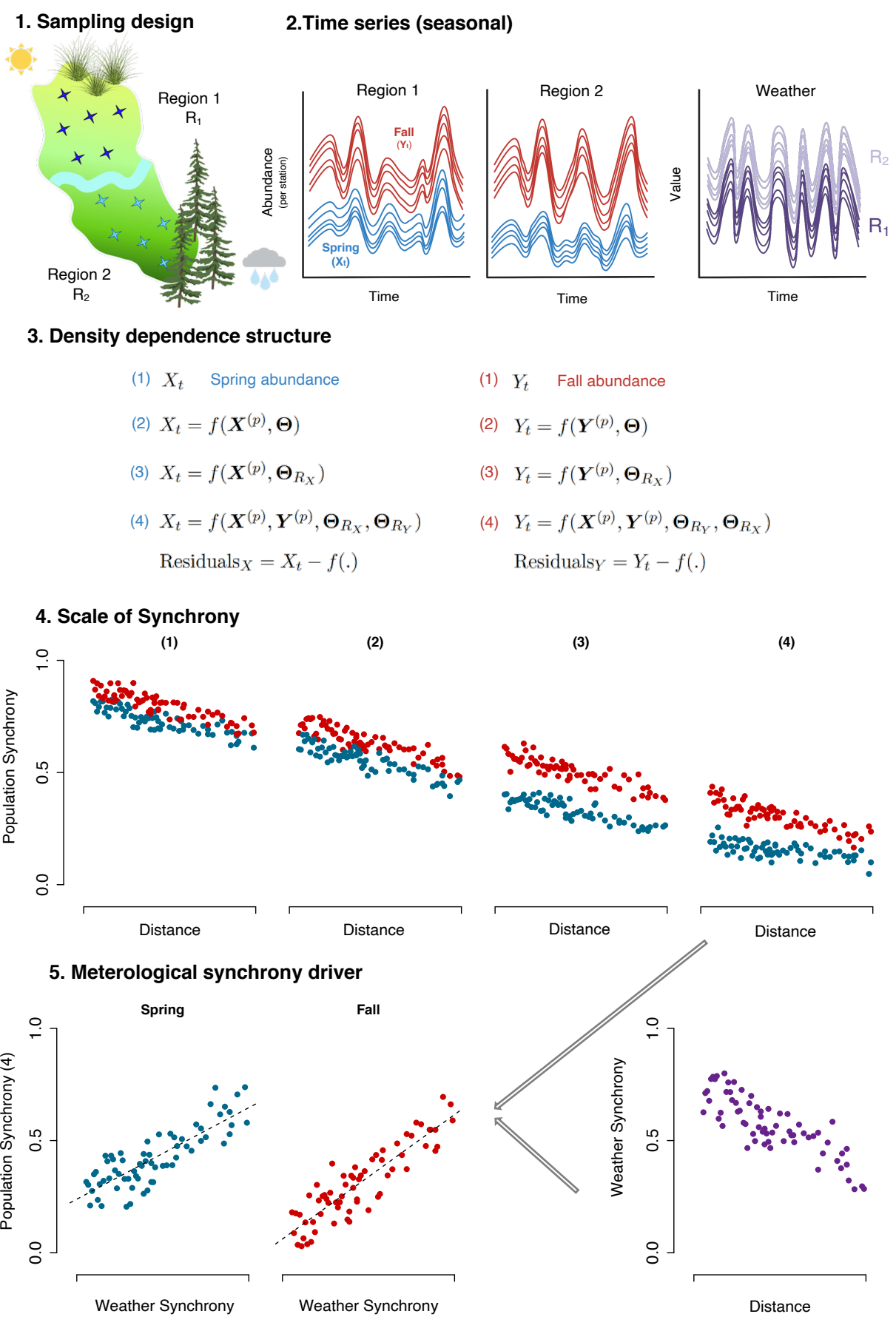
1. Sampling design
2.Time series (seasonal)
Region 1
R1
Region 2
R2
Abundance
(per station)
Region 1
Fall
(Yt)
Spring
(Xt)
Time
Region 2
Time
Weather
Value
R2
R1
Time
3. Density dependence structure
(1) Xt Spring abundance
(2) Xt = f(X(p), Θ)
(3) Xt = f(X(p), ΘRX)
(4) Xt = f(X(p), Y(p), ΘRX, ΘRY)
Residuals X = Xt − f(.)
(1) Yt Fall abundance
(2) Yt = f(Y(p), Θ)
(3) Yt = f(Y(p), ΘRX)
(4) Yt = f(X(p), Y(p), ΘRY, ΘRX)
Residuals Y = Yt − f(.)
4. Scale of Synchrony
(1)
(2)
(3)
(4)
Population Synchrony
1.0
0.5
0.0
Distance
Distance
Distance
Distance
5. Meterological synchrony driver
Spring
Fall
Population Synchrony (4)
1.0
0.5
0.0
Weather Synchrony
Weather Synchrony
Weather Synchrony
1.0
0.5
0.0
Distance