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INTERRELATIONSHIPS OF GASTEROSTEIFORM FISHES

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Phylogenetic relationships of Gasterosteiformes were studied in an osteological examination of representatives of 11 families of gasterosteiform fishes, as ingroups, and 5 families of other smegmamorpha fishes (Atheriniformes, Elasmobranchii, and Synbranchiformes), as outgroups, to hypothesize their systematic relationships. Based on phylogenetic analysis of 110 informative osteological characters,

four synapomorphies were found to unite all Gasterosteiformes and support was provided that Gasterosteiformes (including Hypopterygiidae and Indostomidae) is a monophyletic group. Furthermore, based on the synapomorphies provided for the subgroups, three suborders in Gasterosteiformes are recognized: Hypopterygoidei, Gasterosteioidei, and Syngnathoidei.

BIOLOGY OF A PUFFISH, *APHANIUS VLADYKOVI*, FROM CENTRAL IRAN

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We studied some biological aspects of the Zagros tooth-carp, *Aphanius vladykovi*, an endemic and poorly known species from Chaharmahal-Bakhtiari province in central Iran, by regular monthly collections and direct observation in aquaria during a full year. Individuals from Modar-Dokhtar spring of Gandoman region were collected; some were preserved in formalin and some were transferred to aquaria alive. Standard biometric and biological measurements were carried out. The stomach content consisted mostly of freshwater

crustacean and the RLG was 0.7, on average, suggesting a carnivorous habit. The eggs had an average diameter of 1 mm (± 0.1) and the average absolute and relative fecundity was 415 (± 169) and 110 (± 25), respectively. The gonadosomatic ratio and ovary condition suggested that the reproductive season of the species was between late March and June with a peak in early April. The species is euryhaline and eurythermal and prefers neutral to basic waters. It is usually found in well-oxygenated waters, but is tolerant to hypoxia as well.

CONTRIBUTION TO THE BIOLOGY OF THE LIZARDFISH, *SAURIDA TUMBIL* (SYNODONTIDAE), FROM THE PERSIAN GULF

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Some biological aspects of lizardfish, *Saurida tumbil* from the Persian Gulf, Iran, were studied by regular