

## 4. Results

### 4.1. Body and gut-weight of the species

In this experiment, 29 out of 40 individuals (73%) contained on an average ( $1.15 \pm 1.12$ ) microplastics per individual. *Ompok bimaculatus* ranged in total length from 36.8 to 18.9 cm, standard length 28.5 to 15.9 cm, body weight between 300.15 to 34.12 g and GIT weight between 6.85 to 0.99 g.

Table 4.1. Body and gut-weight of the *Ompok bimaculatus* (Sampling station based)

| Species Name             | Sampling Station | Total body weight (g) | Mean body weight $\pm$ SD | Total Gut weight (g) | Mean Gut weight $\pm$ SD |
|--------------------------|------------------|-----------------------|---------------------------|----------------------|--------------------------|
| <i>Ompok bimaculatus</i> | St-1             | 1295.07               | 86.33 $\pm$ 28.95         | 48.86                | 3.25 $\pm$ 1.34          |
|                          | St-2             | 864.97                | 57.66 $\pm$ 20.95         | 22.42                | 1.49 $\pm$ 0.42          |
|                          | St-3             | 1033.85               | 103.38 $\pm$ 51.57        | 24.89                | 2.48 $\pm$ 1.09          |

#### 4.2. Concentration of Microplastic of the species (Station based)

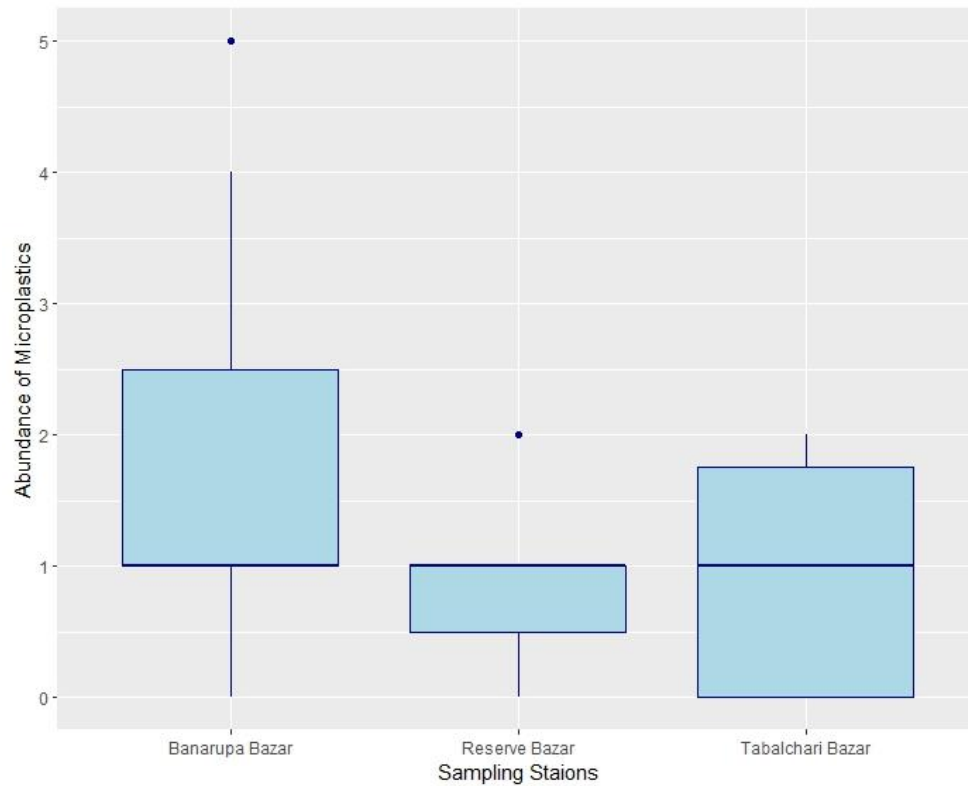


Figure 4.2 Microplastic concentration in three sampling station

Table 4.2: Distribution abundance of Microplastics among stations

| Species Name             | Sampling Station | Total number of individuals | Total number of microplastics | Percentage (%) |
|--------------------------|------------------|-----------------------------|-------------------------------|----------------|
| <i>Ompok bimaculatus</i> | St-1             | 15                          | 24                            | 47.48          |
|                          | St-2             | 15                          | 13                            | 25.81          |
|                          | St-3             | 10                          | 9                             | 26.70          |
| Total                    |                  | 40                          | 46                            | 100            |

