

Integrated Population Models. Theory and ecological applications with R and JAGS

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List with errata

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1. p. 81, the calculation of the reproductive value is wrong

```
levec <- Re(eigen(A)$vectors)[u,] should be  
levec <- Re(eigen(t(A))$vectors)[,u])
```

The resulting values are then

```
[1] -0.6571735 -0.7537393
```

We usually scale them, such that the reproductive value of the first age class equals 1. If this is done, we get:

```
levec / levec[1]  
[1] 1.000000 1.146941
```

Hence, the shrikes of the second age class contribute about 1.15 times more to population growth than the first age class.

2. p. 181 in the simulation of the observation using observation matrix OPM

```
true.state <- z[i,t-1] should be true.state <- z[i,t]
```

3. p. 187 in the block of code starting "From here onwards..." there are at two places

```
  } #s  
  } #m
```

which should be

```
  } #m  
  } #s
```

as the 'm' loop is nested inside the 's' loop. Note that these errors refer to comments only, so the code works correctly also if kept unchanged.

The same error is also on page 196, lines 5-6 and lines 11-12

4. p. 187 in the code for the multinomial likelihood

The line of code:

```
U[(t-1)*ns+(1:ns), (j-1)*ns+(1:ns)] <- U[(t-1)*ns+(1:ns), (j-2)*ns+(1:ns)] %*% psi[,t,] %*% dq[,t,]
```

needs to be corrected to:

```
U[(t-1)*ns+(1:ns), (j-1)*ns+(1:ns)] <- U[(t-1)*ns+(1:ns), (j-2)*ns+(1:ns)] %*% psi[,j-1,] %*% dq[,j-1,]
```

5. p. 188 in the block of code beginning "Call JAGS from R..." there is

```
par(mfrow=c(2, 2)) ;
```

which is superfluous with current versions of `jagsUI`. It does nothing except messes up subsequent plots!

The same error is also on page 196, 2nd line from bottom: `par(mfrow=c(3, 3)) ;` is superfluous and can be deleted.

6. p. 493 in the code for the multinomial likelihood

The line of code:

```
U[(t-1)*ns+(1:ns), (j-1)*ns+(1:ns)] <- U[(t-1)*ns+(1:ns), (j-2)*ns+(1:ns)] %*% psi[,t,] %*% dq[,t,]
```

needs to be corrected to:

```
U[(t-1)*ns+(1:ns), (j-1)*ns+(1:ns)] <- U[(t-1)*ns+(1:ns), (j-2)*ns+(1:ns)] %*% psi[,j-1,] %*% dq[,j-1,]
```