**A mathematical model of macroalgal detrital dynamics**

**Abstract**

**Introduction**

**{Pessarrodona et al., 2023, #24778}**

**{Birch et al., 1983, #5320}**

**{Albright et al., 1982, #85687}**

**{Smith and Foreman, 1984, #41137}**

**{Brouwer, 1996, #26704}**

**{Bourguès et al., 1996, #24868}**

**{Rovira and Rovira, 2010, #106773}**

**{Trevathan-Tackett et al., 2020, #39238}**

**{de Bettignies et al., 2020, #27484}**

**{Hamersley et al., 2015, #100187}**

**{Pedersen et al., 2021, #86830}**

**{Frontier et al., 2021, #5573}**

**{Frontier et al., 2021, #81382}**

**{Wright et al., 2023, #11375}**

**{Wright and Kregting, 2023, #49344}**

**{Wright and Foggo, 2021, #58012}**

**{Wright et al., 2022, #84780}**

**The mathematical model**

**Implementation in R and Stan**

**Discussion**