Different approaches to scaling SAD and the logseries

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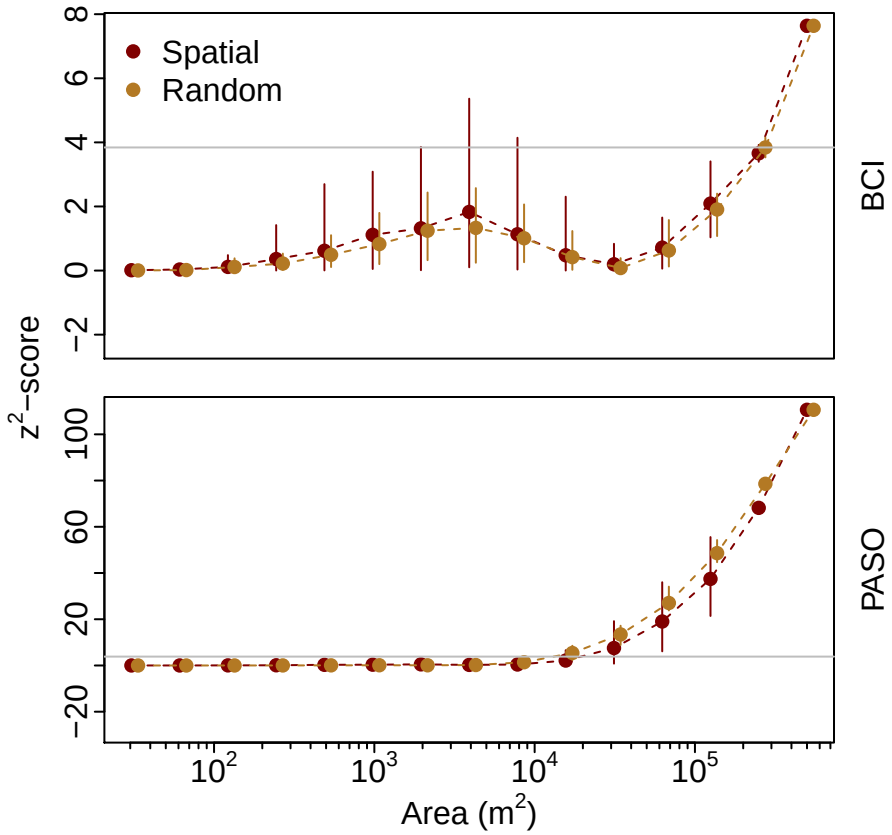
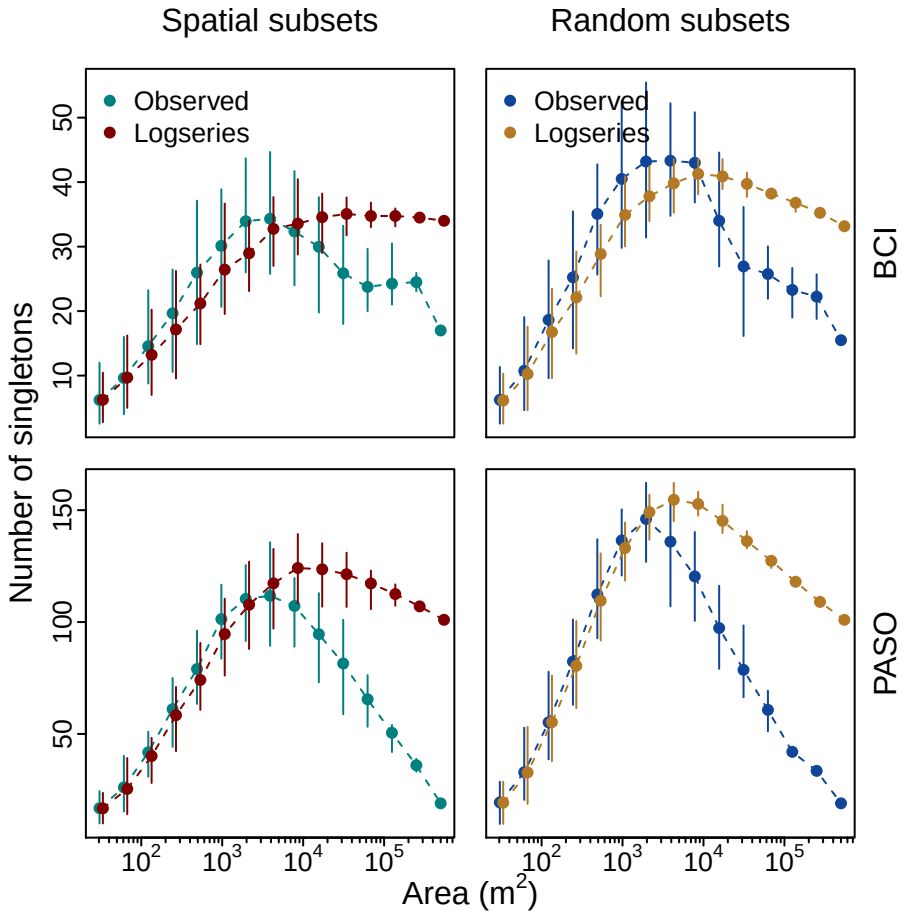
```
singScaleSumm <- read.csv('scaling_fisherSingletons.csv', as.is = TRUE)
zScaleSumm <- read.csv('scaling_fisherZ.csv', as.is = TRUE)

obsCol <- hsv(0.5, 1, 0.5)
fishCol <- hsv(0, 1, 0.5)
perm.obsCol <- hsv(0.6, 0.9, 0.6)
perm.fishCol <- hsv(0.1, 0.8, 0.7)
```

```
par(mfrow = c(2, 1), mar = c(0, 0, 0, 0) + 0.5, oma = c(3, 3, 2, 2), mgp = c(2, 0.25, 0), tcl = -0.25)

scalePlot(zScaleSumm[zScaleSumm$site == 'BCI', ], 'z2', log = 'x', xaxt = 'n', col = fishCol)
scalePlot(zScaleSumm[zScaleSumm$site == 'BCI', ], 'perm.z2', col = perm.fishCol, add = TRUE, jit = 1.1)
abline(h = qchisq(0.95, 1), col = 'gray')
mtext('BCI', side = 4, line = 0.5)
legend('topleft', legend = c('Spatial', 'Random'), col = c(fishCol, perm.fishCol), pch = 16, bty = 'n')

scalePlot(zScaleSumm[zScaleSumm$site == 'PASO', ], 'z2', log = 'x', xaxt = 'n', col = fishCol)
scalePlot(zScaleSumm[zScaleSumm$site == 'PASO', ], 'perm.z2', col = perm.fishCol, add = TRUE, jit = 1.1)
abline(h = qchisq(0.95, 1), col = 'gray')
logAxis(1, expLab = TRUE)
mtext('PASO', side = 4, line = 0.5)

mtext(expression('Area ('*m^2*')'), side = 1, line = 1, outer = TRUE)
mtext(expression(z^2*'-score'), side = 2, outer = TRUE, line = 1)