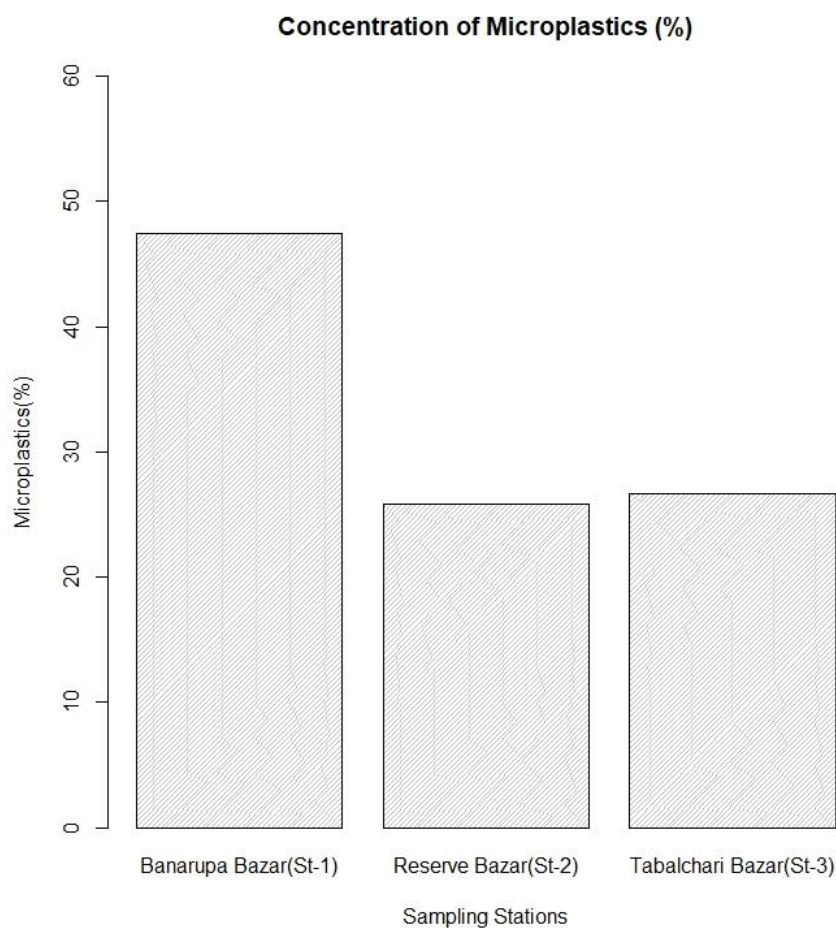


Figure 4.3 Concentration of microplastic of the species (Station based) (%)

### 4.3 Correlation between body length, microplastic abundance, and gut-weight

Figure 4.1 and table 4.4 shows the results of the correlation and t-test.

Traditionally,  $p < 0.05$  is referred to as statistically significant, and  $p < 0.001$  is statistically highly significant. The result demonstrates a negative correlation between length and plastic, positive correlation between gut-weight and plastic and a highly significant correlation between length & gut-weight.

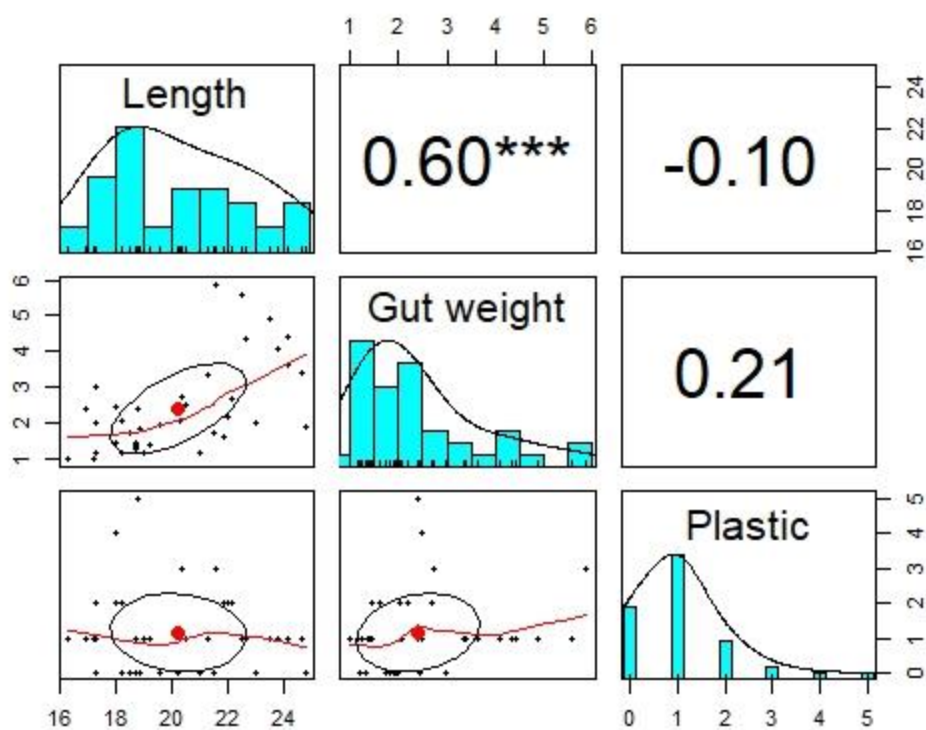


Figure 4.3: Correlation between microplastic abundance, body length and gut-weight.

