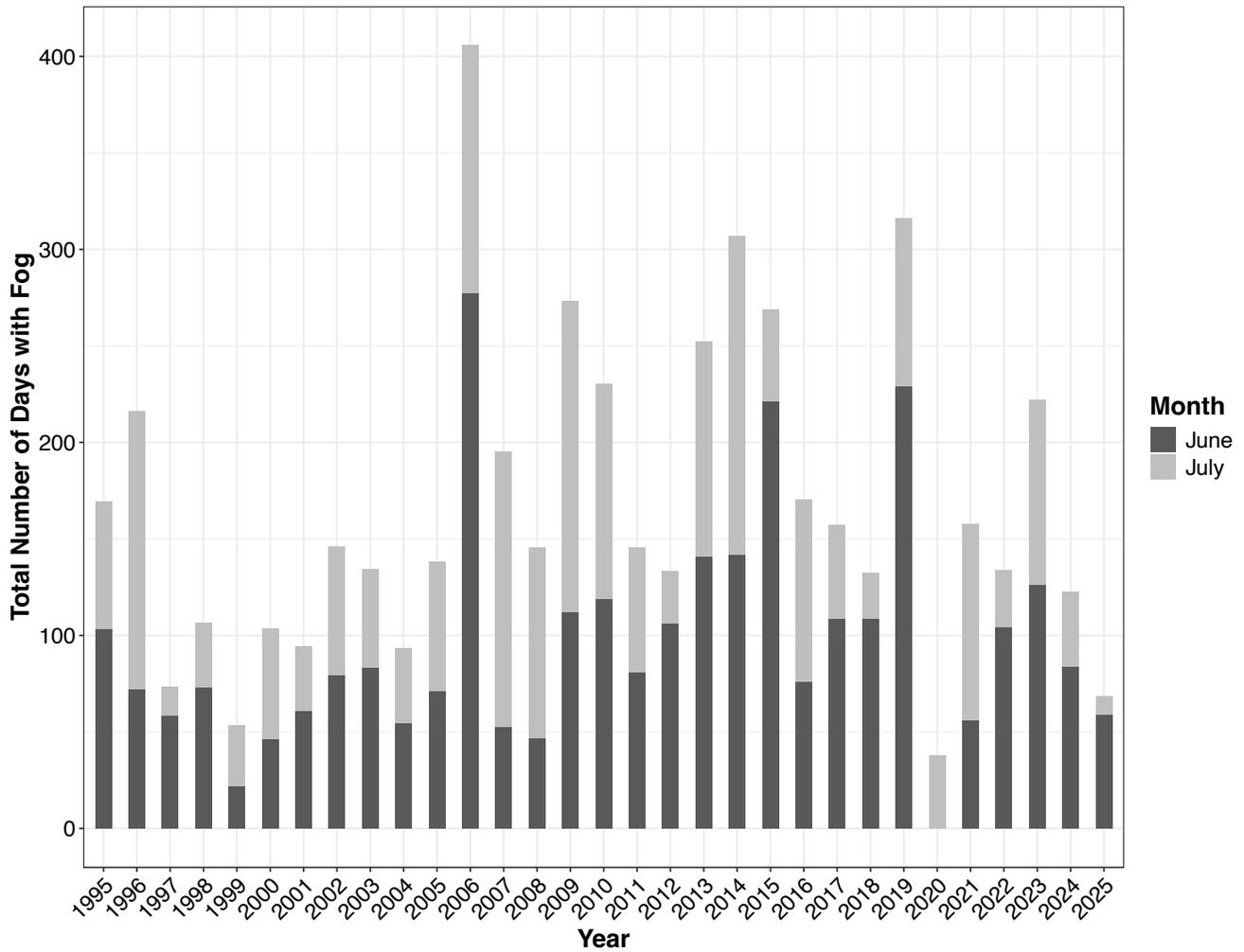


Figure 4. Total number of days with fog in June (dark grey) and July (light grey) at Machias Seal Island between 1995 - 2025.

Notes:

- No June data collection in 2020, July data collection began on July 4.

