Glider sampling simulation figures 8 & 9

Doug Kinzey, AERD

11/30/2021

```
NASC.yrs = c(2001:2009,2011)

AMLR.area = c('SA','WA')

n.rep = 100

n.gldr = c(1,2,3,4,5)

save.tables = 1

max.NASC.m = 250

depths = c(150,200,300,400,500,700,1000)

azfp.off = c(150,150,150,150,150,150,150)

qntl.vals = c(0.97,0.98,0.99,0.999,1)

smpl.st = 1
```

Figure 8. Approximate coverage probabilities based on 9 replicates of 1, 2, 3 and 5 gliders.

```
source('Fig8.r')
Fig8(n.gldr = 1)
Fig8(n.gldr = 2)
Fig8(n.gldr = 3)
Fig8(n.gldr = 5)
```

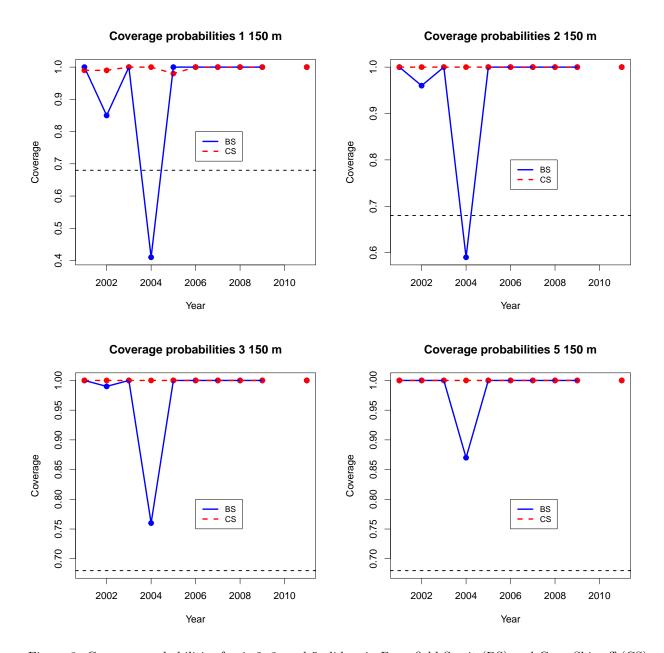


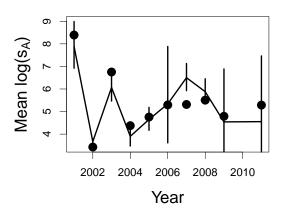
Figure 8. Coverage probabilities for 1, 2, 3, and 5 gliders in Bransfield Strait (BS) and Cape Shirreff (CS). The expected value of 68% is shown as the dashed black line.

Figure 9.

```
source('Fig9.r')
Fig9(AMLR.area='SA',n.rep,NASC.yrs,n.gldr)
Fig9(AMLR.area='WA',n.rep,NASC.yrs,n.gldr)
```

Delta.dist 1 glider_SA_100 reps

Delta.dist 1 glider_WA_100 reps



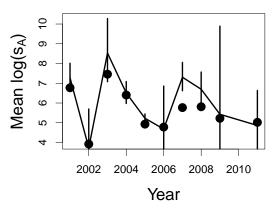


Figure 9. Estimated densities using the delta distribution and yos as the sampling unit \pm one SD from all replicates of a single glider (lines) with a maximum yo depth of 150 m for Bransfield Strait (a) and Cape Shirreff (b), and the annual mean densities of the population (points).