```

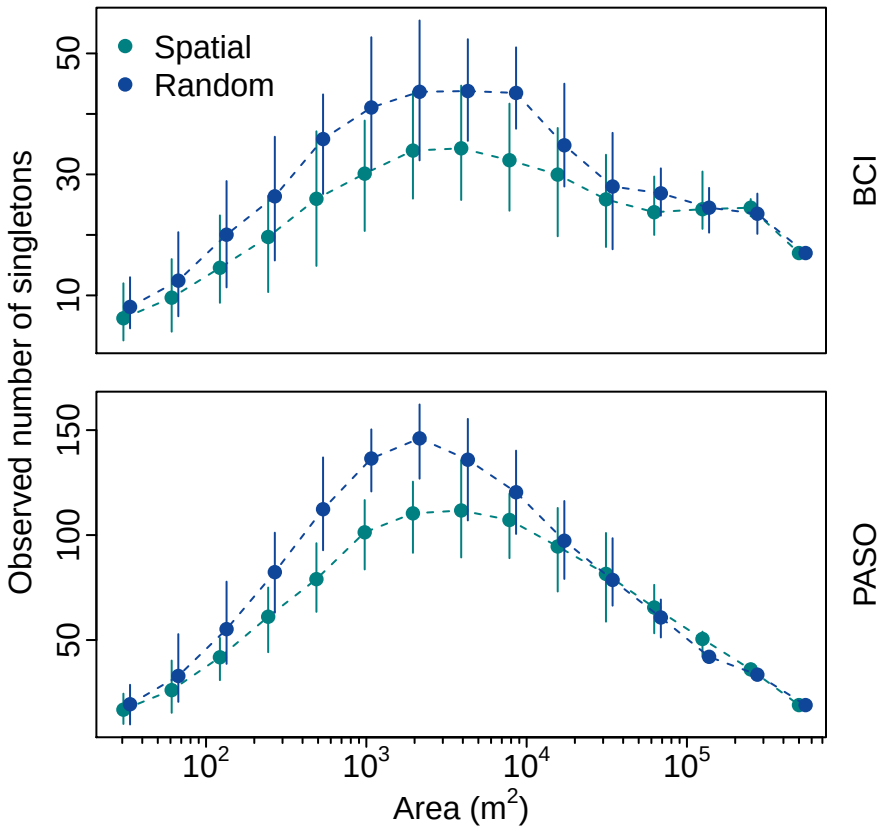



```
par(mfrow = c(2, 2), mar = c(0, 0, 0, 0) + 0.5, oma = c(3, 3, 2, 2), mgp = c(2, 0.25, 0), tcl = -0.25)

scalePlot(singScaleSumm[singScaleSumm$site == 'BCI', ], 'n1obs', log = 'x', xaxt = 'n', col = obsCol)
scalePlot(singScaleSumm[singScaleSumm$site == 'BCI', ], 'n1fish', add = TRUE, jit = 1.1, col = fishCol)
legend('topleft', legend = c('Observed', 'Logseries'),
       col = c(obsCol, fishCol), pch = 16, bty = 'n')
mtext('Spatial subsets', side = 3, line = 1)

scalePlot(singScaleSumm[singScaleSumm$site == 'BCI', ], 'perm.n1obs', log = 'x', xaxt = 'n', yaxt = 'n'
          col = perm.obsCol)
scalePlot(singScaleSumm[singScaleSumm$site == 'BCI', ], 'perm.n1fish', add = TRUE, jit = 1.1,
          col = perm.fishCol)
legend('topleft', legend = c('Observed', 'Logseries'),
       col = c(perm.obsCol, perm.fishCol), pch = 16, bty = 'n')
mtext('BCI', side = 4, line = 0.5)
mtext('Random subsets', side = 3, line = 1)

scalePlot(singScaleSumm[singScaleSumm$site == 'PASO', ], 'n1obs', log = 'x', xaxt = 'n', col = obsCol)
scalePlot(singScaleSumm[singScaleSumm$site == 'PASO', ], 'n1fish', add = TRUE, jit = 1.1, col = fishCol
          xaxt = 'n')
logAxis(1, expLab = TRUE)

scalePlot(singScaleSumm[singScaleSumm$site == 'PASO', ], 'perm.n1obs', log = 'x', xaxt = 'n', yaxt = 'n
