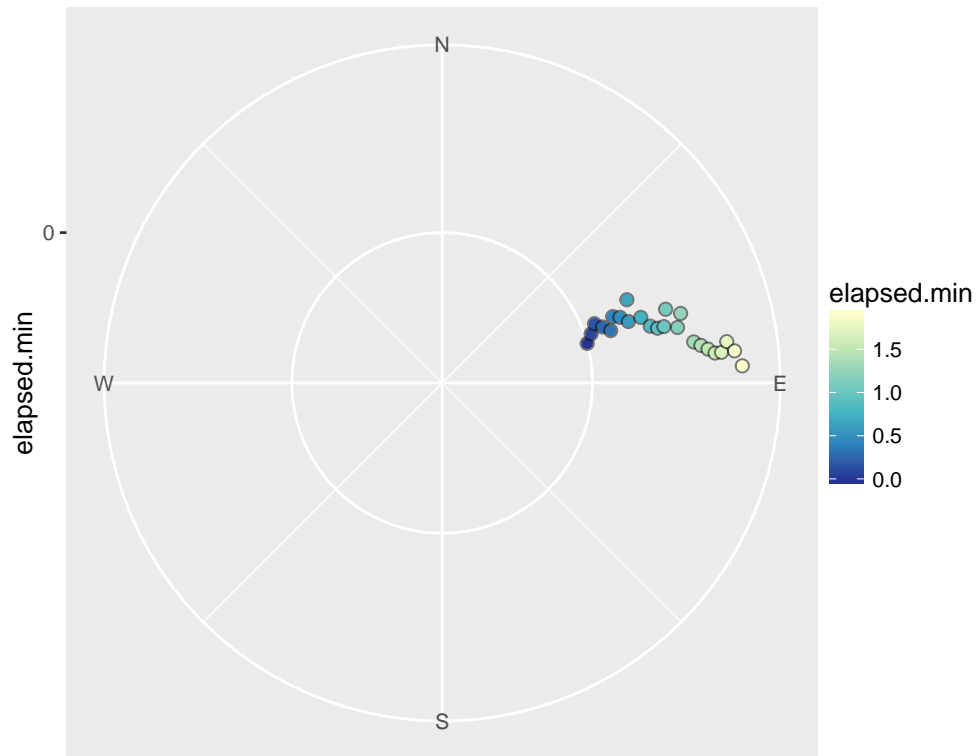



# Compass rotation



# Trajectory

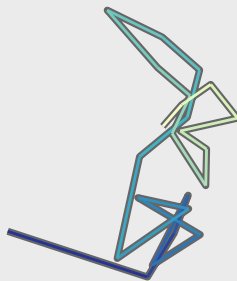
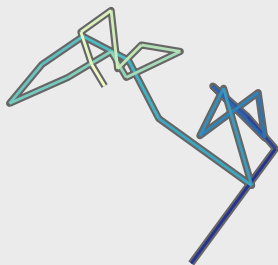
elapsed.min



0.0 0.5 1.0 1.5

raw

rotated



y

x

# Positions

Directionality — signif. - - - non-signif.

raw  
18°,  $r=0.8$ ,  $p=0$

top

1

0.5

0

Rayleigh's  $r$

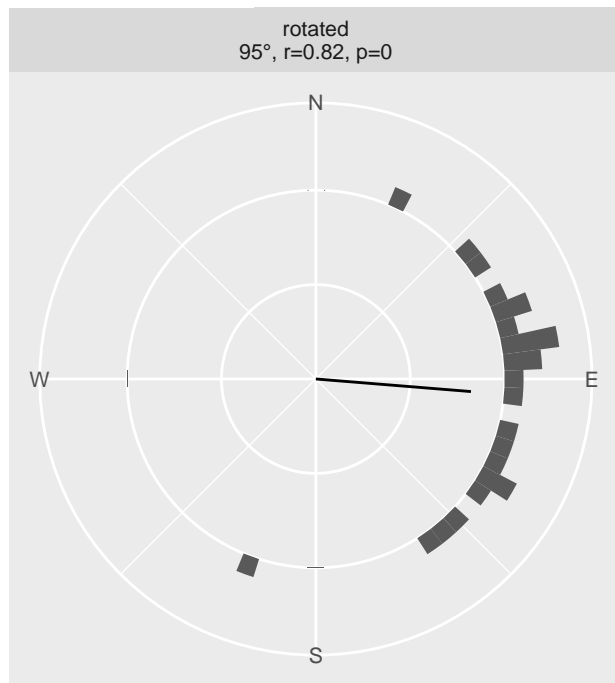
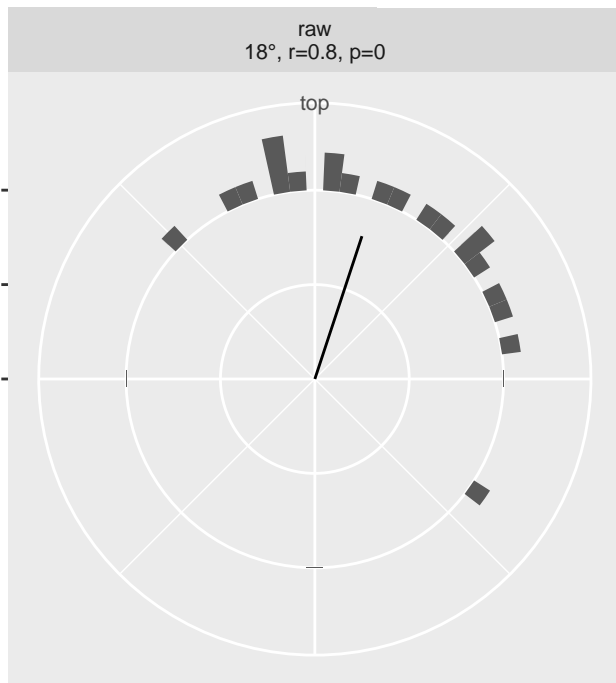
rotated  
95°,  $r=0.82$ ,  $p=0$

