

TOTAL DATASET

RStudio

women x cassie x larvae x

length	freq
1	6
2	7
3	8
4	9
5	10
6	11
7	12
8	13
9	14
10	15
11	16
12	17
13	18
14	19
15	20

Environment History Connections Tutorial

R - Global Environment

Data

- cassie 40 obs. of 2 variables
- fitlarvae1 List of 10
- larvae 15 obs. of 2 variables
- women 16 obs. of 2 variables

Files Plots Packages Help Viewer Presentation

Zoom Export Publish

Showing 1 to 15 of 15 entries, 2 total columns

```
R 4.3.1 ~ /  
> larvae<-as.mixture(larvae)  
> plot(larvae)  
> fitlarvae1<-mix(larvae,mixparam(c(9,17),.5),"gamma",mixconstr(consigma="CCV"))  
> summary(fitlarvae1)
```

Parameters:

	pi	mu	sigma
1	0.2711	8.702	1.417
2	0.7289	15.058	2.451

Standard Errors:

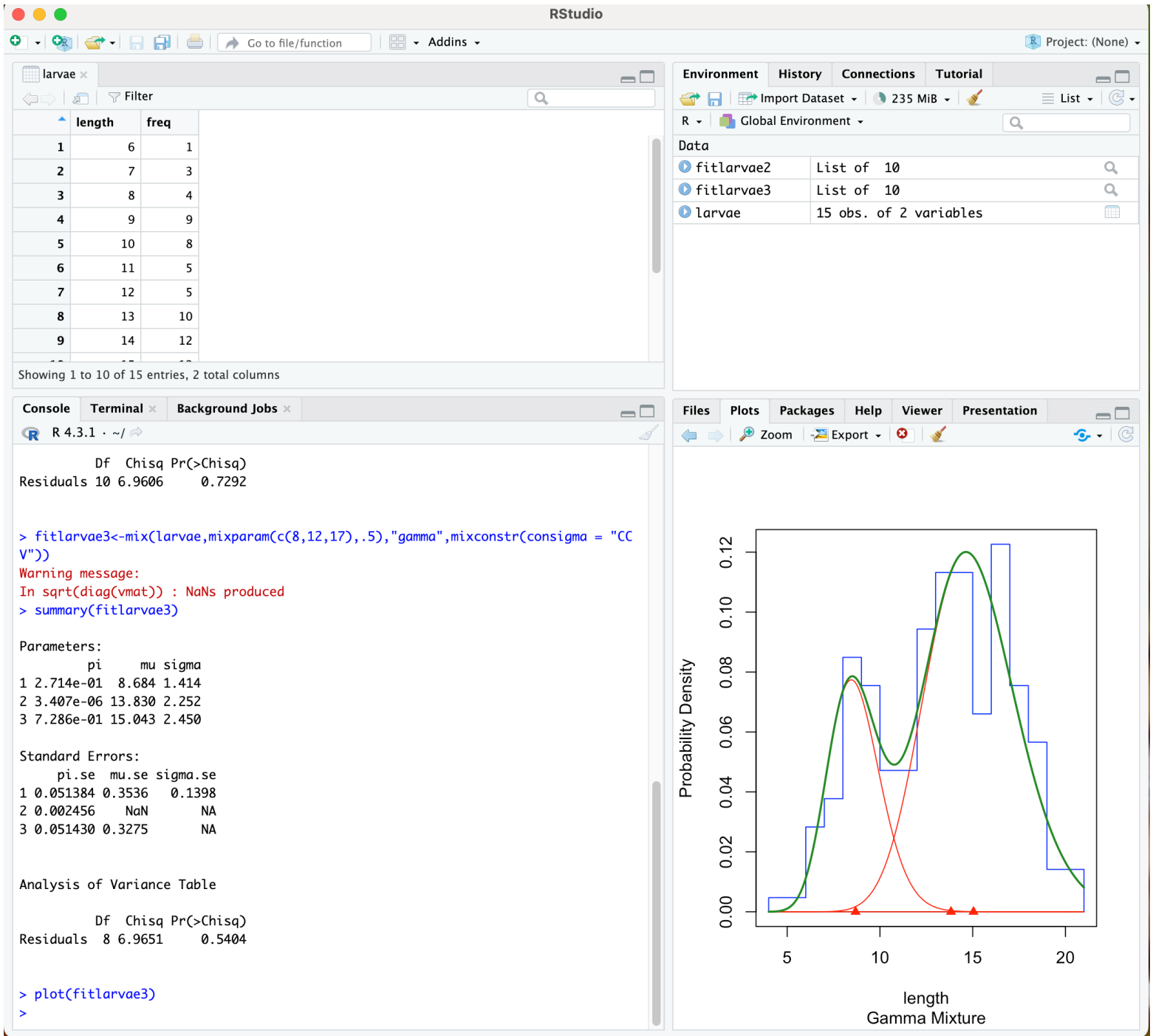
	pi.se	mu.se	sigma.se
1	0.05125	0.3539	0.1405
2	0.05125	0.3274	NA