          col = perm.obsCol)
scalePlot(singScaleSumm[singScaleSumm$site == 'PASO', ], 'perm.n1fish', add = TRUE, jit = 1.1,
          xaxt = 'n', col = perm.fishCol)
logAxis(1, expLab = TRUE)
```

```
mtext('PASO', side = 4, line = 0.5)

mtext(expression('Area ('*m^2*')'), side = 1, line = 1, outer = TRUE)
mtext('Number of singletons', side = 2, line = 1, outer = TRUE)
```




```
par(mfrow = c(2, 1), mar = c(0, 0, 0, 0) + 0.5, oma = c(3, 3, 2, 2), mgp = c(2, 0.25, 0), tcl = -0.25)

scalePlot(singScaleSumm[singScaleSumm$site == 'BCI', ], 'n1obs', log = 'x', xaxt = 'n', col = obsCol)
scalePlot(singScaleSumm[singScaleSumm$site == 'BCI', ], 'perm.n1obs', add = TRUE, jit = 1.1, col = perm
mtext('BCI', side = 4, line = 0.5)
legend('topleft', legend = c('Spatial', 'Random'), col = c(obsCol, perm.obsCol), pch = 16, bty = 'n')

scalePlot(singScaleSumm[singScaleSumm$site == 'PASO', ], 'n1obs', log = 'x', xaxt = 'n', col = obsCol)
scalePlot(singScaleSumm[singScaleSumm$site == 'PASO', ], 'perm.n1obs', add = TRUE, jit = 1.1, col = per
logAxis(1, expLab = TRUE)
mtext('PASO', side = 4, line = 0.5)

mtext(expression('Area ('*m^2*')'), side = 1, line = 1, outer = TRUE)
mtext('Observed number of singletons', side = 2, line = 1, outer = TRUE)
```


Spatial
Random
Observed number of singletons
10
30
50
50
100
150
BCI
PASO
10^2
10^3
10^4
10^5
Area (m^2)