D-42 Fungal inhibitory properties of bubble nest mucous, as a protective mechanism of eggs and early larvae of Belontid fishes

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The members of the family Belontiidae include the bubble nest builders. The building of the nest gives eggs and larvae of these fish access to atmospheric air in the often polluted environment in which they live. However, these habitats harbor an array of pathogenic organisms including *Saprolegnia* sp (Fish Fungus). The possible role of the bubble nest in protecting the susceptible eggs and early larvae from these pathogenic organisms is hitherto unknown. The objective of this study was to investigate the role of nest mucous in the protection of eggs and early larvae of 3 belontid fishes *(Trichogaster trichopterus sumatranus* Ladiges, 1933, T. *leeri* Bleeker, 1832 and *Betta splendens* Regan, 1909 from fish fungus. The effects of the bubble nest mucous on the growth of *Saprolegnia* sp. was tested in the laboratory. Two experiments with appropriate controls were carried out in order to test possible fungicidal and/or fungal inhibitory properties of the nest mucous which was collected from the bubble nests made by males of each of the 3 species. In the first experiment, nest mucous was introduced into a culture medium which was then inoculated with *Saprolegnia* sp. In the second experiment, nest mucous was introduced into a culture medium containing a pure culture of *Saprolegnia* sp. The growth of the fungus was observed.

The results of the experiments were analysed using the chi squared test. The results of the first experiment showed inhibition of fungal growth. The second experiment while confirming inhibition of fungal growth did not show fungicidal properties of the mucous. Therefore, a possible protective role by inhibition of fungal growth by the bubble nest is suggested in addition to providing access to air, for the developing eggs and early larvae of these belontid fishes.