Analysis of Variance Table

	Df	Chisq	Pr(>Chisq)
Residuals	10	6.9606	0.7292

```
> plot(fitlarvae)  
Error: object 'fitlarvae' not found  
> plot(fitlarvae1)  
> |
```

TOTAL DATASET



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The screenshot displays the RStudio interface with the following components:

- Environment Panel:** Shows the 'Global Environment' with a list of objects: `fitlarvae2` (List of 10), `fitlarvae3` (List of 10), `fitlarvae4` (List of 10), and `larvae` (15 obs. of 2 variables).
- Console:** Contains the following R code and output:

```
>
>
>
>
> fitlarvae4<-mix(larvae,mixparam(c(8,10,13,18),.5),"gamma",mixconstr(consigma = "C
CV"))
> summary(fitlarvae4)

Parameters:
      pi      mu  sigma
1 0.05235  6.639 0.6389
2 0.22104  9.091 0.8749
3 0.34560 13.234 1.2736
4 0.38101 16.778 1.6147

Standard Errors:
      pi.se  mu.se  sigma.se
1 0.03226 0.5233  0.09143
2 0.04679 0.3169    NA
3 0.07088 0.3993    NA
4 0.07485 0.4316    NA

Analysis of Variance Table

      Df  Chisq Pr(>Chisq)
Residuals 6 2.4701  0.8718

> plot(fitlarvae4)
> |
```
- Plots Panel:** Displays a histogram of the 'length' variable with a fitted gamma mixture model. The x-axis is labeled 'length' and 'Gamma Mixture', and the y-axis is 'Probability Density'. The plot shows a blue histogram, a green curve representing the total fit, and a red curve representing one of the mixture components. Red triangles on the x-axis indicate the means of the mixture components.

