



Figure S1 Cross scheme used to generate males for sequencing and preservation of X chromosomes that have experienced one round of female meiosis. Isogenized *Canton-S* females and *w¹¹¹⁸* males were crossed and male progeny were then singly mated to *C(1)DX* females for five days before the male was removed and stored at -80°C . Male progeny were collected from each stock as needed for sequencing the recombinant X chromosome within the stock.