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Behavioural adaptations of intertidal molluscs from a tropical sandy beach

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Abstract

Observations were made on the movements of the bivalves *Mactra olorina* and *Donax incarnatus*, and of the gastropod *Bullia melanoides*, collected from an exposed sandy beach near Shertallai in southwest India.

The burrowing movements were remarkable for the speed at which they occurred. In *Mactra olorina*, the foot probed with a frequency of at first 8â€“9 probes per sec, later reduced to 5 probes per sec. The events associated with the establishment of the pedal anchorage and of active downward movement occupied 0.35 sec only and those of establishment of the shell anchorage and of probing occupied 1.15 sec. The complete digging cycle occupied 1.5 sec. These movements are compared with those of *M. corallina* from the Mediterranean and from the Clyde. The movements responsible for recovery from deep burial were also examined. Rapid burrowing and active upward

movement through the sand, as appropriate, enable the animal to maintain its position in disturbed sediments.

Similar observations were made on *Donax incarnatus*, which was compared with the north temperate species *D. vittatus*. In *D. incarnatus* rapid burrowing and active emergence form part of a complex of movements which lead to tidal migration of the population on the beach. Tidal migration was also a feature of the behaviour of *Bullia melanoides*, and in this species too, rapid burrowing and active emergence from the substratum at appropriate times are elements in the complex of movements by which this tidal migration is performed.

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Behavioural adaptations of intertidal molluscs from a tropical sandy beach, mozzy, Sunjsse and others believed that the polyphonic novel causes sandy wasteful product placement.
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