CONCLUSION OF THE THESIS

- In present investigation during Feb. 2010 to Jan. 2011 and Feb. 2011 to Jan. 2012 found 24 species of fishes belonging to 06 orders and 11 families have been identified from Karpara Reservoir and population dominance of *Cyprinus carpio*. The species *Acathocobitis botia* (Hamilton, 1822), *Parambasis ranga* (Hamilton, 1822), *Channa gachua* (Hamilton, 1822) fish species are not found in this sampling. While the fish species like *Channa morulius* and *Chanda nama* were rare in the catch.

- From the Masoli Reservoir, *Notopterus chitala* (Hamilton, 1822), *Acathocobitis botia* (Hamilton, 1822), *Parambasis ranga* (Hamilton, 1822), *Channa gachua* (Hamilton, 1822) fish species are not found in our result and 33 species of fishes belonging to 07 orders and 13 families were recorded.

- During survey 33 species from 13 families and 7 orders are observed from Yeldari Reservoir. *Cirrhinus reba* (Hamilton, 1822), *Rohtee ogilbii* (Skyes, 1839), *Chela bakaila* (Ham-Buch), *Channa morulius* (Hamilton, 1822), *Notopterus chitala* (Hamilton, 1822), *Acathocobitis botia* (Hamilton, 1822), *Parambasis ranga* (Hamilton, 1822), *Garra lissorhynchus* (McClelland, 1842) are not found from this reservoir.

- Same results on Ichthy-faunal diversity are found from Siddheshwar Reservoir like that of Yeldari Reservoir. It is probably due to location of the both reservoir in the same region and constructed on the same river Purna. Siddheshwar Reservoir is down-stream to Yelderi Reservoir.

- The occurrence of freshwater shark *Wallago attu* was throughout year from Yeldari Reservoir, Siddheshwar Reservoir, Karpara Reservoir while comparatively less in occurrence from Masoli Reservoir. Maximum catch size of an individual was 110 centimeter in Yeldari Reservoir during the survey of this research
work; Yeldari as a vast spread, large reservoir of more than 5000 ha. area. It support the large fishes like Wallago attu and probable fishing banned area near the embemkment, It might have sheltered. But the catch of Wallago attu was throughtout the year in the study area and it is a regular fish of good market demand. Therefore, it has been considered for the biochemical composition analysis from different habitats.

- The occurrence of Giant river fish Sperata (Mystus) seenghala was throughout year from Yeldari Reservoir, Masoli Reservoir and Karpara Reservoir whereas comparatively less from ocurrence in Siddheshwar Reservoir. Maximum catch size of an individual was 70 cm. in Masoli and Karpara Reservoir during the survey of this research work. But the catch of Sperata seenghala species was throughtout year from this reservoir and it is a regular fish of good market demand. Therefore, it has been considered for the biochemical composition analysis from different habitats.

- Alimentary canal of Wallago attu short, thick and Sperata seenghala are of long. Stomach of Wallago attu is prominent, pear shaped, thick walled, saccular and lies on the ventral side of air bladder and left side of visceral cavity. Stomach of Sperata seenghalais prominent, thick and long. Mouth is terminal in both species of fishes. Longer lower jaw in Wallago attu and longer upper jaw in Sperata seenghala. In Wallago attu, never protrusible tongue, but in Sperata seenghala it is present. Oesophagus short in Wallago attu and narrow, thick and short in Sperata seenghala. Pharynx is short and packed, expansive in Wallago attu and Sperata seenghala. Intestine lies in coiled condition around the stomach.

- Gut content analysis of Sperata (Mystus) seenghala and Wallago attu from Godavari river system in Maharashtra was studied first time during this investigation. Both the species of fishes consume 90% food items of animal origin of which 90% are locally available
weed fish species. Total number of food item in the diet of both species are 34% (20 animal species and 14 plant species) but with increase body size the % of animal matter in the diet increase in *W. attu* as compared to the same in *S. seenghala*. There are no major variations in the gut content of both the catfish species collected from different habitats in Godavari river system.

- From Masoli Reservoir, it was observed that moisture content in body muscles of *Wallago attu* higher in summer season and lower from Karpara Reservoir in winter season.

- During Feb. 2010 to Jan. 2011, there is significant difference \((p<0.05)\) in moisture content (\%) of body muscles of *Wallago attu* collected from different reservoirs in the selected study area in different seasons.

- There is significant difference \((p<0.05)\) in moisture content (\%) of body muscles of *Wallago attu* in different seasons but, no significant difference \((p>0.05)\) in moisture content (\%) of body muscles of *Wallago attu* collected from selected reservoirs during Feb. 2011 - Jan. 2012 was found.

- From Karpara Reservoir and Yeldari Reservoir, it was observed that moisture content in body muscles of *Sperata seenghala* higher in summer season and lower from Siddheshwar Reservoir in winter season.

