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| ***Goliath Grouper Suction Feeding*** |
| Time 0 | **Cone A** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 34.9 | N/A |   |
| b | 153.6 |
| **Cone B** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 34.9 | N/A |   |
| c | 54.3 |
| d | 6.4 |
| e |   |
| ***Volume of feeding mechanism before expansion (t0)*** |   |
| Time 1 | **Cone A** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 39.5 | N/A |   |
| b | 161.3 |
| **Cone B** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 39.5 |  |   |
| c | 56.4 |
| d | 32.6 |
| e |   |
| ***Volume of feeding mechanism at maximum expansion (t1)*** |   |
| ***Volume change during feeding event (***$ mm^{3}$***)*** |   |
| ***Duration of feeding event (sec)*** | 0.132 |
| ***Area of mouth at maximum expansion (t1) (***$ mm^{2}$***)*** |   |
| ***Velocity of water flow into mouth (mm/sec)*** |   |
|  |  |
| ***Goliath Grouper Suction Feeding Answer Key*** |
| Time 0 | **Cone A** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 34.9 | N/A | 195,916.4  |
| b | 153.6 |
| **Cone B** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 34.9 | N/A | 84,297.3  |
| c | 54.3 |
| d | 6.4 |
| e |  12.2 |
| ***Volume of feeding mechanism before expansion (t0)*** | 280,213.7 |
| Time 1 | **Cone A** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 39.5 | N/A | 263,546.5  |
| b | 161.3 |
| **Cone B** | **Length (mm)** | **Area (**$mm^{2}$**)** | **Volume (**$mm^{3}$**)** |
| a | 39.5 | 3338.8  | 230,990.0  |
| c | 56.4 |
| d | 32.6 |
| e |  266.5 |
| ***Volume of feeding mechanism at maximum expansion (t1)*** | 494,536.5  |
| ***Volume change during feeding event (***$ mm^{3}$***)*** |  214,322.8 |
| ***Duration of feeding event (sec)*** | 0.132 |
| ***Area of mouth at maximum expansion (t1) (***$ mm^{2}$***)*** | 3338.8  |
| ***Velocity of water flow into mouth (mm/sec)*** | 486.3  |
|  |  |