Wind

Wind Speed:

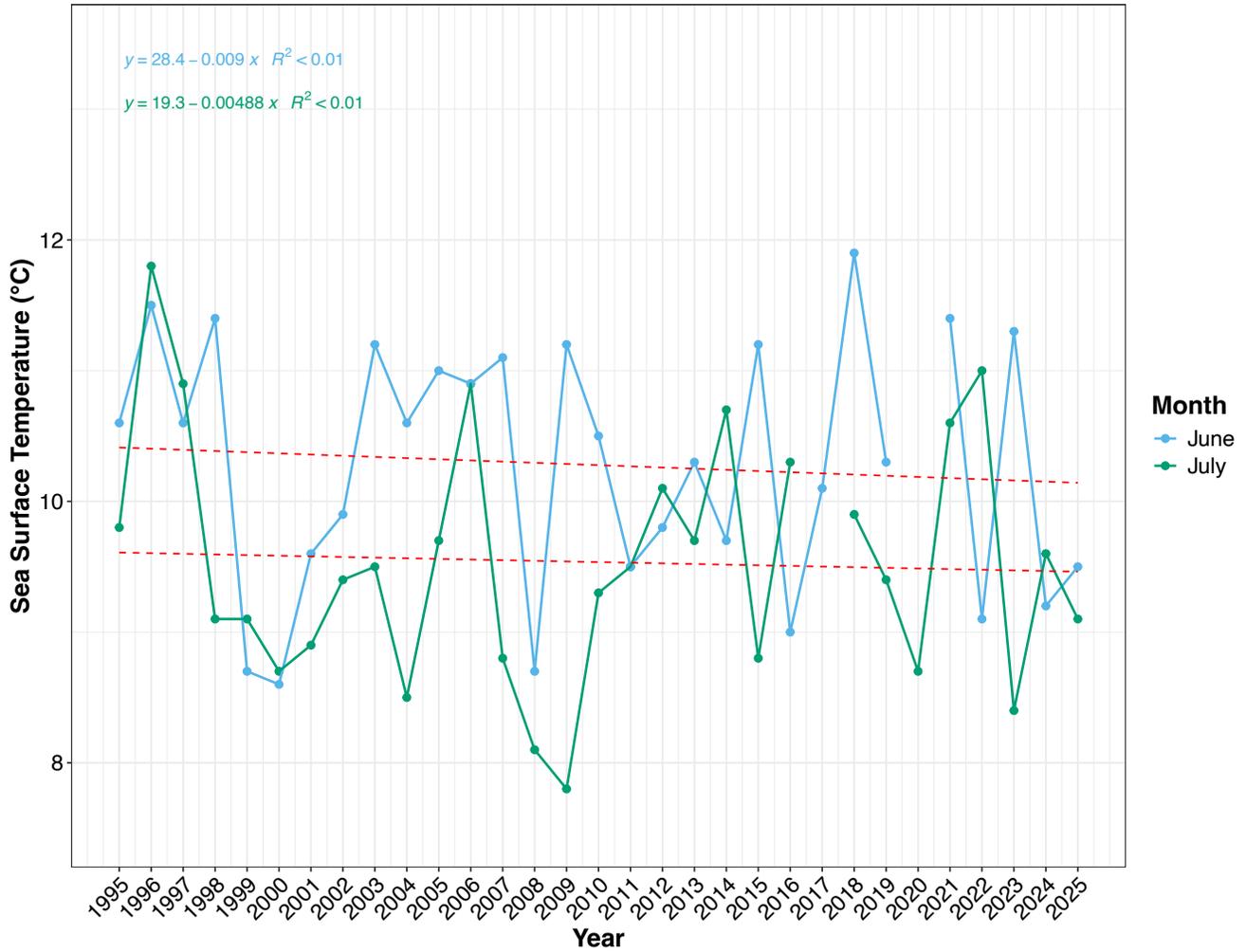


Figure 5. Mean wind speed (knots) in June (blue) and July (green) at Machias Seal Island between 1995 – 2025.

Notes:

- No June data collection in 2020, July data collection began on July 4.