- During Feb. 2010 - Jan. 2011 and Feb. 2011 - Jan. 2012, there is significant difference \((p<0.05)\) in moisture content (\%) of muscle tissue of *Sperata seenghala* collected from selected reservoirs in different seasons.

- From Masoli Reservoir, total protein content in body muscles of *Wallago attu* was higher in summer season and from Siddheshwar Reservoir, it was lower in winter season.

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Total protein content in body muscles of *Sperata seenghala* from Masoli Reservoir was higher in summer season and fluctuate the result of lower total protein content in body muscles from Siddheshwar Reservoir in monsoon season and from Karpara Reservoir in winter season.

During Feb. 2010 to Jan. 2011 and Feb. 2011 to Jan. 2012, there is significant difference \((p<0.05)\) in total protein content of body muscles of *Wallago attu* collected from different selected reservoirs in the selected study area in different seasons.

During Feb. 2010 to Jan. 2011 and Feb. 2011 to Jan. 2012, there is significant difference \((p<0.05)\) in total protein content of body muscles of *Sperata seenghala* in all seasons which is no significant difference \((p>0.05)\) in total protein content of body muscles of *Sperata seenghala* collected from different selected reservoirs but during Feb. 2011 - Jan. 2012.

In monsoon season, total fat content in body muscles of *Wallago attu* was higher collected from Siddheshwar Reservoir and Karpara Reservoir. In summer season, total fat content in body muscles of *Wallago attu* was lower collected from Siddheshwar Reservoir and Yeldari Reservoir.

The total fat content fluctuated in body muscles of *Sperata seenghala*, was higher in the fish species collected from Masoli Reservoir and Karpara Reservoir in winter season and monsoon season and also total fat content in body muscles of *Sperata seenghala* was lower collected from Yeldari Reservoir in winter season and monsoon season.

From different reservoirs in study area in different seasons, there is no significant difference \((p>0.05)\) in total fat content of body muscles of *Wallago attu* and *Sperata seenghala* collected during Feb. 2010 - Jan. 2011 and Feb. 2011 - Jan. 2012.
➢ From the selected fishes *W. attu* and *S. seenghala* collected from different selected reservoirs in different seasons the fatty acids, Palmitic acid and Oleic are detected by thin layer chromatography method.

➢ Total amino acid content in body muscles of *Wallago attu* was found to be significantly (*p*<0.05) higher collected from Masoli Reservoir in summer season which was lower collected from Siddheshwar Reservoir in winter season.

➢ Total amino acid content in body muscles of *Sperata seeenghala* was noted significantly (*p*<0.05) higher collected from Masoli Reservoir in summer season and lower total amino acid content in body muscles of *Sperata seeenghala* collected from Karpara Reservoir in winter season.

➢ There is significant difference (*p*<0.05) in total amino acid (mg/g) of body muscles of *Wallago attu* and *S. seeenghala* collected from different selected reservoirs in different seasons during Feb. 2010 - Jan. 2011 and Feb. 2011 - Jan. 2012.

➢ By Applying *t*-test, there is significant difference (*P*<0.05) in total protein (mg/g) content and total fat (mg/g) content in body muscles of both the selected fish species of freshwater shark *Wallago attu* and Giant river fish *Sperata seeenghala* collected from different selected reservoirs from different seasons during Feb. 2010 - Jan. 2011 and Feb. 2011 - Jan. 2012.

➢ The highest total protein content was obtained 7.89 mg/g in summer season collected from Masoli Reservoir and lowest total protein content was obtained 0.69 mg/g in monsoon season collected from Siddheshwar Reservoir in body tissues of *Wallago attu* in all seasons from all selected reservoirs during two years.

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The highest total protein content was obtained 6.73 mg/g in summer season collected from Masoli Reservoir and lowest total protein content was obtained 1.14 mg/g in winter season collected from Siddheshwar Reservoir in body muscles of *Sperata seenghala* in all seasons and all selected reservoirs during Feb. 2010 - Jan. 2011 and Feb. 2011 - Jan. 2012.

The highest total fat content was obtained 2.43 mg/g in monsoon season collected from Karpara Reservoir and lowest total fat content was obtained 0.64 mg/g in summer season collected from Siddheshwar Reservoir in body muscles of *Wallago attu* in different seasons, all selected reservoirs during Feb. 2010 - Jan. 2011 and Feb. 2011 - Jan. 2012.

During Feb. 2010 - Jan. 2011 and Feb. 2011 - Jan. 2012, the highest total fat (1.91mg/g) was obtained in monsoon season collected from Karpara Reservoir and lowest total fat content was obtained 0.48 mg/g in monsoon season collected from Yeldari Reservoir in body muscles of *Sperata seenghala* in all seasons from all selected reservoirs.