N

W

E

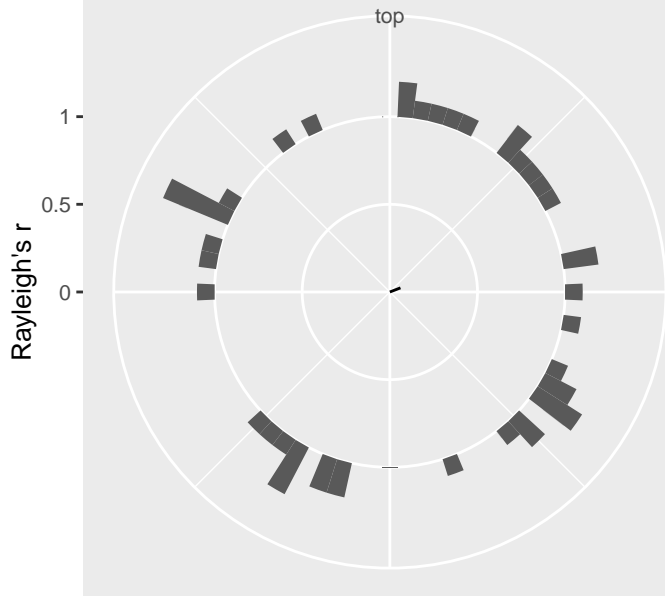
S



# Swimming directions

Directionality — signif. - - - non-signif.

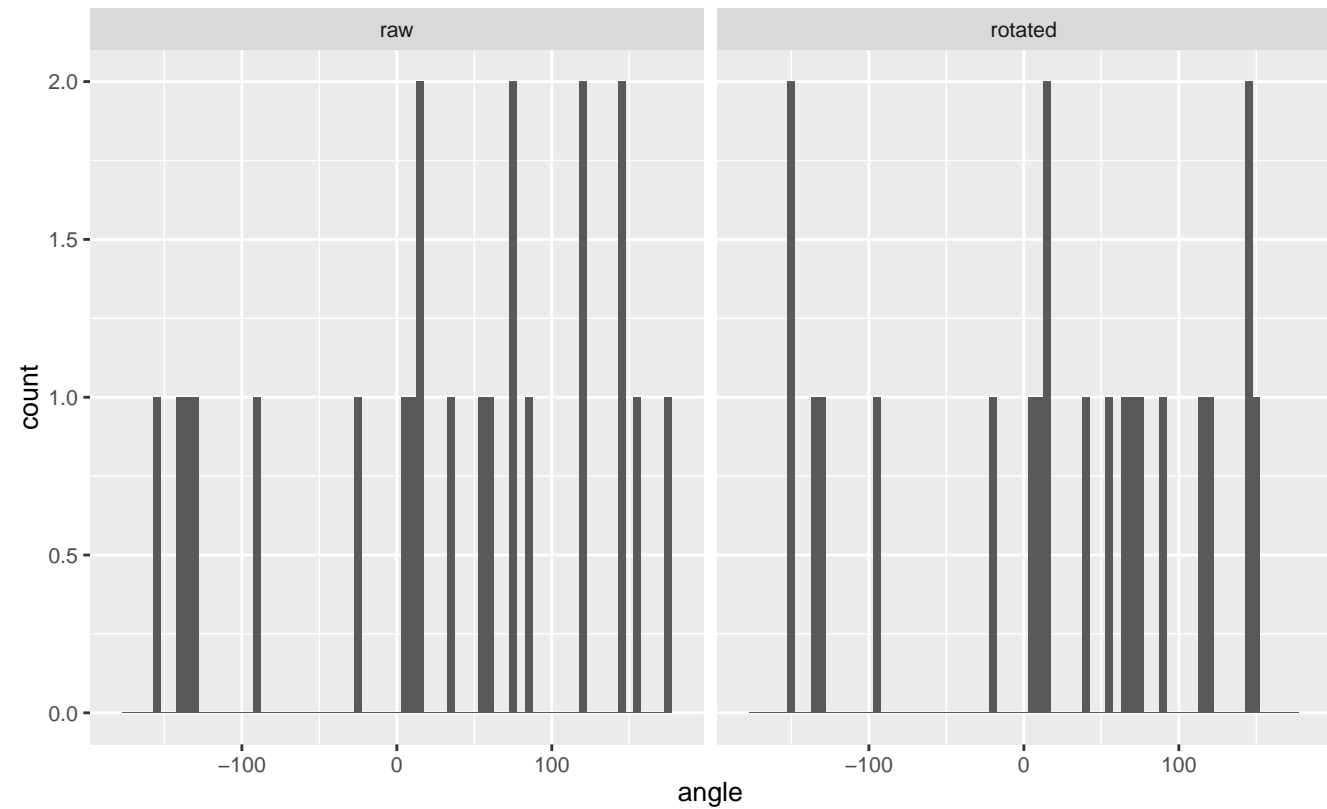
raw  
69°,  $r=0.12$ ,  $p=0.724$



rotated  
138°,  $r=0.1$ ,  $p=0.789$



# Turning angles



Swimming speeds