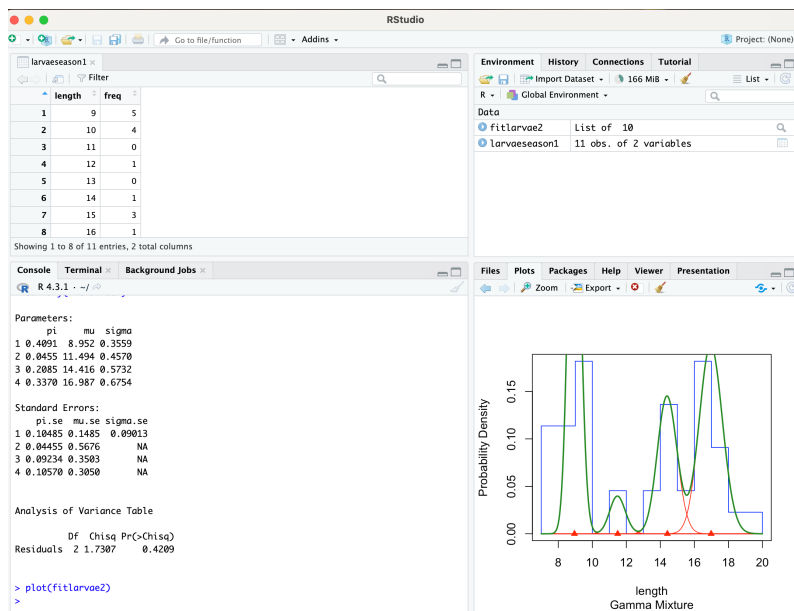
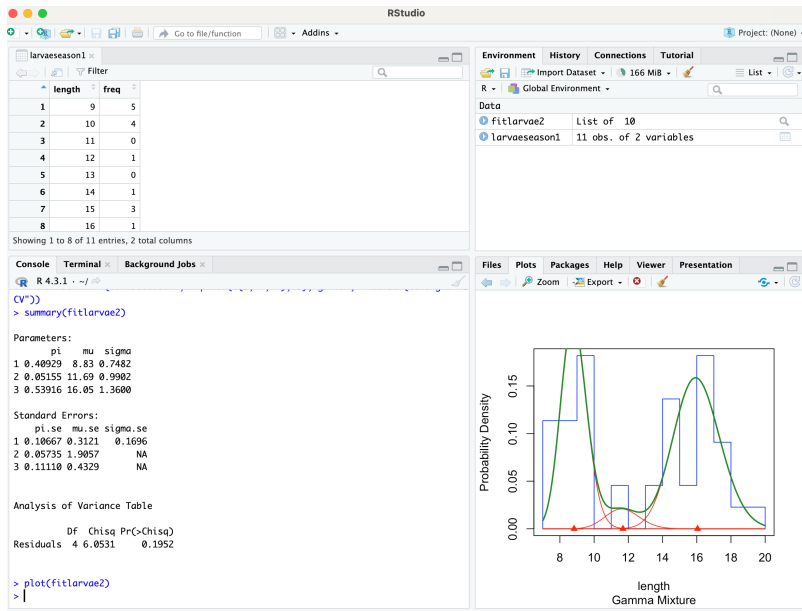
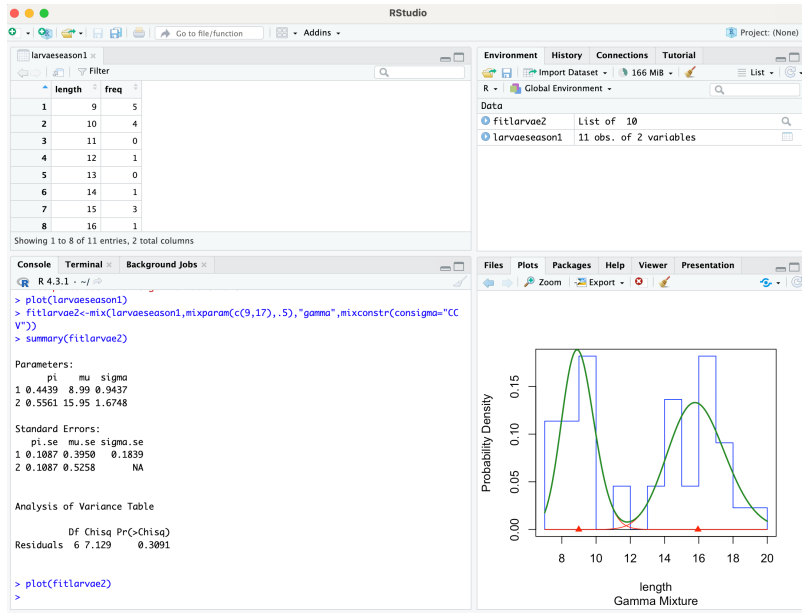
TOTAL DATASET

The screenshot displays the RStudio interface with the following components:

