

CHANGES IN THE RATE OF OXYGEN CONSUMPTION IN FRESHWATER BIVALVE, *LAMELLIDENS MARGINALIS* FROM GODAVARI RIVER: IN THE EFFECT OF CEREBRALECTOMY AND INJECTION OF CEREBRAL EXTRACT DURING SUMMER

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ABSTRACT: Considering the importance of neuro- endocrine control on the physiological activities in bivalve shellfishes from fresh water environments, we have reported here the role played by cerebral ganglia in respiratory metabolism of freshwater bivalve molluscs, *Lamellidens marginalis* from Godavari River at Paithan near Aurangabad.

During summer season, the adult bivalve molluscs, *Lamellidens marginalis* of 70-75 mm shell length and 10.222-13.662 g body weight were subjected to (a) control (normal) (b) removal of both cerebral ganglia (c) injection of their cerebral extract to intact control as well as (d) injection of their extract to ganglia removal bivalves and (e) injection of ice- cold distilled water to normal control for 12 days. The rate of oxygen consumption in bivalves from all four groups (including control) was measured on 2nd, 7th and 12th day. The study revealed that, the rate of oxygen consumption was significantly increased in cerebral ganglia removed, as well as cerebral ganglionic extract injected to ablated group on 2nd, 7th and 12th day compared to control. The rate also showed significant increase in injection of extract to normal control 2nd, 7th and 12th day. Increased rate of oxygen consumption recorded in cerebral ganglia ablated group than extract injected one on 12th day.

Key words : Cerebralectomy, injection of cerebral ganglionic extract, oxygen consumption, freshwater bivalve molluscs.