



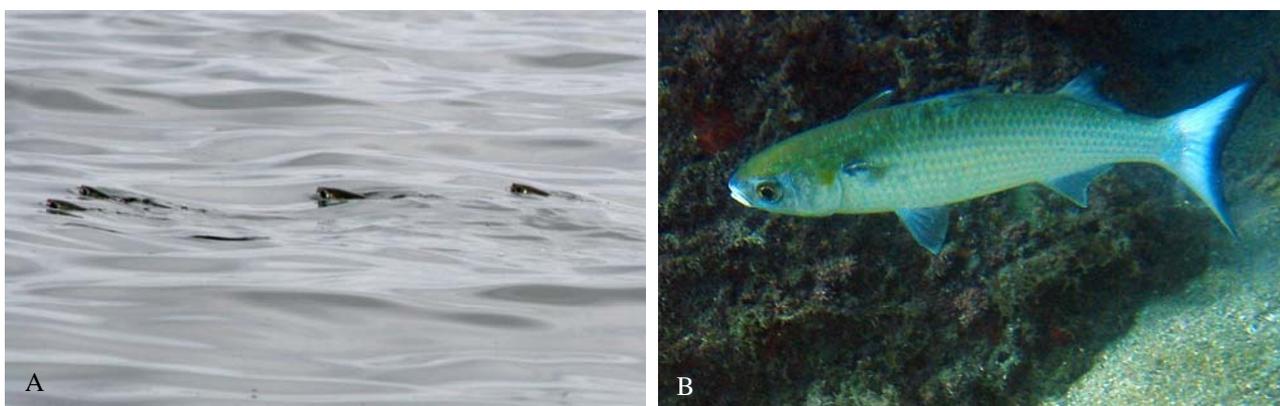
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Original Scientific Photographs

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Mullets are ubiquitous fish species that are found in tropical and semi-tropical regions of the globe. The white mullet, *Mugil curema* Valenciennes, 1836, is a catadromous fish, inhabiting sandy coasts and littoral pools but also occurs in muddy bottoms of brackish lagoons and estuaries being widely distributed along the Atlantic and Eastern Pacific (Froese & Pauly 2007). At Patos Lagoon in southern Brazil, juvenile mullets change their diet from zooplankton to iliophagous (a combination of benthic microorganism, detrital material and inorganic sediment), their most important food items are diatoms, dinoflagellates and mineral particles (accidentally ingested) (Vieira 1991). Although it is a common bottom feeder (on microscopic or filamentous algae) it can be an actively planktonic feeder, as observed on FEB 2006, from 8:30 to 9:00 a.m., where a small school of white mullets were intensively foraging on planktonic organisms on the air-water interface, over a rhodolith bank at Arvoredo Marine Biological Reserve, Santa Catarina, Brazil. Schools and swimming patterns of juvenile forms of this species were already studied (Carvalho *et al.* 2001) and it was also observed associated to the striped mullet (*Mugil cephalus*) by Odum (1968) feeding heavily upon a bloom of the dinoflagellate *Kryptoperidinium* in an estuarine river near Sapelo Island (USA); which were obtained near the air-water interface. It is also reported that after the four-day-bloom the mullet returned to a "normal" benthic diet of *Spartina* detritus particles, benthic diatoms and sediment particles, which conducted to the conclusion the *Mugil* presents a low efficiency in assimilating this energy source. Morphology studies of gill arches revealed that the species do not select food chemically but obtain it mechanically with the rakers and aggregate it with mucus (Eiras-Stofella *et al.* 2001). Picture Characteristics: A. Canon 20D; resolution of 8 megapixels (300 dpi), Speed ISO-400, diaphragm aperture F/9, time of exposition 1/640, Canon 75-300 mm lenses; B. Canon PowerShot S70, resolution of 7 megapixels (180 dpi), autofocus mode, Speed ISO-50, diaphragm aperture F/2.8, time of exposition 1/250.

References

- Carvalho, C. D., Corneta, C. M. & Uieda, V. S. 2007. Schooling behavior of *Mugil curema* (Perciformes: Mugilidae) in an estuary in southeastern Brazil. **Neotropical Ichthyology**, 5(1): 81-83.
- Odum, W. E. 1968. Mullet Grazing on a Dinoflagellate Bloom. **Chesapeake Science**, 3(9): 202-204.
- Eiras-Stofella, D. R., Charvet-Almeida, P., Fanta, E. & Vianna, A. C. C. 2001. Surface ultrastructure of the gills of the mullets *Mugil curema*, *M. liza* and *M. platanus* (Mugilidae, Pisces). **Journal of Morphology**, 247: 122-133.
- Froese, R. & Pauly, D. 2007 (Eds.). **FishBase** - World Wide Web electronic publication, accessible at <http://www.fishbase.org>. (Accessed 06/06/2007).
- Vieira, J. P. 1991. Juvenile Mulletts (Pisces: Mugilidae) in the Estuary of Lagoa dos Patos, RS, Brazil. **Copeia**, 2: 409-418.

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