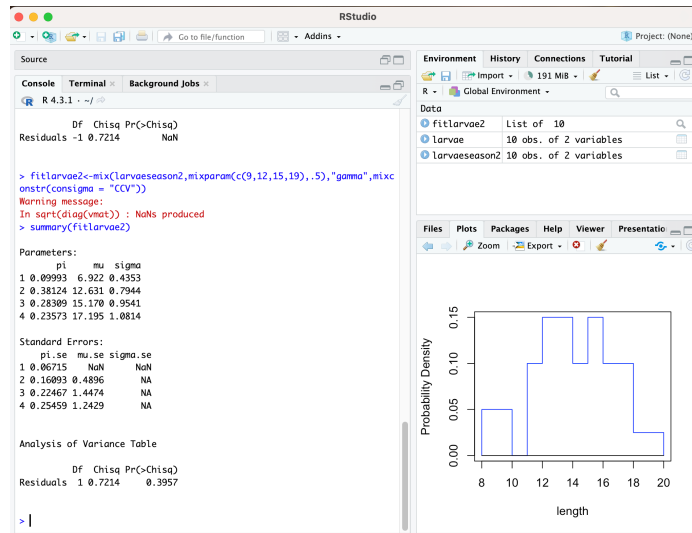
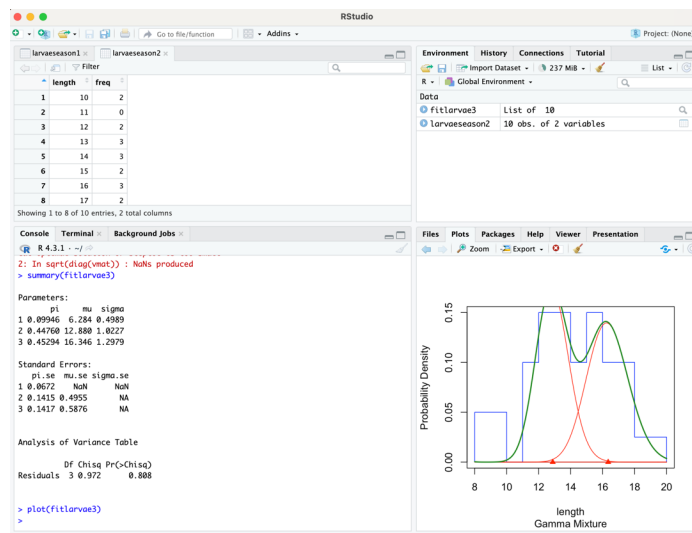
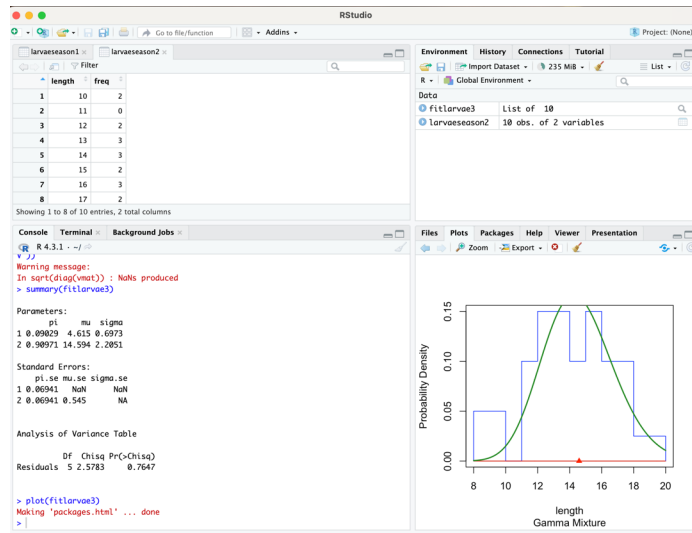
- Environment Panel:** Shows the 'Global Environment' with two data objects: 'fitlarvae1' (List of 10) and 'larvae' (15 obs. of 2 variables).
- Console:** Contains the following text:

```
R 4.3.1 ~/  
The optimization process terminated because either the estimates are approximate  
local optimal solution or steptol is too small  
> plot(fitlarvae1)  
> summary(fitlarvae1)  
  
Parameters:  
      pi    mu  sigma  
1 1.581e-01 7.703 0.7142  
2 2.288e-01 10.776 0.9992  
3 4.358e-01 14.637 1.3571  
4 1.773e-01 17.820 1.6522  
5 4.947e-07 35.015 3.2465  
  
Standard Errors:  
      pi.se mu.se sigma.se  
1 NA NA NA  
2 NA NA NA  
3 NA NA NA  
4 NA NA NA  
5 NA NA NA  
  
Analysis of Variance Table  
  
      Df Chisq Pr(>Chisq)  
Residuals 4 20.894 0.0003324 ***  
---  
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1  
  
> |
```
- Plots Panel:** Displays a histogram of 'length' with a fitted Gamma Mixture model. The y-axis is 'Probability Density' (0.00 to 0.12) and the x-axis is 'length' (5 to 20). The plot shows a blue histogram, a green curve representing the total mixture, and a red curve representing one of the components. Three red triangles on the x-axis indicate the means of the components.