Table 4.4 Results of the sample t-test

| <i>Ompok bimaculatus</i> |        |            |         |
|--------------------------|--------|------------|---------|
|                          | Length | Gut-weight | Plastic |
| Length                   | NA     | 0.0001     | 0.551   |
| Gut-weight               | 0.0001 | NA         | 0.1941  |
| Plastic                  | 0.551  | 0.1941     | NA      |

#### 4.5. Types of microplastics

Table 4.7. Types of microplastics

| Species Name             | Sampling Station | Types of Microplastics (%) |          |             | Total |
|--------------------------|------------------|----------------------------|----------|-------------|-------|
|                          |                  | Fiber                      | Fragment | Thread-line |       |
| <i>Ompok bimaculatus</i> | St-1+St-2+St-3   | 40                         | 2        | 4           | 46    |
| Percentage (%)           |                  | 86.96                      | 4.34     | 8.70        | 100   |

Types of Microplastics

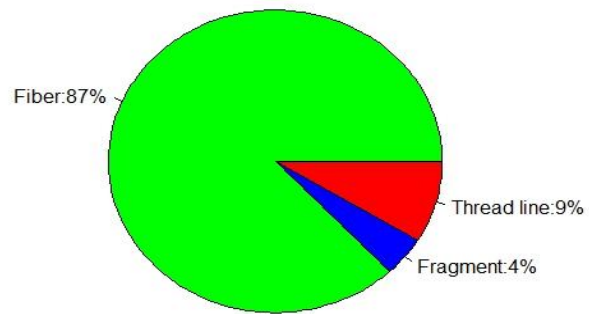
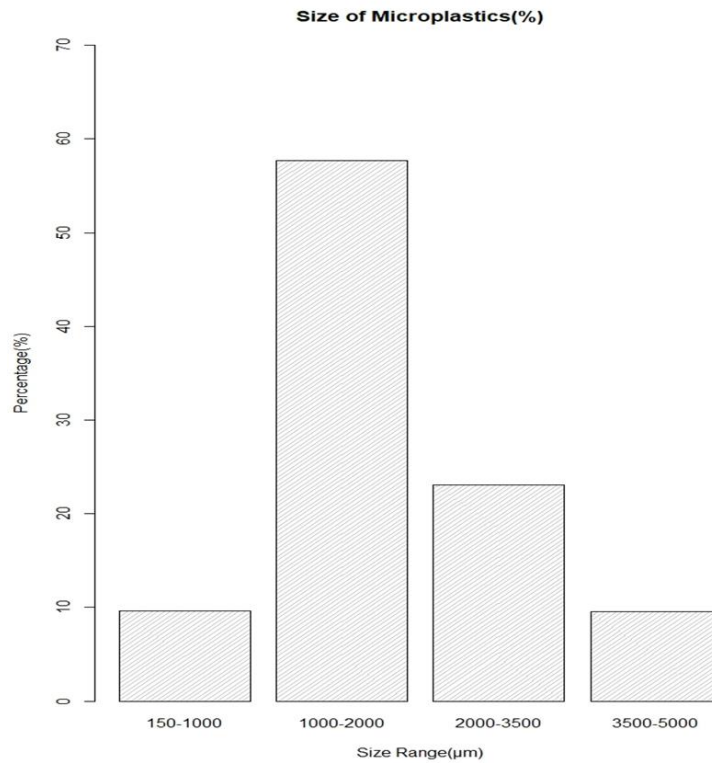


Fig: Types of microplastics (%)

## 4.6. Sizes of microplastics

Table 4.7. Sizes of microplastics

| Species Name             | Sampling Station | Sizes of Microplastics        |                                |                                |                                | Total |
|--------------------------|------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|-------|
|                          |                  | 150-1000<br>( $\mu\text{m}$ ) | 1000-2000<br>( $\mu\text{m}$ ) | 2000-3500<br>( $\mu\text{m}$ ) | 3500-5000<br>( $\mu\text{m}$ ) |       |
| <i>Ompok bimaculatus</i> | St-1+St-2+St-3   | 10                            | 18                             | 11                             | 7                              | 46    |
| Percentage (%)           |                  | 21.73                         | 39.13                          | 23.91                          | 15.21                          |       |



## 4.7 Colors of microplastics

Table 4.8 Colors of microplastics

| Species Name             | Sampling Station | Sizes of Microplastics |       |       |       | Total |
|--------------------------|------------------|------------------------|-------|-------|-------|-------|
|                          |                  | Transparent            | Blue  | Red   | Black |       |
| <i>Ompok bimaculatus</i> | St-1+St-2+St-3   | 5                      | 9     | 25    | 7     | 46    |
| Percentage (%)           |                  | 10.87                  | 19.57 | 54.34 | 15.21 |       |

