

Apply An Age-Length Key

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Source the Previous Script

```
> # Appropriately set the working directory before this
> # This also ran library(FSA) which also provides alkIndivAge(), Summarize(), hist()
> source("scripts/ALK_Construction.R")
> ls()
[1] "ALK.obs"      "ALK.sm"      "hook1"      "lblTL"      "lens"      "mlr"      "raw"
[8] "sp.age"      "sp.age.mod"  "sp.len"     "SpotVA2"    "tmp"

> headtail(sp.len)
      t1 age
1   9.6 NA
2   9.4 NA
3   9.1 NA
329 9.6 NA
330 7.5 NA
331 7.4 NA
```

Apply ALK using Isermann-Knight Method

```
> sp.len.mod <- alkIndivAge(ALK.obs,age~t1,data=sp.len)
> headtail(sp.len.mod)
      t1 age
1   9.6  1
2   9.4  1
3   9.1  2
329 9.6  2
330 7.5  1
331 7.4  1

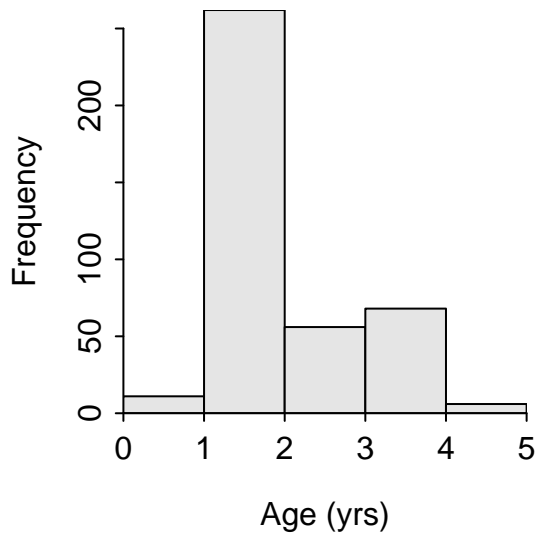
> sp.comb <- rbind(sp.age,sp.len.mod)
> str(sp.comb)
'data.frame':   403 obs. of  2 variables:
 $ t1 : num  10.6 7.1 12.3 9.7 11.2 8.9 12.6 7.6 10 7 ...
 $ age: num  1 1 3 2 3 1 3 1 1 1 ...
```

Summarize Final Results

```
> ( agefreq <- xtabs(~age,data=sp.comb) )
age
 0    1    2    3    4
11 262  56  68   6

> prop.table(agefreq)
age
      0      1      2      3      4
0.02729529 0.65012407 0.13895782 0.16873449 0.01488834
```

```
> hist(~age,data=sp.comb,w=1,xlab="Age (yrs)")
```



```
> ( sp.sum <- Summarize(tl~age,data=sp.comb,digits=2) )
```

Warning: RHS variable was converted to a factor.

	age	n	nvalid	mean	sd	min	Q1	median	Q3	max	percZero
1	0	11	11	8.11	0.90	6.3	8.10	8.20	8.75	8.9	0
2	1	262	262	9.07	1.16	7.0	8.20	8.95	9.80	12.8	0
3	2	56	56	11.04	1.20	9.0	9.90	11.30	12.00	12.9	0
4	3	68	68	12.06	0.84	11.0	11.40	11.85	12.72	13.9	0
5	4	6	6	13.00	0.77	12.0	12.37	13.20	13.50	13.9	0

```
> plot(tl~age,data=sp.comb,ylab=lblTL,xlab="Age (yrs)",pch=19,col=col2rgbt("black",0.1))
```

```
> lines(mean~fact2num(age),data=sp.sum,col="blue",lwd=2)
```