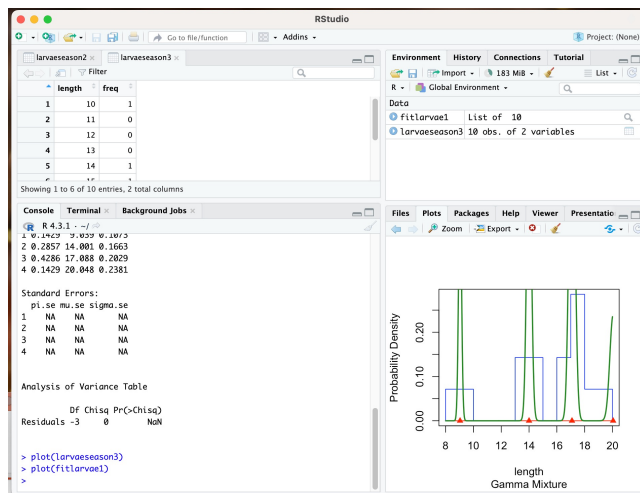
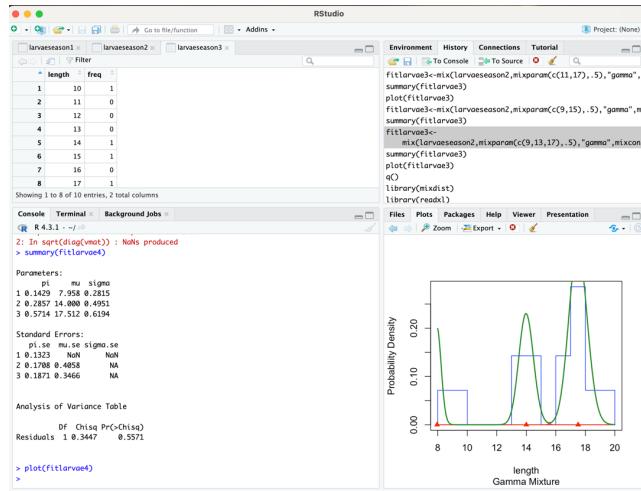
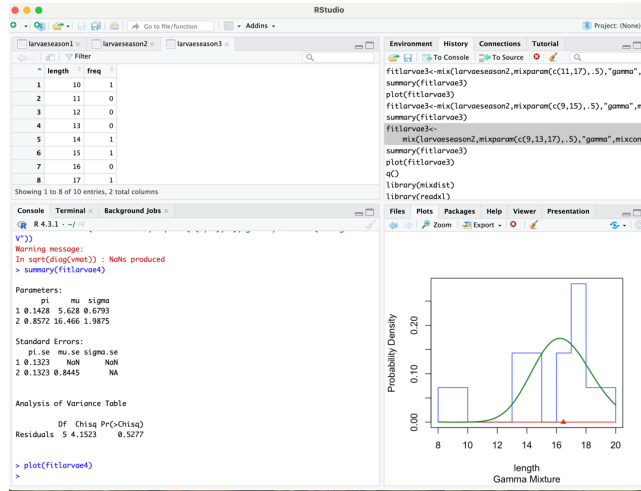
SEASON 1 DATASET



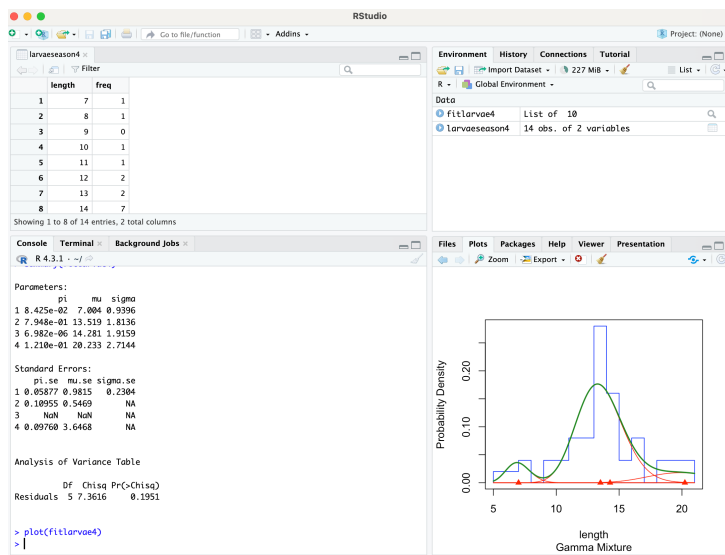
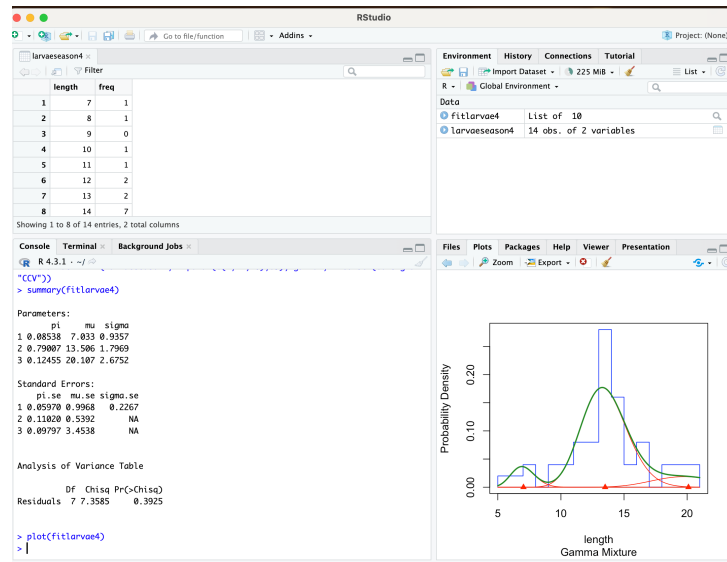
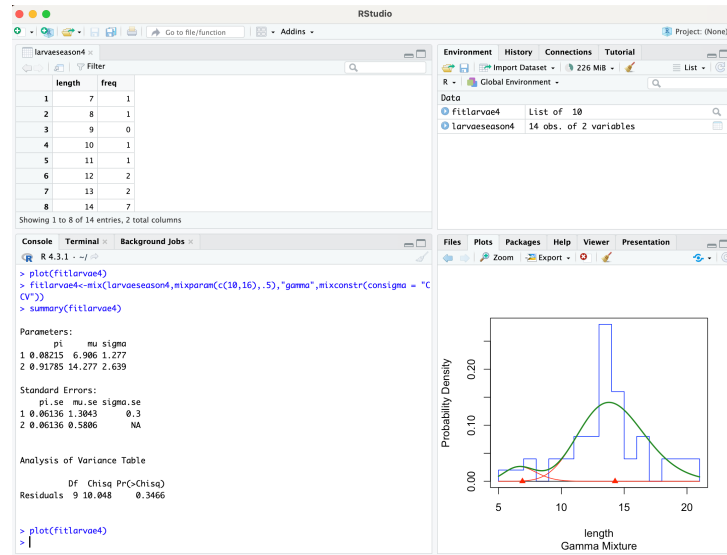
SEASON 2 DATASET



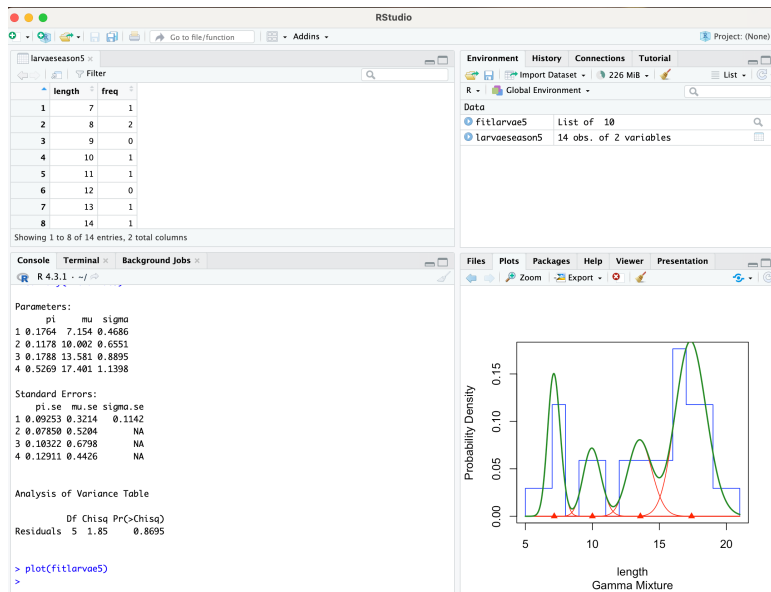
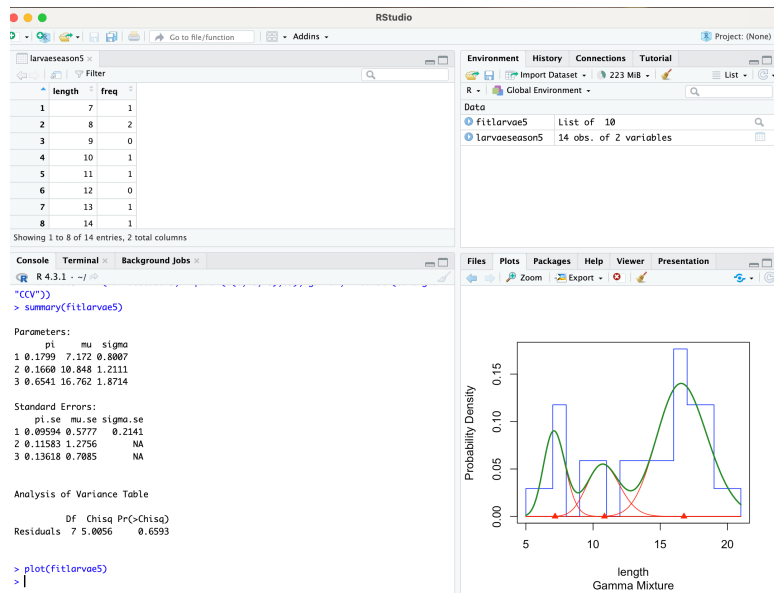
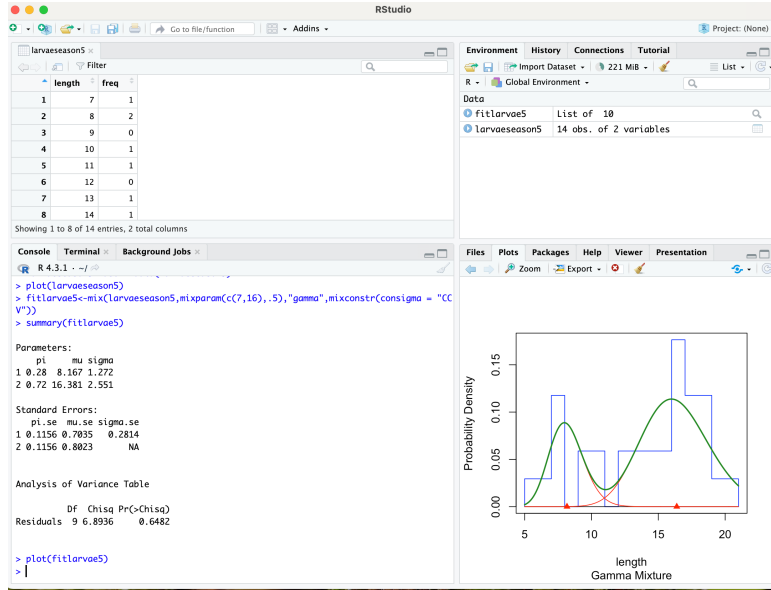
SEASON 3 DATASET



SEASON 4 DATASET



SEASON 5 DATASET



SEASON 6 DATASET

